



Strategic Leadership in Educational Infrastructure Quality Assurance: Strengthening Governance, Maintenance, and Institutional Development

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ABSTRACT

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Strategic management of educational facilities is essential for maintaining infrastructure quality and supporting effective learning. However, challenges involving maintenance procedures, sanitation adequacy, and technological readiness require systematic and collaborative management. This study aims to analyze how strategic management by school principals contributes to educational facilities and infrastructure quality assurance, including the identification of strategic strengths, weaknesses, opportunities, and areas requiring improvement. This study employed a mixed-methods approach with an explanatory sequential design. Quantitative data were collected from 80 respondents using questionnaires and analyzed through descriptive statistics and the Strategic Factors Analysis Summary (SFAS) matrix. Qualitative data were obtained through interviews to explain managerial practices, infrastructure conditions, and strategic decision-making. The findings indicate that infrastructure management involves participatory planning, delegated responsibilities, responsive reporting, and periodic evaluation. The SFAS analysis produced a total weighted score of 3.38, highlighting stakeholder participation and institutional renewal as major strengths. Nevertheless, routine maintenance funding, damage-handling procedures, sanitation adequacy, and technological infrastructure require further improvement. The findings emphasize the importance of evidence-based planning, preventive maintenance, stakeholder collaboration, and adequate technological readiness to strengthen institutional accountability and ensure sustainable infrastructure quality assurance.

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INTRODUCTION

The development of Islamic educational institutions in Indonesia, particularly madrasahs, reflects increasing societal expectations regarding educational quality and institutional competitiveness (Sliwka et al., 2024;

Tsekouropoulos et al., 2025). Madrasahs are no longer perceived merely as traditional religious institutions but as strategic educational organizations expected to produce academically accomplished graduates capable of competing globally. However, achieving these expectations requires more than curriculum improvement and instructional innovation; it also depends on the availability, functionality, and sustainability of educational facilities (Fitriyana, 2025; Hidayah et al., 2024). Principals face complex challenges in managing limited budgets, constrained physical space, growing student populations, and increasingly sophisticated learning technologies. The effectiveness of strategic leadership consequently becomes essential in ensuring that educational infrastructure supports meaningful learning experiences (Kosasih et al., 2025; Roni et al., 2026). This situation highlights a theoretical concern: conventional infrastructure management may insufficiently address the interconnected organizational, technical, and user-related dimensions of educational quality assurance in contemporary Islamic educational institutions. Addressing this concern requires a more comprehensive and responsive management perspective (all hasanah, 2026).

At MAN 1 Kota Lubuklinggau, the need for effective infrastructure management emerges from the institution's efforts to maintain educational quality while responding to changing expectations among students, teachers, parents, and the wider community. The institution's reported achievement among the 1,000 best schools nationally in 2022, increasing enrollment interest, digitally supported classrooms, and Rumah Tahfidz Al-Uulum illustrate its institutional development. Nevertheless, limited land availability, maintenance requirements, budget constraints, and potentially insufficient supporting facilities create continuing managerial demands. From a user-centered perspective, infrastructure quality should not be assessed solely through the number of available facilities but also through their accessibility, reliability, suitability, and contribution to everyday educational activities. Students require safe and comfortable learning environments, teachers need functional instructional technologies, and administrators require reliable information for allocating resources (Azzuhri et al., 2024; Hasbiyallah et al., 2025a). Understanding these distinct experiences is therefore essential for identifying infrastructure priorities and developing contextually appropriate quality assurance strategies.

Addressing these challenges requires an innovative management approach that connects strategic decision-making with the actual experiences and needs of infrastructure users. Conventional planning procedures may establish procurement schedules and maintenance responsibilities, yet their effectiveness can be limited when stakeholder experiences, emerging problems,

and changing facility requirements are insufficiently considered. Strategic management provides a systematic foundation through environmental scanning, strategy formulation, strategy implementation, and evaluation and control. Its application can be strengthened by integrating accountability, transparency, long-term planning, and ethical principles (Rehan, 2025). Furthermore, a continuous improvement orientation encourages organizational participation in maintaining educational standards (Nasrullah et al., 2026; Ulum et al., 2025). Combining these perspectives with a human-centered approach can help principals identify priority problems, develop feasible interventions, and evaluate their usefulness. Such integration is particularly relevant when infrastructure decisions must balance limited resources, educational requirements, and technological development. An innovative approach should therefore enable stakeholders to participate actively in identifying problems and shaping solutions that are practical, sustainable, and responsive to institutional needs.

