

ROLE OF PRINCIPAL LEADERSHIP IN THE DIGITAL ERA IN BUILDING STUDENT CHARACTER

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ABSTRACT

The digital era has shifted the paradigm of traditional education, a complex technology-based ecosystem, toward demands for school leadership to be adaptive while still upholding moral values. This study aims to analyze the leadership strategies of the principal at Muhammadiyah 1 High School in Ponorogo in facing the challenges of digitalization to strengthen student character. Using a qualitative case study approach, data was collected through in-depth interviews, observation, and documentation. The research findings indicate that the principal implements values-based digital leadership by integrating the school's Management Information System (MIS) as a tool for efficiency and oversight. Character formation is carried out through a synergy between digital policies and religious guidance that emphasizes social media ethics. Technical obstacles such as limited student internet access and teacher competency are addressed through ongoing training programs and collaboration with parents. In conclusion, effective digital leadership is one that balances technological innovation with spiritual values (morals).

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INTRODUCTION

Education in the digital era is no longer simply an option, but a systemic necessity. The digital transformation in Indonesia has shifted learning methods from traditional to online and blended learning systems. This situation presents both significant opportunities and challenges for the quality of learning at the secondary level. Amidst this rapid technological advancement, the leadership role of the principal is a key determinant in directing school policies to ensure that the spirit of character education is not lost. Muhammadiyah 1 High School, Ponorogo, as an Islamic educational institution, faces a significant challenge in harnessing technological sophistication with noble moral values for Generation Z (Bernadetta et al., 2025).

Society 5.0 requires schools to produce graduates who are not only cognitively intelligent but also morally resilient individuals in the cyber world. The positive impact of digitalization is demonstrated by the flexibility of information access, but on the other hand, it gives rise to low digital ethics if not balanced with appropriate educational policies (Muhammad et al., 2025). The challenges arising from this phenomenon are often exacerbated

by the digital divide, which limits the equitable distribution of quality educational materials across regions (Sidiq et al., 2025). Therefore, school principals should act as change managers to help bridge this gap through proactive vision (Rita & Sofyan, 2022).

Building student character in the digital age demands a more strategic and valuable approach to school leadership, no longer reliant solely on physical supervision. Advances in information technology have expanded students' social interactions, allowing the internalization of character values to occur not only in the classroom but also in digital spaces with minimal direct control. In this context, the principal's leadership plays a central role in establishing a value system that consistently guides the behavior of teachers and students.

Empirical studies show that the principal's leadership style significantly influences teacher performance in shaping students' social character, particularly in the areas of responsibility, discipline, and social ethics (Mubarok et al., 2024). Transformational and value-oriented leadership has been shown to be more effective in encouraging teachers to integrate character education into technology-based learning. This is in line with the view of Bass and Riggio (2006), who asserted that transformational leaders are able to build moral and professional commitment through role models, inspiring motivation, and individual attention (Harsoyo, 2022).

The implementation of technology integration at Muhammadiyah 1 High School in Ponorogo demonstrates that a humanistic and religious approach is key to maintaining a balance between digital innovation and character building. The use of learning technologies, such as digital platforms and online media, is not only aimed at improving learning effectiveness but also serves as a means of internalizing Islamic values and media ethics. Hallinger (2010) in (Ansori & Hamzah, 2025) states that this approach reflects instructional leadership practices that are adaptive to changing times while remaining grounded in the school's institutional identity.

Furthermore, developing a school quality culture in the digital era must place character integrity as the primary foundation. A quality culture reduced to academic achievement and technological mastery has the potential to neglect the affective and moral dimensions of students. Therefore, the integration of character values needs to be systemically internalized in school policies, curricula, and teacher performance evaluations. These findings strengthen the argument that a school's success in producing globally competitive graduates is largely determined by its ability to integrate digital literacy with strengthening students' character and identity (Retnomurtiningsih et al., 2024).

METHOD

This research applies a qualitative approach with a case study design to comprehensively explore digital leadership practices at Muhammadiyah 1 High School, Ponorogo. A descriptive-exploratory research model was chosen because it is considered relevant to examining the educational transformation process in Islamic educational institutions, particularly in capturing the relationship between policy direction and the reality of its implementation in the school environment (Sidiq et al., 2025). The research informants consisted of the principal as the primary data source, Islamic Religious Education (PAI) teachers, and administrative staff directly involved in managing digital-based systems.

Data collection was conducted through in-depth interviews, participant observation of the use of digital technology in school activities, and a review of applicable policy documents. The data obtained were analyzed using thematic analysis supported by source triangulation to increase the credibility and validity of the research results. Through this approach, the study was able to more clearly reveal how principal leadership designs and implements strategies in addressing dynamic social change and the demands of digitalization, particularly in strengthening character education that is systematically designed and (Huda, 2025).

