

Reconceptualizing School Facility Governance through Tri Hita Karana-Based Strategic Management: A Qualitative Case Study in Denpasar, Indonesia

Ni Wayan Ary Rusitayanti, Ni Luh Putu Yesy Anggreni, I Putu Eka Indrawan

^{1,2,3} PGRI Mahadewa University, Indonesia

e-mail: aryrusita22@gmail.com, yesianggreni@mahadewa.ac.id, putueka@mahadewa.ac.id

Submitted: 21-11-2025

Revised: 06-03-2026

Accepted: 04-04-2026

ABSTRACT. This study interrogates the limited integration of culturally grounded ethics within dominant models of school facility management, which remain largely technocratic and efficiency-driven. Addressing this gap, the research examines how strategic management can be reconfigured through the Tri Hita Karana framework to produce not only operational effectiveness but also ethical and ecological coherence in educational institutions. Focusing on SMP Negeri 11 Denpasar, the study employs a qualitative case study design to analyze the planning, implementation, and evaluation processes involving school leaders, teachers, staff, and students. Data were generated through in-depth interviews, participant observation, and analysis of institutional planning documents (RKS, RKAS, and digital inventory systems). The findings demonstrate that strategic management becomes substantively transformative rather than merely procedural when embedded within the relational principles of *parhyangan* (spiritual alignment), *pawongan* (social cohesion), and *palemahan* (environmental stewardship). Instead of functioning solely as an administrative control mechanism, facility management operates as a value-mediated governance practice that structures ethical decision-making, participatory accountability, and ecological responsibility. This repositioning shifts facility optimization from a resource-utilization paradigm toward a culturally embedded sustainability model. The study advances theory by proposing Value-Based Strategic Facility Management (VBSFM) as an integrative conceptual framework that bridges strategic management theory and indigenous philosophy in educational governance. By articulating how local wisdom restructures managerial rationality, this research moves beyond descriptive reporting toward a normative–theoretical argument: that sustainable school infrastructure management requires epistemic integration between strategic logic and culturally embedded value systems. The model offers a transferable analytical lens for examining culturally responsive governance in diverse educational contexts.

Keywords: *Strategic management, Educational facilities, Tri Hita Karana, School management, Sustainability*

 <https://doi.org/10.32678/tarbawi.v12i01.12259>

How to Cite Rusitayanti, N. W. A., Anggreni, N. L. P. Y., & Indrawan, I. P. E. (2026). Reconceptualizing School Facility Governance Through Tri Hita Karana-Based Strategic Management: A Qualitative Case Study in Indonesia. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 12(01), 95–106. <https://doi.org/10.32678/tarbawi.v12i01.12259>

INTRODUCTION

Improving the quality of education in the twenty-first century increasingly depends on schools' ability to develop effective, safe, and sustainable learning ecosystems (Royhatudin et al., 2020; Junita et al., 2024; Amanulloh et al., 2025). In this context, educational facilities and infrastructure are no longer understood merely as physical assets that support teaching and learning activities, but as strategic elements that influence the quality of pedagogical interaction, learning

innovation, and the comfort and sustainability of the learning environment (Barrett et al., 2015; Earthman, 2004). Well-designed physical school environments have been shown to contribute to increased student engagement, improved learning experiences, and the overall effectiveness of the teaching and learning process (Thomas et al., 2019; de Borba et al., 2020). However, the governance of educational facilities continues to face various challenges. In many schools, facility management tends to remain administrative and reactive, often dependent on annual budgets and not fully integrated into school development strategic planning (Frelin & Grannäs, 2021). This condition indicates that the optimization of educational facilities is still frequently positioned as a technical issue, even though its management has direct implications for the quality of educational services and the sustainability of school ecosystems.

From the perspective of educational administration, strategic management provides a systematic framework for identifying institutional needs, determining development priorities, allocating resources effectively, and continuously evaluating organizational performance (Bryson, 2018; Wheelen et al., 2018). The implementation of strategic management in school facility governance enables a shift from routine maintenance patterns toward more planned, measurable, and adaptive management practices that respond to evolving educational needs (Bell, 2002; Foxon et al., 2009; Fidan & Balci, 2017). As educational governance paradigms evolve, facility management approaches have also shifted from technocratic orientations toward value-based governance. This approach emphasizes that institutional sustainability is not determined solely by efficient resource management but also by social legitimacy, organizational ethics, and alignment with the value systems embedded in society (Kooiman, 2003; Rhodes, 2017). Within the framework of cultural governance theory, organizational strategies become more effective and sustainable when they are integrated with local cultural values that shape the identity and social practices of educational communities.