Design Thinking offers a human-centered approach that can complement strategic management by organizing problem-solving around empathy, problem definition, idea generation, prototyping, and testing (Azizah & Widad, 2026). Rather than treating infrastructure challenges exclusively as technical or administrative issues, this approach encourages decision-makers to understand stakeholder experiences before determining appropriate interventions (Liu et al., 2022; Rifa'i & Syahputra, 2025). In the context of madrasah infrastructure quality assurance, empathy can reveal how students and teachers experience existing facilities, while problem definition helps distinguish underlying needs from visible symptoms. Ideation supports the exploration of alternative solutions, prototyping enables preliminary assessment of proposed improvements, and testing provides opportunities to refine interventions using stakeholder feedback. These activities can be connected with strategic environmental analysis, implementation planning, and systematic evaluation (Furqon et al., 2026). Nevertheless, Design Thinking should not be regarded as a substitute for regulatory compliance, technical feasibility assessments, or financial accountability. Its relevance lies in complementing formal management processes with contextual understanding, collaborative innovation, and iterative learning to improve the responsiveness of infrastructure decisions.

Previous studies have examined several dimensions of educational infrastructure management and institutional improvement. Research has emphasized priority-based procurement under budget constraints, stakeholder participation, and the appointment of personnel responsible for individual facilities. Other studies have identified relationships between infrastructure management, learning comfort, and overall educational quality. Research on

digital facilities has also highlighted the potential contribution of educational technology to instructional processes, alongside continuing challenges in technology utilization. Furthermore, systematic inventory management and priority-based maintenance have been recognized as important practices for preserving the functionality of educational assets. Broader investigations into strategic educational management have emphasized the importance of institutional adaptability in responding to internal and external changes (Khan et al., 2024; Taufiqurrahman et al., 2025). Collectively, these studies establish a foundation for understanding infrastructure management as an important component of educational quality assurance. However, the existing body of knowledge provides an incomplete explanation of how user experiences and collaborative problem-solving can be systematically integrated into strategic infrastructure decisions.

Despite these contributions, an important research gap remains concerning how strategic management and human-centered design can be integrated into infrastructure quality assurance in Islamic senior secondary education. Existing studies largely discuss procurement, maintenance, digital facilities, stakeholder participation, or strategic management separately, providing limited explanation of how users' experiences can systematically inform strategic decisions throughout the improvement process. The theoretical gap concerns the relationship between formal strategic management frameworks and iterative, user-centered problem-solving, particularly under conditions of limited land, constrained maintenance budgets, and expanding digital learning requirements. Moreover, the application of Design Thinking to infrastructure quality assurance in madrasahs remains insufficiently addressed in the literature considered in this study. The novelty of this research lies in examining the potential integration of environmental scanning, stakeholder empathy, problem definition, solution development, implementation, and evaluation within a strategic infrastructure management framework. By focusing on MAN 1 Kota Lubuklinggau, the study seeks to develop a context-sensitive understanding of responsive and sustainable infrastructure quality assurance.

This study aims to analyze the principal's strategic management of infrastructure quality assurance at MAN 1 Kota Lubuklinggau through a human-centered perspective informed by Design Thinking. Specifically, it examines how infrastructure needs and organizational challenges are identified through environmental scanning and stakeholder understanding; how priority problems are defined and alternative solutions formulated; and how selected strategies are organized, implemented, and evaluated to improve facility functionality and educational support. The study also explores the potential contribution of iterative feedback and stakeholder participation to refining infrastructure

management practices. Its central argument is that connecting strategic management with Design Thinking can provide a more responsive approach to infrastructure quality assurance by linking institutional objectives with users' actual needs and operational constraints. The findings are expected to contribute to Islamic educational management scholarship and provide practical insights for madrasah principals, infrastructure managers, and policymakers seeking sustainable, accountable, and evidence-informed approaches to educational facility development.

RESEARCH METHODS

This study employed a Design Thinking approach consisting of five stages: empathize, define, ideate, prototype, and test (Hooi & Chan, 2023; Ruloff & Petko, 2025). The research was conducted at MAN 1 Model Lubuklinggau, selected because its infrastructure management challenges provided a relevant context for developing user-centered solutions to educational facility quality assurance. The participants comprised teachers and educational personnel who directly experienced and managed the use of educational facilities, including the principal, vice principal responsible for facilities and infrastructure, and relevant asset management staff. The quantitative participants consisted of 80 teachers and educational personnel selected through total sampling, while key qualitative participants were selected purposively based on their roles, experiences, and involvement in infrastructure management. The study focused on understanding users' needs, identifying infrastructure-related problems, and developing practical solutions that addressed facility availability, maintenance, functionality, and the effectiveness of educational infrastructure management.