RESULTS AND DISCUSSION

The research results show that principal leadership in the digital era plays a strategic role in integrating technology with student character building. A summary of the discussion results is presented in the following table:

Table 1. Principal Leadership in the Digital Era

| Discussion Aspects | Empirical Findings | Analysis | Theoretical Basis |
|---------------------------|--|---|-------------------------|
| Digital Leadership Vision | Digitalization has become a strategic school policy. | Leadership is visionary and transformative. | Bass & Riggio |
| SIM Implementation | SIM integrated into school services. | Improve efficiency and accountability. | Nashrullah et al., 2025 |
| Character Building | Emphasis on digital ethics and Islamic morals. | Character is built through moral awareness. | Yuniarsih et al., 2023 |
| Obstacles and Solutions | Internet access and teacher competence. | Ongoing training and collaboration. | Sidiq et al., 2025 |

Digital Leadership Vision and Policy Authority

The principal's leadership at Muhammadiyah 1 High School in Ponorogo is built on a strategic awareness that digital technology is not merely a supporting tool, but rather an integral structural element of 21st-century educational governance. In this context, the principal positions himself as a central actor in the formulation and adoption of strategic policies that determine the direction of the school's transformation. Leadership authority is understood not merely as administrative authority, but as a moral and professional responsibility to ensure the school's progressive adaptation to global change.

Interview results indicate that school principals emphasize the dominant role of leadership in determining the success of school digitalization implementation. The following statement reflects this view:

"The role of the principal in the digital age: The principal plays a crucial role in policymaking and has authority over school programs. Therefore, any digital policy depends on the principal. It is the principal's policy that is crucial."

This statement indicates that the digitalization of education at Muhammadiyah 1 High School in Ponorogo is taking place within a top-down yet visionary leadership framework, where strategic policies are designed to align the school's vision, human resource readiness, and the demands of technological development. The principal does not view technology as a threat to educational values, but rather as a strategic instrument to improve the effectiveness of learning services and school management.

The leadership strategy implemented is proactive and adaptive. The principal firmly rejects apathy and resistance to digital developments. Digitalization is viewed as an institutional necessity that must be managed in a targeted manner through systematic and sustainable policies. This approach aligns with transformational leadership theory, which emphasizes the importance of long-term vision, strategic decision-making, and the leader's ability to drive comprehensive organizational change.

Theoretically, digital transformation in education requires strong policy support from top leadership for effective and consistent implementation (Nashrullah et al., 2025). Without clear policy legitimacy and leadership authority, digital innovation tends to be partial and unsustainable. In the context of Muhammadiyah 1 High School in Ponorogo, the principal serves as both a policymaker and a change leader, ensuring that all elements of the school teachers, educational staff, and students have the structural and cultural readiness to adapt to the digital ecosystem.

Furthermore, the digital leadership vision promoted is not only oriented toward utilizing technology but also toward school readiness to face global dynamics in the Society 5.0 era. Principals view digitalization as a means to strengthen the competitiveness of educational

institutions without neglecting the Islamic values and character that define the school's identity. This aligns with the view that educational leaders in the Society 5.0 era are required to be able to integrate technological advances with the humanistic and ethical dimensions of educational management (Zayrin et al., 2024).

Thus, the digital leadership vision at SMA Muhammadiyah 1 Ponorogo is reflected in the strategic use of policy authority to promote targeted, inclusive, and sustainable educational modernization. The principal acts not only as a decision-maker but also as an architect of change, ensuring that digital transformation aligns with educational goals, student needs, and the global challenges of the 21st century.

Implementation of School Management Information System (MIS)

The implementation of a school Management Information System (MIS) is the operational manifestation of the principal's digital leadership vision in responding to the demands of 21st-century educational transformation. MIS is not merely understood as an administrative tool, but rather as a strategic system that supports data-based decision-making, improves the quality of educational services, and strengthens accountable and transparent school governance. This perspective aligns with Nashrullah et al. (2025) who emphasized that digitalization of educational management is a primary prerequisite for accelerating school quality amidst the dynamics of technological disruption.

Based on interviews, the principal confirmed that the implementation of SIM was carried out in a planned and gradual manner over the past year. This system was developed to serve the needs of students, teachers, and educational staff, while also encouraging the integration of technology into the learning process. This statement demonstrates a strong leadership commitment to making technology a foundation for improving educational services, not merely an administrative complement.