In the context of Bali, the philosophy of *Tri Hita Karana* offers a holistic governance perspective through the principles of harmony between humans and God (*parhyangan*), harmony among human beings (*pawongan*), and harmony between humans and the environment (*palemahan*). This concept has long been used as an ethical foundation for social development and sustainable tourism in Bali (Hisyam et al., 2024; Wiryawan, 2024; Lestari et al., 2025; Natalis et al., 2025). Nevertheless, its use as a framework for educational governance, particularly in the management of school facilities and infrastructure, remains relatively underexplored systematically. In fact, when integrated into school management practices, the principles of *Tri Hita Karana* can offer a new perspective on educational facilities, viewing them not merely as physical infrastructure but also as social, spiritual, and ecological spaces that foster a harmonious and sustainable school culture.

Several studies over the past decade indicate that strategic management of educational facilities can enhance the effectiveness of school infrastructure utilization. The literature reveals at least four major research trends in this field. First, efficiency-oriented studies emphasize the importance of strategic planning and cost control in improving the effective use of school facilities (Umar et al., 2024). Second, studies focusing on the digitalization of facility management highlight the implementation of digital inventory systems and the integration of technology into infrastructure management to support twenty-first-century learning (Irawan, 2023; Irawandi & Saputra, 2025; Juwana et al., 2025; Karina et al., 2025). Third, research on governance and accountability emphasizes transparency in infrastructure management and stakeholder participation in decision-making (Alfaiz et al., 2024). Fourth, although still limited, several studies have begun exploring the integration of cultural values and local wisdom into educational management practices. However, most of these studies continue to position facility management within technocratic and administrative perspectives, while the integration of ecological, social, and spiritual values as a foundation for school facility governance has not been extensively examined.

Based on this review, several research gaps remain to be addressed. First, there is a theoretical gap concerning the absence of a conceptual framework that systematically integrates strategic

management theory with local wisdom philosophies grounded in ecological and spiritual harmony in the governance of school facilities. Second, there is an operational gap related to the limited empirical research examining how cultural values can be concretely translated into the processes of planning, organizing, implementing, and evaluating the management of educational facilities and infrastructure. Third, there is an indicator gap: a lack of performance indicators grounded in spiritual, social, and ecological harmony to assess the effectiveness of school facility governance, particularly at the junior secondary school level.

Based on these gaps, this study aims to reconceptualize school facility governance by integrating strategic management with the values of *Tri Hita Karana*. The research was conducted at SMP Negeri 11 Denpasar as an empirical context to analyze how the principles of *parhyangan*, *pawongan*, and *palemahan* can be integrated into the planning, implementation, and evaluation processes of school facilities and infrastructure management. Conceptually, this study contributes to the development of a culturally grounded strategic facility management model that positions the value of harmony as the foundation of educational infrastructure governance. In addition, the study provides practical contributions by formulating facility management performance indicators grounded in spiritual, social, and ecological principles, thereby enriching more sustainable and contextually relevant approaches to educational facility management.

METHOD

This study employs a qualitative case study design to explore in depth how school facilities and infrastructure are optimized through the application of strategic management grounded in the values of *Tri Hita Karana*. A qualitative approach was selected because it enables researchers to understand complex social phenomena within their natural settings and to capture the meanings, interactions, and cultural values embedded in organizational practices (Creswell & Creswell, 2017; Denzin, 2017). The case study design allows for a contextualized and holistic examination of how strategic facility management is practiced within a particular institutional environment, particularly when cultural and value-based dimensions are involved (Yin, 2018).

The research was conducted at SMP Negeri 11 Denpasar, a public junior secondary school in Bali that has actively implemented environmentally friendly programs and cultural values aligned with the *Tri Hita Karana* philosophy. The selection of this site was based on purposive case selection, given that the school provides an informative and relevant context for examining the integration of local cultural values into educational management practices (Patton, 2015). The school has demonstrated consistent efforts in environmental management, community collaboration, and a spiritually based school culture, making it a suitable case for understanding how strategic management can be enriched by local wisdom principles in the governance of educational facilities.

The research subjects were key stakeholders involved in the planning, management, and use of school facilities. Informants included the school principal, the vice principal responsible for facilities and infrastructure, several teachers, administrative staff responsible for facility management, and students, who are the primary users of the facilities. Informants were selected through purposive sampling, based on their roles, experience, and knowledge related to facility governance and school management processes (Creswell & Poth, 2016). In total, the study involved approximately 12–15 informants, allowing the researcher to capture diverse perspectives regarding planning, implementation, and evaluation of school facilities.