Data were collected through direct observation, in-depth interviews, needs assessments, document analysis, and prototype testing. During the empathize stage, observations and interviews were conducted to explore users' experiences, expectations, and difficulties in accessing and utilizing educational facilities. In the define stage, the collected information was synthesized to identify the main problems and establish user-centered problem statements. The ideate stage involved generating and selecting potential solutions through consideration of stakeholder needs, institutional resources, and operational feasibility (Subhi et al., 2025; Walid et al., 2024). In the prototype stage, selected ideas were translated into preliminary solutions, such as infrastructure management procedures, maintenance prioritization mechanisms, or strategic quality assurance frameworks. The test stage involved presenting these prototypes to relevant stakeholders to obtain feedback, assess usability, and identify necessary improvements. These stages were conducted iteratively,

allowing findings from prototype testing to inform revisions to earlier decisions and ensure that the proposed solutions remained responsive to actual institutional needs.

Qualitative data were analyzed thematically through familiarization with the data, initial coding, theme development, interpretation, and synthesis of findings. The analysis focused on recurring patterns concerning infrastructure needs, management challenges, stakeholder expectations, proposed improvements, and user responses to the developed prototypes. Prototype testing results were analyzed descriptively by examining user feedback, perceived usability, relevance, feasibility, and the extent to which the proposed solutions addressed the identified problems. Where applicable, observations and structured user assessments were compared before and after prototype refinement to identify changes in perceived effectiveness (Didi Sartika Ansori Ansori, Halimatus Sya'diyah, 2025; Syafrudin et al., 2026; Wahyudin et al., 2024). Data validity was strengthened through source triangulation by comparing information from different participants and documentary evidence, member checking to confirm the accuracy of participants' accounts, and continuous user feedback throughout the iterative Design Thinking process. These procedures supported the development of contextually appropriate recommendations for improving strategic infrastructure management and quality assurance at MAN 1 Model Lubuklinggau.

RESULTS AND DISCUSSION

Results

Quantitative Findings

The quantitative data were collected from 80 teachers and educational personnel at MAN 1 Model Lubuklinggau using a five-point Likert-scale questionnaire. The analysis covered strategic management (X1), quality assurance (X2), and facilities and infrastructure quality (Y).

Table 1. Descriptive Statistics of the Research Variables

Variable	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Strategic Management (X1)	80	15	25	40	34.45	3.253	10.580
Quality Assurance (X2)	80	12	18	30	25.56	2.778	7.718
Facilities and Infrastructure Quality (Y)	80	12	18	30	25.13	3.328	11.073
Valid N (listwise)	80	—	—	—	—	—	—

Table 1 presents the descriptive statistics for the three research variables. Strategic management had a mean score of 34.45, quality assurance had a mean score of 25.56, and facilities and infrastructure quality had a mean score of 25.13. The standard deviations were 3.253, 2.778, and 3.328, respectively. The minimum and maximum scores were 25 and 40 for strategic management, 18 and 30 for quality assurance, and 18 and 30 for facilities and infrastructure quality.

Instrument validity was assessed using the Pearson Product-Moment correlation test, with a critical (r) -value of 0.220 at the 5% significance level for 80 respondents. All 20 questionnaire items were reported to have calculated correlation coefficients greater than 0.220 and significance values below 0.05. Instrument reliability was assessed using Cronbach's Alpha.

Table 2. Summary of Instrument Reliability Tests

Variable	Cronbach's Alpha	Number of Items	Assessment
Strategic Management (X1)	0.850	8	Reliable
Quality Assurance (X2)	0.790	6	Reliable
Facilities and Infrastructure Quality (Y)	0.838	6	Reliable

Table 2 presents the reliability coefficients for the three research variables. Strategic management recorded a Cronbach's Alpha of 0.850, quality assurance recorded 0.790, and facilities and infrastructure quality recorded 0.838. All coefficients exceeded the minimum threshold of 0.60. The questionnaire comprised eight items for strategic management, six items for quality assurance, and six items for facilities and infrastructure quality.

The 20 questionnaire items were subsequently grouped into eight strategic factors and incorporated into the Strategic Factors Analysis Summary (SFAS) matrix. The factors comprised three strengths, three areas for improvement, and two opportunities. Each factor was assigned a weight, rating, weighted score, and strategic time horizon.