Aini et al., (2023) stated that technically, the implementation of MIS in this school was carried out through several strategic stages. First, an administrative needs analysis was conducted to identify obstacles in the current manual system, such as service delays, data duplication, and low work efficiency. Digitalization was chosen as a solution to improve the effectiveness and efficiency of overall school management (Erlitha, 2024) . Second, integrated services were realized through the development of applications that included digital attendance, grade management, teacher and employee administration, and access to academic information for students. This integration contributed to increased school accountability and openness, while strengthening stakeholder trust in the educational institution (Munir & Zumrotus, 2024) . Third, data-based monitoring and evaluation were implemented as a continuous quality control mechanism. Data generated from MIS were used by the principal to evaluate teacher performance, the effectiveness of school programs, and student learning outcomes. Thus, decision-making was no longer subjective, but based on measurable and systematic evidence (Retnomurtiningsih et al., 2024).

Character Building: Synergy and Digital Ethics

Amidst schools' openness to technological innovation, character building remains a key anchor in educational development. In the context of Islamic schools, digitalization is not understood as a value-free process, but rather must be guided and controlled to align with moral and spiritual principles. Therefore, school principals develop integrative strategies that combine the use of technology with the internalization of Islamic values.

Interview results indicate that digital character building is achieved through synergy between the principal, Islamic Religious Education (PAI) teachers, parents, and the community. This synergy is realized through a shared vision and mission, strengthened institutional communication, and the development of extracurricular activities and student

development. This approach reflects participatory leadership that positions character as a collective responsibility of the entire education ecosystem.

In practice, the principal establishes digital ethics guidelines as guidelines for technology use within the school environment. The primary emphasis is placed on moral values and spiritual awareness, instilling the understanding that activities in digital spaces still have moral and religious consequences. This approach aims to build student self-control, not simply adherence to formal rules. This strategy reinforces the concept of value-based digital leadership, a leadership model that integrates technological innovation with the upholding of moral values and character (Yuniarsih et al., 2023). Thus, digital leadership in this school is not merely technocratic, but transformative and humanistic, in line with the goals of holistic Islamic education.

Analysis of Technical Constraints and Field Challenges

Although the implementation of digital leadership and MIS has shown positive progress, research findings reveal a number of technical obstacles and field challenges that require serious attention. These challenges reflect the complexity of the digital transformation process in educational settings, particularly in schools with diverse socioeconomic backgrounds.

First, the digital divide is a major obstacle to the equitable implementation of digital systems. Not all students have adequate devices and internet access, potentially creating disparities in the use of technology-based learning services. This situation poses a challenge to achieving equitable digital inclusion for all students (Sidiq et al., 2025). Second, teachers' digital literacy competencies still show significant variation. Some teachers experience difficulties integrating technology into their learning practices. In response, school principals implement ongoing training and mentoring policies, including encouraging teacher participation in Subject Teacher Consultation (MGMP) forums as a means of enhancing professional capacity. This strategy aligns with the need for educator competency development through coaching and continuous learning (Sari et al., 2021). Third, parental involvement in supervising technology use at home remains a challenge. Limited parental digital literacy has the potential to weaken control and mentoring of students outside the school environment. In response, schools build two-way communication through collaborative forums with parents to align perceptions, strengthen the role of families, and ensure continuity of character development between school and home (Safitri et al., 2025).

Overall, these findings demonstrate that successful digital leadership is determined not only by technological sophistication, but also by human resource readiness, environmental support, and inclusive, value-driven policies. With adaptive and reflective management, these challenges can be transformed into opportunities to sustainably strengthen educational quality.

CONCLUSION

The principal's leadership at Muhammadiyah 1 Ponorogo High School in the digital era has proven to play a strategic role as a policy architect capable of synergizing technological transformation with the strengthening of moral and Islamic values. The empirical findings of this study indicate that the implementation of a systematically designed Management Information System (MIS) not only improves the efficiency and accountability of school administration services but also strengthens the functions of supervision, coaching, and internalization of student character in a sustainable manner. The integration of technology in school governance is implemented in a directed manner through visionary leadership that positions digitalization as a means of supporting educational quality, not as a mere goal, thus remaining in line with the vision of Islamic education that is oriented towards the formation of individuals with noble character.

Furthermore, structural challenges such as gaps in internet access and varying levels of digital literacy among school residents are addressed through collaborative and adaptive policies, such as strengthening teacher capacity through the MGMP forum, ongoing mentoring in the use of digital learning media, and intensive and participatory communication with parents. This strategy emphasizes that the success of digital leadership is determined not only by the sophistication of the technology adopted, but also by the ability of educational leaders to build an inclusive, collaborative, and value-based school culture. Thus, the implications of this research reinforce the perspective that digital leadership in the context of Islamic education in the Society 5.0 era is transformative leadership that positions technology as an ethical instrument to strengthen morals, improve the quality of educational services, and prepare an adaptive generation.

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