Data collection was conducted over three months, enabling the researcher to continuously observe facility management practices and gain a deeper understanding of organizational routines and decision-making processes. The researcher served as the primary research instrument, directly engaging with the research setting through participatory observation, in-depth interviews, and document analysis (Tisdell et al., 2025).

Three main data collection techniques were employed. First, participatory observation was conducted to examine the physical conditions of facilities, patterns of facility utilization, maintenance practices, and the manifestation of Tri Hita Karana values in daily school activities (Spradley, 2016). Particular attention was given to environmental care (*palemaban*), collaborative interactions among school members (*pawongan*), and spiritual or religious activities within the school environment (*parbyangan*). Second, semi-structured interviews were conducted using an interview guide developed from indicators of strategic management and the Tri Hita Karana harmony principles. Semi-structured interviews enable researchers to explore participants' experiences and perspectives in depth while maintaining flexibility in questioning (Kvale & Brinkmann, 2009). These interviews explored stakeholders' perspectives on strategic planning, implementation mechanisms, resource allocation, challenges in facility management, and evaluation processes. Third, documentation analysis was used to examine official records, including the School Work Plan (RKS), the School Activity and Budget Plan (RKAS), infrastructure inventory documents, and reports on facility utilization and development. Documents serve as important sources of institutional evidence that support and triangulate qualitative findings (Bowen, 2009).

All research instruments were developed based on strategic management indicators, including planning, organizing, implementation, and evaluation, as well as Tri Hita Karana harmony indicators, to ensure that the data collected aligned with the research objectives. The integration of these frameworks allowed the study to capture both managerial and cultural dimensions of facility governance. To provide a clearer overview of the research procedure, the study's stages are summarized in Figure 1. The flowchart illustrates the systematic process of the research, beginning with problem identification and formulation of research objectives, followed by the selection of the qualitative case study design. The process continues by determining the research location, subjects, and informants; developing research instruments; conducting data collection through observation, interviews, and documentation; and applying triangulation techniques to ensure data credibility. The collected data were then analyzed using the interactive model of Miles et al. (2014), followed by validation procedures such as member checking, audit trails, and confirmability assessment before interpreting and discussing the research findings.



Figure 1. Flowchart of the Research Methodology for Optimizing School Facilities Through Strategic Management Based on Tri Hita Karana

Data analysis was conducted using the interactive model of Miles et al. (2014), which involves three main stages: data condensation, data display, and conclusion drawing and verification. During the analysis process, the researcher applied a systematic coding strategy. First, open coding was used to identify key concepts emerging from interview transcripts, observation notes, and documents. Second, axial coding was conducted to categorize related codes into broader themes, including strategic planning, stakeholder collaboration, environmental management, and spiritual-cultural practices. Finally, selective coding was applied to integrate these themes into a conceptual explanation of how Tri Hita Karana values shape the strategic governance of school facilities (Saldana, 2021). The coding process was supported by iterative comparisons across data sources to identify recurring patterns and relationships.

To ensure the credibility and trustworthiness of the findings, several validation techniques were employed. These included source triangulation, method triangulation, and time triangulation to compare data obtained from different informants, collection techniques, and observation periods (Denzin, 2017). In addition, member checking was conducted by sharing preliminary interpretations with key informants to verify the researcher's understanding (Creswell & Creswell, 2017). The research process was further strengthened through audit trails, reflective field notes, and systematic documentation, allowing the research procedures to be transparently traced and evaluated.

This study also adhered to ethical research principles. Prior to data collection, all participants were informed of the study's purpose and voluntarily agreed to participate. Informed consent was obtained from each informant, and participants were assured that their identities and responses would remain confidential. The researcher ensured that all data were used solely for academic purposes and that the research process respected the school community's institutional norms and cultural values. Through these methodological procedures, the study aims to produce credible, contextually grounded findings that explain how strategic management enriched by Tri Hita Karana principles can optimize school facilities and infrastructure. The methodological rigor applied in this research supports the development of a culturally informed model for educational facility governance.

RESULT AND DISCUSSION

Result

Vision-Driven Participatory Strategic Planning

The findings indicate that a vision-driven and participatory planning process guides strategic planning for school facilities at SMP Negeri 11 Denpasar. Rather than merely listing infrastructure needs, the planning process integrates technological development, ecological considerations, and stakeholder participation. Three analytical subthemes emerged from the coding process: digital prioritization, ecological filtering, and budget alignment.