Table 3. SFAS Matrix Based on Quantitative Findings

No.	Strategic Factor	Weight	Rating	Weighted Score	Strategic Time Horizon
1	Strength: Stakeholder participation and infrastructure needs management	0.13	4	0.52	Medium-term
2	Strength: Renewal, competitiveness, and human resource readiness	0.13	4	0.52	Long-term

3	Strength: Monitoring and response to infrastructure damage	0.13	3	0.39	Short-term
4	Area for Improvement: Routine maintenance and budget allocation	0.12	3	0.36	Short-term
5	Area for Improvement: Infrastructure damage-handling procedures	0.12	3	0.36	Short-term
6	Area for Improvement: Adequacy of supporting facilities	0.12	3	0.36	Medium-term
7	Opportunity: Digitalization of learning	0.13	3	0.39	Long-term
8	Opportunity: Infrastructure attractiveness to the community	0.12	4	0.48	Medium-term
Total		1.00	—	3.38	—

Table 3 presents the eight strategic factors and their corresponding weights, ratings, weighted scores, and implementation horizons. The highest weighted scores were recorded for stakeholder participation and infrastructure needs management, and for renewal, competitiveness, and human resource readiness, each with a score of 0.52. Infrastructure attractiveness to the community recorded a score of 0.48. The remaining factors had weighted scores ranging from 0.36 to 0.39. The total weight was 1.00, and the total weighted score was 3.38.

Qualitative Findings

The qualitative data were obtained through in-depth interviews with the principal and the vice principal responsible for facilities and infrastructure. The interview findings were organized into four themes: physical conditions and delegation of authority, maintenance and infrastructure constraints, digitalization and model classroom development, and stakeholder participation and budget planning.

The first theme concerned the physical condition of facilities and the distribution of management responsibilities. Approximately 90% of the facilities and infrastructure were reported to be in good condition. Management responsibilities were delegated to homeroom teachers and relevant staff, while the principal retained a supervisory and controlling role.

The second theme concerned maintenance requirements and infrastructure constraints. The interviews identified roof and ceiling damage caused by strong winds, the need to replace an approximately 20-meter HDMI cable for projector connectivity, and the availability of only four toilets serving 26 class groups. These conditions were reported as part of the institution's ongoing infrastructure management challenges.

The third theme concerned digitalization and model classroom development. The madrasah had provided Wi-Fi, projectors, and Smart TVs and implemented an online examination system through the MAN 1 application. The

institution also pursued paperless examinations. However, the planned expansion to Smart Boards was constrained by electricity capacity and internet bandwidth, which was reported at 300 Mbps.

The fourth theme concerned stakeholder participation and budget planning. The principal presented proposed programs during beginning-of-year meetings involving the school committee and community representatives. Reported outcomes of stakeholder support included funding for participation in national-level academic olympiads, implementation of a five-day school program, and a community-supported initiative to construct a third floor for the mosque to accommodate approximately 400 male students attending Friday prayers.

Integration of Quantitative and Qualitative Findings

The quantitative and qualitative findings were integrated to provide a consolidated account of strategic infrastructure management at MAN 1 Model Lubuklinggau. The quantitative phase identified eight strategic factors through the IFAS, EFAS, and SFAS analytical framework, while the qualitative phase documented the management arrangements, infrastructure conditions, maintenance challenges, digitalization initiatives, and stakeholder participation reported by the interview participants.

The integration process involved examining the consistency between questionnaire findings and interview data from the principal and the vice principal responsible for facilities and infrastructure. Source triangulation was used to compare information concerning management responsibilities, maintenance requirements, and digital development. This process followed the explanatory sequential approach described by Creswell (2020), in which qualitative findings are used to provide further explanation of quantitative results.

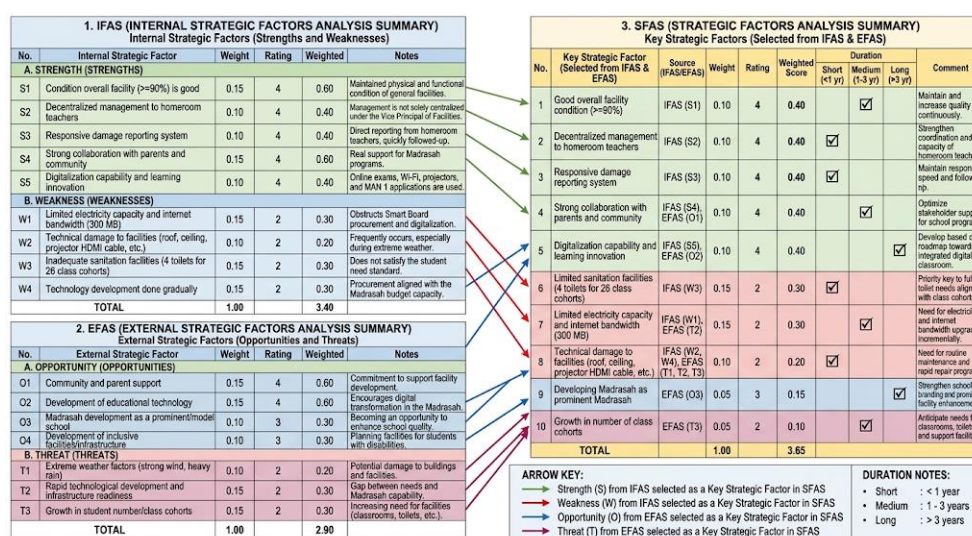


Figure 1. Integrated IFAS, EFAS, and SFAS Matrix for Strategic Infrastructure Management

Figure 1 illustrates the integration of the Internal Factor Analysis Summary (IFAS), External Factor Analysis Summary (EFAS), and Strategic Factors Analysis Summary (SFAS) matrices. The model presents the relationships among internal strengths, areas for improvement, external opportunities, and threats, as well as the prioritization of strategic factors and their corresponding time horizons. The integration framework follows the strategic management model attributed to J. David Hunger and Thomas L. Wheelen (2011).