First, digital prioritization reflects the school's strategic orientation toward supporting technology-enhanced learning environments. Interview data reveal that digital infrastructure—such as Chromebooks, classroom Wi-Fi, and LCD projectors has become the primary focus of procurement planning. As explained by the school principal: *“The RKS and RKAS are prepared collaboratively, but our main priority today is digital learning infrastructure so that teaching can adapt to technological developments.”* Similarly, the ICT teacher emphasized that digital facilities significantly shape instructional practices: *“Chromebooks and LCDs are now frequently used in project-based learning activities. Teachers are also trained regularly to maximize their use.”*

Second, the planning process applies an ecological filtering mechanism, reflecting the *palemahan* dimension of Tri Hita Karana. Observational data show that environmental sustainability is considered in infrastructure decisions, such as allocating green open spaces, school gardens, and waste recycling programs. A laboratory staff member explained: *“The school not only plans new facilities but also considers environmental sustainability, such as maintaining the educational garden and managing waste.”*

Third, budget alignment serves as a strategic mechanism to ensure that infrastructure planning remains feasible within the financial structure of the School Activity and Budget Plan (RKAS). The involvement of the school committee helps address funding limitations through collaborative decision-making and external support. Table 1 summarizes key findings from interviews with informants regarding strategic planning practices.

Table 1. Summary of Interview Results with Research Informants at SMP Negeri 11 Denpasar

Informant	Aspects Discussed	Main Interview Results	Key Findings
Principal	Strategic planning	RKS and RKAS are developed participatively with a focus on digital facilities	Planning based on the school's vision
Deputy Principal for Infrastructure	Procurement and inventory	Data collection on facilities through a digital procurement system based on priority needs	Digitization accelerates and streamlines the process.
Social Studies Teacher	Utilization of learning facilities	Digital facilities support project-based learning; scheduling arrangements are still needed.	Effective use, but coordination is needed.
ICT Teacher	Integration of digital tools	Chromebooks, LCDs, and Wi-Fi are used to their full potential; training is provided regularly.	Digital transformation improves the quality of learning.
Laboratory Staff	Equipment maintenance	Monthly maintenance and inventory recording are carried out regularly	Scheduled maintenance maintains the service life of facilities
Students	User experience	Learning is more interesting	Facilities increase motivation, but need improvement
School Committee	External Support	The committee collaborates to assist the school	External collaboration overcomes funding limitations.

Analytically, these findings suggest that strategic planning operates not merely as an administrative procedure but as a value-driven governance process in which technological advancement, environmental sustainability, and participatory decision-making intersect.

Digitally Mediated Asset Governance

The second theme emerging from the analysis is digitally mediated asset governance, referring to how the school manages facilities through digital systems that enhance transparency, efficiency, and equitable access. Three key subthemes were identified: transparency, rotational access, and preventive maintenance.

First, transparency is strengthened through digital documentation of procurement and inventory systems. Observational data show that infrastructure records are stored digitally through the school's asset management system. According to the deputy principal responsible for infrastructure, *“Facility data are recorded through a digital procurement and inventory system, making monitoring and reporting much easier.”* Second, rotational access ensures that digital devices are distributed equitably across classrooms. Since LCD projectors are not permanently installed in each classroom, teachers use them through a scheduling system. A Social Studies teacher explained: *“LCD projectors are used alternately by teachers, so scheduling is necessary to ensure that everyone can use them during lessons.”* Third, preventive maintenance has become a structured institutional practice. Observations indicate that maintenance activities follow monthly and semester schedules, thereby extending the lifespan of infrastructure assets. As stated by laboratory staff: *“We conduct regular maintenance every month and record all equipment conditions in the inventory system”*. The analytical mapping of observational data is presented in Table 2.

Table 2. Observation Data on Strategic Management Implementation at SMP Negeri 11 Denpasar

Aspects Observed	Field Observation Results	Interpretation/Analysis
Procurement process	Procurement was carried out in accordance with BOS procedures, with digital documentation.	The procurement process is transparent and accountable.
Inventory of goods	Facility data is recorded digitally (school website)	Technology improves asset management efficiency
Routine maintenance	Monthly and semester maintenance schedules are consistently carried out.	Preventive maintenance is effective.

Use of learning spaces	LCDs are not installed in classrooms, but each teacher has access to LCDs when teaching. Classrooms are equipped with Wi-Fi.	Support for active learning
Teacher and student involvement	Teachers participate in ICT training; students and teachers help maintain the cleanliness of the facilities.	School community collaboration fosters a culture of responsibility.
School environment	Educational gardens and waste recycling activities are available	The school implements environmentally friendly principles

Overall, the findings suggest that digital systems do not merely improve operational efficiency but also reshape governance practices, enabling more transparent and accountable asset management.