The integrated findings comprise the reported favorable condition of approximately 90% of facilities, decentralized management responsibilities, stakeholder participation, maintenance challenges, sanitation limitations, and ongoing digitalization initiatives. The quantitative analysis produced a total SFAS weighted score of 3.38, with individual factor scores ranging from 0.36 to 0.52. The qualitative findings documented specific operational conditions associated with the management of educational facilities and infrastructure at the institution.

Discussion

The findings indicate that strategic management of facilities and infrastructure at MAN 1 Model Lubuklinggau has been implemented through coordinated planning, delegated responsibilities, stakeholder participation, and periodic evaluation (Ataman et al., 2024; Hasbiyallah et al., 2025b). Approximately 90% of the facilities were reported to be in good condition, suggesting that existing management practices have supported the school's operational needs. However, this overall assessment does not necessarily demonstrate that every facility is adequate for all users. For example, four toilets serve 26 class groups, raising questions about sanitation capacity and equitable access during busy school hours. This distinction is important because infrastructure quality should be assessed not only through physical condition but also through availability, functionality, accessibility, and suitability for actual educational activities (Marwan et al., 2026; Wirawan et al., 2025). Consequently, school management needs to complement general facility assessments with user-based evaluations to identify service gaps and establish more measurable quality assurance priorities.

Stakeholder participation represents another important dimension of the school's strategic management. Meetings involving school leaders, teachers, and the wider community have provided opportunities to communicate infrastructure needs and mobilize support for institutional development. Community contributions have supported student participation in national competitions, while collective efforts have facilitated the construction of the

mosque's third floor to accommodate approximately 400 male students during Friday prayers (Altassan, 2025; Li et al., 2023). These initiatives demonstrate how collaboration can expand the resources available for educational and religious activities. Nevertheless, participation in specific programs should be distinguished from a sustainable commitment to infrastructure maintenance. External assistance may address immediate needs, but long-term quality assurance requires clear funding priorities, transparent responsibilities, and regular monitoring. School leaders should therefore develop a collaborative management framework that connects community contributions with institutional plans, maintenance schedules, and documented assessments of infrastructure needs.

Digital development has also become part of the school's infrastructure strategy through the provision of Wi-Fi connectivity, projectors, Smart TVs, and paperless examinations supported by the MAN 1 application. These initiatives indicate that infrastructure planning increasingly considers technology as a resource for improving administrative efficiency and learning processes. However, the delayed implementation of Smart Boards because of electrical limitations and internet-related considerations illustrates that technology procurement alone cannot guarantee effective digital transformation (Kwan, 2020; Özdemir et al., 2024). Infrastructure investments must be supported by reliable electricity, sufficient network capacity, technical assistance, and user readiness. The reported internet bandwidth of 300 Mbps should therefore be evaluated in relation to the number of simultaneous users, network distribution, and actual instructional requirements rather than treated as an automatic indicator of adequacy. A more systematic digital infrastructure assessment would help the school prioritize investments, minimize implementation delays, and ensure that technological facilities contribute directly to educational quality.

Maintenance practices further illustrate the relationship between operational management and infrastructure quality assurance. Damage can be reported directly by homeroom teachers to school leadership, enabling problems to be identified through routine communication. The school also conducts infrastructure evaluations twice a year, providing an established mechanism for reviewing facility conditions (Arifin, 2026; Faizah et al., 2025). Nevertheless, reported roof and ceiling damage caused by strong winds and the need to replace or provide a long HDMI cable indicate that maintenance demands vary in urgency and scope. Reliance on periodic evaluations may not be sufficient for problems requiring immediate intervention. A more effective approach would combine scheduled inspections with preventive maintenance, risk-based prioritization, and a documented reporting system that records the type of damage, response time, repair costs, and completion status. Although plans for

wheelchair-accessible routes and tactile guiding blocks indicate attention to inclusive infrastructure, these plans should be translated into clear implementation priorities and evaluated against accessibility standards.