Value-Embedded Facility Culture

Beyond managerial structures, the study reveals the emergence of a value-embedded facility culture in which the philosophical value of Tri Hita Karana shapes infrastructure management practices. Three interrelated subthemes were identified: *palemahan* (sustainability practices), *pawongan* (collaborative discipline), and *parhyangan* (sacred space ethics). The *palemahan* dimension manifests through environmentally oriented practices such as waste recycling programs, school gardens, and energy conservation initiatives. Observational evidence indicates that students and teachers actively participate in maintaining the school's ecological environment. The *pawongan* value is reflected in collaborative responsibility among school members in maintaining facilities. Teachers participate in ICT training, while students contribute to maintaining classroom cleanliness and to discipline in equipment use. One teacher noted: "Facilities can function well because teachers and students share responsibility in maintaining them."

Meanwhile, the *parhyangan* dimension emphasizes the spiritual dimension of school spaces. The school maintains sacred areas for religious activities and promotes ethical behavior in the use of learning spaces. According to one teacher: "We remind students that classrooms and learning tools must be respected because learning itself is part of our spiritual responsibility." These findings indicate that infrastructure governance is not solely technical but embedded in cultural and spiritual values that shape everyday institutional practices.

Structural and Cultural Constraints

Despite the positive implementation of strategic management, the analysis also identifies several structural and cultural constraints that influence infrastructure optimization. Three main subthemes emerged: budget asymmetry, uneven digital literacy, and cultural compliance gaps. First, budget asymmetry remains a major structural challenge. Although BOS funds support infrastructure procurement, the budget is often insufficient to meet all facility needs. A school committee member stated: "The school budget cannot fully cover all infrastructure needs, so collaboration with external stakeholders is sometimes necessary." Second, uneven digital literacy among teachers and staff affects the optimal use of digital systems. While ICT training programs are conducted regularly, some users still experience difficulties operating digital inventory systems. Third, cultural compliance gaps appear in students' awareness of facility care. Evaluation data indicate that some equipment has been damaged due to improper use. Table 3 summarizes the evaluation findings.

Table 3. Results of the Evaluation of Facility and Infrastructure Management at SMP Negeri 11 Denpasar

Evaluation Aspects Current Conditions	Evaluation Findings	Improvement Plan
Physical condition of facilities	Some projectors, tables, and chairs are starting to break down	Maintenance and replacement are needed. Repairs are budgeted for in the 2025 RKAS
Utilization of digital facilities	Optimal in certain classes, not yet evenly distributed across all classes. Device distribution is not yet balanced.	Addition of equipment through BOS

Effectiveness of learning	Learning is more interactive with digital facilities	Teacher training for device optimization
School community participation	Teachers actively maintain facilities; students still lack awareness	Assigning responsibility to each user of facilities and infrastructure to maintain and care for them after use
Data management system	Already digital-based but not yet real-time	Data input is not yet consistent—training for infrastructure operators and periodic validation are needed.

These constraints highlight the need for continuous capacity development and cultural reinforcement to sustain effective infrastructure governance.

Conceptual Model Emergence

Based on cross-theme analysis, the study proposes an emerging conceptual model of Tri Hita Karana-based strategic facility governance. The model illustrates how three interacting components, vision-driven planning, digital governance mechanisms, and value-embedded institutional culture, collectively contribute to the optimization of school facilities. However, this system is simultaneously influenced by structural constraints such as budget limitations and digital literacy gaps. The conceptual model suggests that effective facility governance occurs when strategic management processes are reinforced by cultural values and supported by digital infrastructure systems, creating a balanced integration between managerial efficiency and socio-cultural harmony.

Discussion

The findings of this study demonstrate that school facility governance is evolving from a predominantly administrative function into a multidimensional governance process shaped by strategic vision, digital mediation, and culturally embedded institutional values. Rather than operating as isolated managerial practices, planning, asset management, and maintenance activities collectively form an integrated governance ecosystem in which technological advancement, sustainability principles, and participatory collaboration mutually reinforce institutional effectiveness.

The identification of vision-driven participatory planning confirms that strategic management in contemporary schools increasingly functions as a value-oriented governance practice rather than a procedural compliance mechanism. The prioritization of digital infrastructure reflects broader global shifts toward technology-enhanced learning environments, where institutional planning aligns with pedagogical transformation. International studies indicate that distributed leadership structures enable collaborative decision-making processes that strengthen institutional adaptability and innovation capacity (Liu et al., 2023; Mifsud, 2024). However, the present findings extend this literature by demonstrating that participatory planning becomes more sustainable when strategic priorities are simultaneously filtered through ecological and cultural values. This suggests that effective planning is not merely collaborative but normatively guided, integrating environmental responsibility and institutional identity into managerial decision-making.

The emergence of digitally mediated asset governance highlights the growing role of digital infrastructures as governance instruments rather than neutral technological tools. Digital procurement documentation, inventory transparency, and rotational access mechanisms illustrate how data systems reshape accountability practices and organizational coordination. Educational governance scholars argue that contemporary institutions are increasingly governed through digital platforms that structure monitoring, decision-making, and institutional behavior (Williamson, 2016). Consistent with this perspective, the study shows that digital systems enhance transparency and efficiency while simultaneously redistributing organizational responsibility across institutional actors. Importantly, technology does not replace human governance but mediates collaborative

interactions, supporting recent arguments that digital transformation in education is socially constructed and context-dependent rather than technologically deterministic (Yang et al., 2023).

A distinctive contribution of this study is demonstrating how infrastructure governance is culturally embedded within the philosophical framework of Tri Hita Karana. The integration of *palemahan*, *pawongan*, and *parhyangan* values reveals that infrastructure management practices are sustained not only through formal regulation but also through shared moral commitments. This finding resonates with sociocultural perspectives on distributed leadership, which emphasize trust, collaboration, and collective responsibility as foundational conditions for organizational improvement (De Jong et al., 2023). Unlike many international studies that conceptualize governance primarily in terms of managerial efficiency, the present research shows that cultural and spiritual values serve as stabilizing mechanisms that sustain institutional practices over time. Such integration expands the sustainability discourse by showing that ecological and ethical orientations can serve as governance resources rather than merely symbolic institutional attributes.

Despite positive outcomes, the study identifies persistent tensions between strategic aspirations and structural realities. Budget asymmetry, uneven digital literacy, and cultural compliance gaps reveal that governance effectiveness depends on organizational capacity development. Similar challenges have been documented in digital governance research, where technological adoption often outpaces human readiness and institutional capability (Yang et al., 2023). These constraints suggest that sustainable governance requires continuous professional learning and organizational adaptation. Leadership effectiveness, therefore, should be interpreted not as control over resources but as the ability to orchestrate alignment among institutional vision, technological systems, and human competencies.

Collectively, the findings support a shift from leadership-centered explanations toward governance-centered interpretations of educational improvement. The proposed Tri Hita Karana-based strategic facility governance model demonstrates that institutional effectiveness emerges from the interaction of three interdependent dimensions: (1) vision-driven strategic planning, (2) digitally mediated governance mechanisms, and (3) value-embedded institutional culture. This integrative framework contributes to educational leadership theory by bridging distributed leadership scholarship with perspectives on digital governance and sustainability. Rather than viewing these domains separately, the study conceptualizes them as mutually constitutive elements within a dynamic governance system.

This study suggests that sustainable school infrastructure governance in the digital era depends less on technological acquisition or managerial authority alone and more on the alignment between strategic vision, collaborative governance practices, and culturally grounded institutional values. By empirically illustrating how digital systems, participatory leadership, and local philosophical principles intersect within everyday organizational practices, the study advances a contextualized yet theoretically transferable understanding of educational governance. These findings invite scholars and policymakers to reconsider educational transformation as a socio-technical and cultural process in which sustainability emerges through the continuous negotiation between innovation, institutional capacity, and shared values.

CONCLUSION

This study shows that school facility and infrastructure management is shaped not only by formal managerial systems but also by cultural values embedded in everyday organizational practices. The findings indicate that integrating strategic management with the Tri Hita Karana philosophy creates a holistic governance model that balances operational efficiency with social harmony and environmental sustainability. Within this framework, *palemahan* strengthens environmentally responsible management, *pawongan* promotes collaboration and shared responsibility in facility use,

and parhyangan introduces ethical and spiritual awareness in the maintenance of learning spaces as part of the educational ecosystem. Conceptually, the study contributes to educational management by demonstrating that local cultural values can function as normative governance mechanisms that reinforce organizational strategies, suggesting that facility optimization should be understood as a socio-cultural governance process rather than merely a technical or administrative activity. Nevertheless, the findings are context-bound, as the research was conducted in a single public school in Bali with a strong commitment to Tri Hita Karana, limiting broader generalization. At the same time, the qualitative case study design prioritizes depth of understanding over statistical representation. Future research should therefore adopt comparative or quantitative approaches to examine how cultural value integration and digitalized facility management influence governance effectiveness across diverse educational contexts.