The quantitative and qualitative findings provide complementary perspectives on the school's strategic management. The quantitative analysis identified a total weighted SFAS score of 3.38, with stakeholder participation and institutional renewal each receiving a weighted score of 0.52. These factors indicate that collaboration and organizational development are important strategic assets. Meanwhile, routine maintenance, damage-handling procedures, and supporting facility adequacy each received a score of 0.36, highlighting areas that require greater managerial attention (Fauzah & Faizi, 2024; Saleha & Hina, 2023). The SWOT analysis, through its SO, WO, ST, and WT strategies, offers a framework for connecting existing strengths and external opportunities with identified weaknesses and potential threats. However, these scores represent strategic assessments rather than direct evidence that particular management interventions have improved infrastructure quality. Their practical value depends on whether they inform specific decisions, measurable targets, budget allocations, and subsequent evaluations. Integrating these results with interview evidence allows the school to formulate priorities that reflect both organizational capacity and actual infrastructure challenges.

This study contributes to understanding strategic infrastructure management by connecting organizational arrangements, stakeholder participation, digital development, maintenance practices, and facility adequacy within a school quality assurance framework. Its central contribution is to demonstrate that infrastructure quality cannot be understood solely through the proportion of facilities reported to be in good condition or through the availability of modern educational technology. Quality assurance also depends on whether facilities meet users' needs, remain functional over time, support inclusive participation, and receive timely maintenance. For practical implementation, school leaders should prioritize sanitation adequacy, establish preventive maintenance schedules, strengthen damage-reporting procedures, and assess digital infrastructure before introducing additional technologies. Accessibility planning should likewise be incorporated into infrastructure budgeting and development rather than treated as a secondary consideration. By translating strategic assessments into measurable actions and continuous evaluation, the school can strengthen accountability, improve resource allocation, and support a more sustainable approach to educational infrastructure quality assurance.

CONCLUSION

This study concludes that strategic management by the principal plays a central role in ensuring the quality of educational facilities and infrastructure through participatory planning, decentralized responsibilities, responsive supervision, and continuous evaluation. The most important lesson is that infrastructure quality depends not only on the physical condition of facilities but also on their adequacy, functionality, accessibility, and alignment with educational needs. The study contributes to educational management scholarship by integrating quantitative SFAS analysis with qualitative evidence through an explanatory sequential mixed-methods design, providing a comprehensive understanding of how strategic priorities, stakeholder collaboration, digital innovation, and maintenance practices interact in institutional quality assurance. However, the research is limited to a single madrasah, and the involvement of a broader range of stakeholders, particularly students and parents, would provide a more comprehensive assessment of facility adequacy and user experiences. Future research should examine multiple educational institutions and quantitatively investigate the relationship between strategic infrastructure management and student learning outcomes. Practically, the findings suggest that madrasah leaders should prioritize adequate sanitation facilities, establish systematic maintenance documentation and damage-reporting procedures, strengthen routine maintenance funding, and ensure sufficient electrical capacity and internet connectivity before adopting advanced educational technologies. These measures can support evidence-based decision-making, improve resource allocation, strengthen institutional accountability, and promote sustainable infrastructure quality assurance.

REFERENCES

- All Hasanah, V. (2026). Implementing Differentiated Experiential Learning to Foster Entrepreneurial Mindset Among Vocational Students: Toward the Development of Garuda CEOs. *Nusantara EduLearn Journal*, 1(1), 50–62.
- Altassan, M. A. (2025). Enhancing Leadership Effectiveness Through Technology in Educational Institutions. *Cogent Business & Management*, 12(1), Article 2544983. <https://doi.org/10.1080/23311975.2025.2544983>
- Arifin, M. (2026). Optimizing Student Organizational Sustainability: Integrating Psychological Training into Leadership Development. *Journal of Psychological Insight*, 2(2), 76–88.