BIBLIOGRAPHY

- Alfaiz, B. Y., Sujatnika, D. A., & Sutarman, A. (2024). Manajemen sarana prasarana dalam meningkatkan efektivitas operasional sekolah dan media pembelajaran siswa di SMAN 1 Rogojampi Banyuwangi. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 10(01), 31-42. <https://doi.org/10.32678/tarbawi.v10i01.9912>
- Amanulloh, M. J. F. A., Sumarsono, R. B., & Supriyanto, A. (2025). Global Trends in Quality Education Research under ESD and the 2030 Agenda: A Bibliometric Review. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 11(01), 47-62. <https://doi.org/10.32678/tarbawi.v11i01.11254>
- Barrett, P., Davies, F., Zhang, Y., & Barrett, L. (2015). The impact of classroom design on pupils' learning: Final results of a holistic, multi-level analysis. *Building and Environment*, 89, 118–133. <https://doi.org/https://doi.org/10.1016/j.buildenv.2015.02.013>
- Bell, L. (2002). Strategic planning and school management: full of sound and fury, signifying nothing?. *Journal of Educational Administration*, 40(5), 407-424. <https://doi.org/10.1108/09578230210440276>
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative research journal*, 9(2), 27-40. <https://doi.org/10.3316/QRJ0902027>
- Bryson, J. M. (2018). *Strategic planning for public and nonprofit organizations: A guide to strengthening and sustaining organizational achievement*. John Wiley & Sons.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage Publications.
- de Borba, G. S., Alves, I. M., & Campagnolo, P. D. B. (2020). How learning spaces can collaborate with student engagement and enhance student-faculty interaction in higher education. *Innovative Higher Education*, 45(1), 51-63. <https://doi.org/10.1007/s10755-019-09483-9>
- De Jong, W. A., De Kleijn, R. A. M., Lockhorst, D., Brouwer, J., Noordegraaf, M., & Van Tartwijk, J. W. F. (2023). Collaborative spirit: Understanding distributed leadership practices in and around teacher teams. *Teaching and Teacher Education*, 123, 103977. <https://doi.org/10.1016/j.tate.2022.103977>
- Denzin, N. K. (2017). *The research act: A theoretical introduction to sociological methods*. Routledge. <https://doi.org/10.4324/9781315134543>
- Earthman, G. I. (2004). *Prioritization of 21st century school facility needs*. American Civil Liberties Union Foundation of Maryland.
- Fidan, T., & Balci, A. (2017). Managing schools as complex adaptive systems: A strategic perspective. *International electronic journal of elementary education*, 10(1), 11-26. <https://doi.org/10.26822/iejee.2017131883>