- Ataman, A., Baharun, H., Sanjani, M. A. F., & Safitri, S. D. (2024). Exploring Complementary Leadership Styles in Madrasahs by Aiming at Their Impact on Integrity and Character Development. *Business and Applied Management Journal*, 1(2), 118–133. <https://doi.org/10.61987/bamj.v1i2.487>
- Azizah, N., & Widad, Z. (2026). Living Qur'an in Local Tradition: Reinterpreting Gratitude and Shodaqoh for Community Well-Being. *Journal of Islamic Scholarly Research*, 1(1), 34–49.
- Azzuhri, M., Huang, M.-P., & Irawanto, D. W. (2024). Reinventing Spiritual Leadership from an Indonesian Perspective. *International Journal of Cross Cultural Management*, 24(2), 289–308. <https://doi.org/10.1177/14705958241245245>
- Didi Sartika Ansori Ansori, Halimatus Sya'diyah, A. H. S. (2025). Transformational Leadership as a Catalyst for Professional Work Culture in Islamic Boarding Schools. *Indonesian Journal of Education and Social Studies*, 4(1), 100–113. <https://doi.org/10.33650/ijess.v4i1.3311>
- Faizah, A. N., Arifin, M., Anwar, M., & Helmi, A. M. (2025). The Impact of Principal Leadership and Committee Roles on Teacher Performance and Student Achievement. *JUMPA: Jurnal Manajemen Pendidikan*, 6(2), 74–88.
- Fauzah, H., & Faizi, M. F. (2024). Changing Institutional Leadership in Islamic Schools as a Spark for the Development of Religious Values. *Business and Applied Management Journal*, 2(1), 38–47. <https://doi.org/10.61987/bamj.v2i1.490>
- Fitriyana, F. (2025). Dimensions of Transcendental Communication in the Management of Spiritual Leadership Among Muslim Family Heads Practicing Shalawat. *JUMPA: Jurnal Manajemen Pendidikan*, 6(2), 115–127.
- Furqon, M., Farwati, W. W., Lateh, M., Afandi, M. A., & Zawawi, A. A. (2026). Family Support and Learning Environment as Key Determinants of Early Childhood Learning Motivation. *IC-ESTE: International Conference on Education, Social Studies, Technology and Health*, 1(1), 42–48.
- Hasbiyallah, H., Alfauzy, M. R., Hakim, A. F., Alfaruq, M. S., & Sumarni, A. (2025). Participatory Leadership in Madrasah Governance: Exploring Practices, Paradoxes, and Power Relations in Islamic Secondary Education. *JUMPA: Jurnal Manajemen Pendidikan*, 6(2), 233–245.
- Hidayah, H., Qushwa, F. G., Munawwaroh, I., Putri, D. F., & Hasanah, R. (2024). Leadership Transformation and Organizational Strengthening in Improving Collaboration and Operational Effectiveness of Islamic Boarding Schools. *Journal of Social Studies and Education*, 2(1), 54–67. <https://doi.org/10.61987/jsse.v2i1.519>
- Hooi, L. W., & Chan, A. J. (2023). Does Workplace Digitalization Matter in Linking Transformational Leadership and Innovative Culture to Employee Engagement? *Journal of Organizational Change Management*, 36(2), 197–216. <https://doi.org/10.1108/JOCM-06-2022-0184>

- Khan, F., Preeti, & Gupta, V. (2024). Examining the Relationships Between Instructional Leadership, Teacher Self-Efficacy and Job Satisfaction: A Study of Primary Schools in India. *Journal of Educational Administration*, 62(2), 223–238. <https://doi.org/10.1108/JEA-09-2022-0145>
- Kosasih, K., Freitas, B. V. F., Melin, U. N., Sari, R. A., & Krisdayanti, E. (2025). The Impact of Transformational Leadership Style and Employee Development on Performance Effectiveness. *Business and Applied Management Journal*, 3(2), 338–348. <https://doi.org/10.61987/bamj.v3i2.1637>
- Kwan, P. (2020). Is Transformational Leadership Theory Passé? Revisiting the Integrative Effect of Instructional Leadership and Transformational Leadership on Student Outcomes. *Educational Administration Quarterly*, 56(2), 321–349. <https://doi.org/10.1177/0013161X19861137>
- Li, J., Chan, P. W. K., & Hu, Y. (2023). The Effects of Principals' Instructional Leadership on Primary School Students' Academic Achievement in China: Evidence from Serial Multiple Mediating Analysis. *Sustainability*, 15(3), Article 2844. <https://doi.org/10.3390/su15032844>
- Liu, Y., Li, L., & Huang, C. (2022). To What Extent Is Shared Instructional Leadership Related to Teacher Self-Efficacy and Student Academic Performance in China? *School Effectiveness and School Improvement*, 33(3), 381–402. <https://doi.org/10.1080/09243453.2022.2029746>
- Marwan, M., Bahri, S., Musdiani, M., Pranajaya, S. A., & Alfiyanto, A. (2026). E-Leadership in School Management for Society 5.0: A Systematic Review from an Educational Psychology Perspective. *JUMPA: Jurnal Manajemen Pendidikan*, 7(1), 58–72. <https://doi.org/10.33650/jumpa.v7i1.15068>
- Nasrullah, M. H., Sukesu, S., & Riyadi, S. (2026). From Transformational Leadership to Social Entrepreneurship: Strengthening Innovation and Sustainability in Faith-Based Organizations. *Business and Applied Management Journal*, 4(1), 16–32. <https://doi.org/10.61987/bamj.v4i1.2041>
- Özdemir, N., Gümüş, S., Kılınç, A. Ç., & Bellibaş, M. Ş. (2024). A Systematic Review of Research on the Relationship Between School Leadership and Student Achievement: An Updated Framework and Future Direction. *Educational Management Administration & Leadership*, 52(5), 1020–1046. <https://doi.org/10.1177/17411432221118662>
- Rehan, A. (2025). The Existence of Cryptocurrency from the Perspective of Islamic Fiqh: A Legal Analysis of the Buying and Selling of Digital Assets. *Al-Fiqh: Journal of Contemporary Islamic Law*, 1(1), 1–10. <https://doi.org/10.61987/fiqh.v1i1.802>
- Rifa'i, M., & Syahputra, M. R. (2025). Transforming Principal Leadership for a Sustainable Quality Ecosystem: A Multi-Site Study of State Islamic Senior High Schools in Medan. *JUMPA: Jurnal Manajemen Pendidikan*, 6(2), 484–497.

- Roni, K. A., Pramono, A., Amran, A., Supriyati, S., & Zuliyana, I. (2026). Responsible Leadership and Village Apparatus Performance: The Moderating Role of Village Development Status. *Business and Applied Management Journal*, 4(2), 311–325. <https://doi.org/10.61987/bamj.v4i2.2284>
- Ruloff, M., & Petko, D. (2025). School Principals' Educational Goals and Leadership Styles for Digital Transformation: Results from Case Studies in Upper Secondary Schools. *International Journal of Leadership in Education*, 28(2), 422–440. <https://doi.org/10.1080/13603124.2021.2014979>
- Saleha, L., & Hina, S. (2023). Servant Leadership: Maintaining Teacher Commitment and Building Community Trust. *Journal of Social Studies and Education*, 1(1), 27–41. <https://doi.org/10.61987/jsse.v1i1.514>
- Sliwka, A., Klopsch, B., Beigel, J., & Tung, L. (2024). Transformational Leadership for Deeper Learning: Shaping Innovative School Practices for Enhanced Learning. *Journal of Educational Administration*, 62(1), 103–121. <https://doi.org/10.1108/JEA-03-2023-0049>
- Subhi, I., Priansyah, D., Evriani, N. T., & Rahman, R. (2025). Reconstructing Kyai Leadership in Strengthening the Quality of Islamic Boarding Schools Amid Digital Disruption. *JUMPA: Jurnal Manajemen Pendidikan*, 6(2), 246–256.
- Syafrudin, S., Suharyati, H., & Suhendra, S. (2026). Servant Leadership, Knowledge Management, and Gotong Royong Culture as Predictors of Teacher OCB: The Mediating Role of Trust and Work Motivation. *Business and Applied Management Journal*, 4(1), 1–15. <https://doi.org/10.61987/bamj.v4i1.2068>
- Taufiqurrahman, M., Ridani, A., & Sudadi, S. (2025). Exploring the Impact of Madrasah Head's Leadership Style on Teacher Performance. *Indonesian Journal of Education and Social Studies*, 4(2), 180–193. <https://doi.org/10.33650/ijess.v4i2.12977>
- Tsekouropoulos, G., Vasileiou, A., Hoxha, G., Theocharis, D., Theodoridou, E., & Grigoriadis, T. (2025). Leadership 4.0: Navigating the Challenges of the Digital Transformation in Healthcare and Beyond. *Administrative Sciences*, 15(6), Article 194. <https://doi.org/10.3390/admsci15060194>
- Ulum, B., Halili, H., Filastin, W. F., & Aisyah, S. (2025). Beyond Spiritual Authority: Revitalising Charismatic Leadership for Economic Independence in Indonesian Pesantrens. *Business and Applied Management Journal*, 3(2), 252–267. <https://doi.org/10.61987/bamj.v3i2.1647>

- Wahyudin, A., Furqon, M., Prabowo, G., & Zawawi, A. A. (2024). Application of Style Leadership Transformational in Islamic Education Institutions. *Ar-Rosikhun: Jurnal Manajemen Pendidikan Islam*, 3(3), 218–226. <https://doi.org/10.18860/rosikhun.v3i3.27705>
- Walid, A., Hidayati, S., & Ramli, N. (2024). Cultural Synergy in Islamic Educational Leadership: Developing an Inclusive Model for Enhancing Management Effectiveness and Educational Quality in Culturally Diverse Institutions. *JUMPA: Jurnal Manajemen Pendidikan*, 5(1), 42–56. <https://doi.org/10.33650/jumpa.v5i1.9335>
- Wirawan, P., Baharudin, B., & Prabowo, S. L. (2025). Resource-Constrained Leadership and Teacher Competence Development: A Qualitative Case Study in an Islamic Boarding School. *JUMPA: Jurnal Manajemen Pendidikan*, 6(1).