- Foxon, T. J., Reed, M. S., & Stringer, L. C. (2009). Governing long-term social–ecological change: what can the adaptive management and transition management approaches learn from each other?. *Environmental Policy and Governance*, 19(1), 3-20. <https://doi.org/10.1002/eet.496>
- Frelin, A., & Grannäs, J. (2021). Designing and building robust innovative learning environments. *Buildings*, 11(8), 345. <https://doi.org/10.3390/buildings11080345>
- Hisyam, M. A., Damyati, A. R., Khambali, K. B. M., & Toksöz, H. (2024). Tri Hita Karana and Islamic ethics: Bridging universal values for social harmony and environmental sustainability. *Teosofi: Jurnal Tasawuf dan Pemikiran Islam*, 14(2), 167-194. <https://doi.org/10.15642/teosofi.2024.14.2.167-194>
- Irawan, M. N. L. (2023). Pengaruh manajemen sarana dan prasarana terhadap efektivitas pembelajaran di sekolah Islam. *An Najah (Jurnal Pendidikan Islam dan Sosial Keagamaan)*, 2(3), 84-91. <https://journal.nabest.id/index.php/annajah/article/view/392>
- Irawandi, F. D. N., & Saputra, A. A. (2025). Strategi manajemen sarana dan prasarana untuk meningkatkan kualitas pendidikan di SD Negeri 02 Talang Kelapa. *Indonesian Journal on Education (IJoEd)*, 1(3), 244-252. <https://doi.org/10.70437/ijoed.v1i3.114>
- Junita, S., Zaini, Z. A. H., Muhith, A., & Ghani, M. F. A. (2024). Implementation of the Trilogy concept: Improving student quality and education standards at the Islamic education foundation. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 10(01), 63-76. <https://doi.org/10.32678/tarbawi.v10i02.9507>
- Juwana, I. D. P., Indrawan, I. P. E., & Anggreni, N. L. P. Y. (2025). Strategic management of school facilities and infrastructure: A case study of state elementary school 11 Sesetan Denpasar. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 11(02), 269-276. <https://doi.org/10.32678/tarbawi.v11i02.11405>
- Karina, K., Asifa, S. N., & Suryadi, S. (2025). Effectiveness of Diarvis-BMD in managing educational infrastructure data. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 11(01), 87-96. <https://doi.org/10.32678/tarbawi.v11i01.11180>
- Kooiman, J. (2003). *Governing as governance*. Sage Publications.
- Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. Sage Publication.
- Lestari, L. D., Kandia, I. W., Santika, I. G. N., Bara, Y. P., & Syukur, F. M. (2025). Coexisting in harmony: The role of Tri Hita Karana philosophy in the social structure of Balinese society. *International Journal of Education and Social Science Studies*, 1(3), 147-152. <https://doi.org/10.60153/ijess.v1i3.233>
- Liu, J., Qiang, F., & Kang, H. (2023). Distributed leadership, self-efficacy and wellbeing in schools: A study of relations among teachers in Shanghai. *Humanities and Social Sciences Communications*, 10(1), 248. <https://doi.org/10.1057/s41599-023-01696-w>
- Mifsud, D. (2024). A systematic review of school distributed leadership: Exploring research purposes, concepts and approaches in the field between 2010 and 2022. *Journal of Educational Administration and History*, 56(2), 154-179. <https://doi.org/10.1080/00220620.2022.2158181>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis*. Sage Publication.
- Natalis, A., Al Asy'Arie, M. A. H., Najib, A. A., & Wibawa, K. C. S. (2025). Tri Hita Karana as the Spirit of Sustainable Development: Integration of the Welfare State and Pentahelix Collaboration in Indonesia. *Journal of Natural Resources*, 8(3), 89-107. <https://doi.org/10.33002/nr2581.6853.080305>
- Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). SAGE Publications.
- Rhodes, R. A. (2017). *Network governance and the differentiated polity: Selected essays* (Vol. 1). Oxford University Press.
- Royhatudin, A., Supardi, S., & Juhji, J. (2020). Transformational leadership style in implementing madrasa based management. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 6(01), 69-80. <https://doi.org/10.32678/tarbawi.v6i01.2187>
- Saldaña, J. (2021). *The coding manual for qualitative researchers* (4th ed.). SAGE Publications.

- Spradley, J. P. (2016). *Participant observation*. Waveland Press.
- Thomas, C. L., Pavlechko, G. M., & Cassady, J. C. (2019). An examination of the mediating role of learning space design on the relation between instructor effectiveness and student engagement. *Learning Environments Research*, 22(1), 117-131. <https://doi.org/10.1007/s10984-018-9270-4>
- Tisdell, E. J., Merriam, S. B., & Stuckey-Peyrot, H. L. (2025). *Qualitative research: A guide to design and implementation*. John Wiley & Sons.
- Umar, S., Senang, S., & Sunardi, S. (2024). Peningkatan mutu pembelajaran melalui pengembangan sarana dan prasarana. *Irsyaduna: Jurnal Studi Kemahasiswaan*, 4(1), 16-28. <https://doi.org/10.54437/irsyaduna.v4i1.1552>
- Wheelen, T. L., Hoffman, J. D. H. A. N., & Bamford, C. E. (2018). *Strategic management and business policy globalization*. Pearson.
- Williamson, B. (2016). Digital education governance: An introduction. *European Educational Research Journal*, 15(1), 3-13. <https://doi.org/10.1177/1474904115616630>
- Wiryanan, I. W. (2024). Implementation of Balinese Tri Hita Karana concept for environmental conservation of cultural heritage of land consolidation arrangements. *International Journal of Conservation Science*, 15(1), 597-614. <https://doi.org/10.36868/IJCS.2024.01.15>
- Yang, X., Zhu, X., & Chen, D. (2023). Discourses regarding education governance in the digital age at K-12 level: Possibilities, risks, and strategies. *Teaching and Teacher Education*, 132, 104261. <https://doi.org/10.1016/j.tate.2023.104261>
- Yin, R. K. (2018). *Case study research and applications: Design and methods*. SAGE Publications