

Leading Digital Transformation in Salaf Islamic Education: Negotiating Technology and Tradition

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ABSTRACT. Digital transformation in Salafi Islamic education presents leadership challenges, as the use of technology must be aligned with the traditions and institutional identity of the pesantren. This study aims to analyse how leaders navigate digital transformation within the context of Salafi Islamic education. The research employs a qualitative approach using a case study design at the Al-Anshoriyah Islamic Boarding School. Data were collected through interviews with three key informants the pesantren director, the chair of the board of trustees, and the headteacher as well as through observation and documentation. The data were analysed thematically by comparing information from the three data collection methods. The research findings identified three interrelated leadership practices: the selective adoption of technology, the gradual management of organisational change, and the negotiation between the utilisation of technology and the continuity of Salaf traditions. Key findings indicate that the continuity of traditional practices does not necessarily signify resistance to digitalisation, but can form part of leadership considerations in determining the scope of technological change. This study offers a perspective on ‘tradition-sensitive digital leadership’, which emphasises the role of leaders in aligning the use of technology with the identity and educational commitments of Islamic boarding schools. This perspective provides a contextual foundation for understanding digital transformation in Islamic educational institutions that uphold their institutional traditions.

Keywords. Digital Leadership; Digital Transformation in Islamic education; Salaf Islamic Education; technology-tradition negotiation; tradition-sensitive leadership

Abstrak. *Transformasi digital dalam pendidikan Islam Salaf menghadirkan tantangan kepemimpinan karena pemanfaatan teknologi perlu diselaraskan dengan tradisi dan identitas kelembagaan pesantren. Penelitian ini bertujuan menganalisis bagaimana pemimpin menavigasi transformasi digital dalam konteks pendidikan Islam Salaf. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus di Pondok Pesantren Al-Anshoriyah. Data diperoleh melalui wawancara dengan tiga informan utama, yaitu pimpinan pesantren, ketua pengurus, dan kepala sekolah, serta melalui observasi dan dokumentasi. Data dianalisis secara tematik dengan membandingkan informasi dari ketiga teknik pengumpulan data. Hasil penelitian mengidentifikasi tiga praktik kepemimpinan yang saling berkaitan, yaitu adopsi teknologi secara selektif, pengelolaan perubahan organisasi secara bertahap, dan negosiasi antara pemanfaatan teknologi dan keberlanjutan tradisi Salaf. Temuan utama menunjukkan bahwa keberlanjutan praktik tradisional tidak selalu menandakan resistensi terhadap digitalisasi, tetapi dapat menjadi bagian dari pertimbangan kepemimpinan dalam menentukan cakupan perubahan teknologi. Penelitian ini menawarkan perspektif kepemimpinan digital sensitif tradisi (tradition-sensitive digital leadership) yang menekankan peran pemimpin dalam menyelaraskan pemanfaatan teknologi dengan identitas dan komitmen pendidikan pesantren. Perspektif ini memberikan*

landasan kontekstual untuk memahami transformasi digital pada lembaga pendidikan Islam yang mempertabankan tradisi kelebagaannya.

Kata Kunci: *kepemimpinan digital; transformasi digital pendidikan Islam; pendidikan Islam salaf; negosiasi teknologi-tradisi; kepemimpinan sensitif tradisi*

Introduction

Digital transformation has become an important dimension of organizational change in education, affecting not only instructional practices but also decision-making, organizational communication, resource management, and institutional coordination (Jamarudin dkk., 2026; McCarthy dkk., 2023; Reis-Andersson, 2024). These changes place leadership at the center of digital transformation because technological adoption requires decisions about institutional priorities, resource allocation, human capacity, and the direction of organizational change (Schiuma dkk., 2024). However, the implications of digital transformation vary across educational settings. In Salaf Islamic boarding schools (pesantren), the adoption of digital technologies takes place within institutions whose educational practices are closely associated with religious authority, scholarly traditions, kitab kuning learning, and established teacher student relationships. Digital transformation in this context therefore raises an organizational question: how can leaders respond to technological developments while maintaining the institutional practices and values that underpin pesantren education? This question positions digital transformation not simply as a process of technological adoption but as a leadership challenge involving institutional priorities, organizational change, and the continuity of educational traditions (Miftah dkk., 2026).

This issue provides the empirical point of departure for examining Pondok Pesantren Al-Anshoriyah Pamekasan. Initial observations identified developments in the pesantren's digital infrastructure and technology use, including internet/Wi-Fi access, computers for administrative activities, digital devices for institutional communication, and digital media for publicizing pesantren activities. These developments indicate that digital technologies have begun to form part of the institution's organizational environment. Nevertheless, the presence of infrastructure and devices alone does not establish how digital transformation is managed in practice. The central empirical question concerns the leadership processes through which technological needs are identified, priorities are established, and the appropriate scope of technology use is determined in relation to the pesantren's educational purposes and institutional traditions. The initial observations do not, by themselves, demonstrate an overt conflict between technology and tradition; rather, they identify a need to investigate how leaders make and justify decisions about digital change in a tradition-oriented educational organization. This distinction shifts the analytical focus from the availability of technology to the leadership practices through which its organizational role is negotiated.

Recent studies (2024-2026) examine digital transformation in education from the perspectives of technology integration, digital leadership, organisational governance, and the preservation of Islamic educational values (Asriadi & Esti Andriani, 2026; Humaydiy dkk., 2026; Wardoyo, 2025). These studies highlight technology adoption, strategic vision, organisational capacity, human resource readiness, and institutional support. However, they have not yet provided much insight into how leaders determine the scope and pace of digital transformation whilst educational traditions and religious authority remain at the heart of life in the pesantren. Consequently, this study examines how leaders of Salaf pesantren navigate digital change through decisions and considerations that accommodate technology whilst safeguarding the continuity of institutional practices. The contribution of this research is contextual and process-oriented, analysing how the relationship between technology and tradition is managed through leadership without assuming that the two are always in conflict.

Conceptually, this study draws on digital leadership as a perspective for examining how leaders provide direction for digital change, establish priorities, mobilize organizational resources, support human capacity, and facilitate institutional adaptation. These dimensions provide the literature-based foundation for analyzing leadership practices; they are not, by themselves, evidence that such practices occur in any particular pesantren. Building on this foundation, the study proposes tradition-sensitive negotiation as an analytical orientation for examining how leaders assess technological opportunities and organizational needs in relation to institutional values and established educational practices. This is a context-specific analytical proposition developed for the present study, rather than a claim that tradition-sensitive negotiation constitutes an already established dimension of digital leadership. It directs attention to the ways leaders define the purposes, boundaries, and organizational implications of digital technology while considering the continuity of religious authority, kitab kuning learning, teacher–student relationships, and pesantren culture. This perspective makes it possible to examine digital transformation as a context-dependent organizational process rather than presuming a linear transition from tradition to technological modernity.

Accordingly, this study examines how leaders navigate digital transformation in Salaf Islamic education, using Pondok Pesantren Al-Anshoriyah Pamekasan as a case study. It focuses on leadership decisions concerning the direction and scope of technology use and the relationship between digital adaptation and institutional continuity. The study contributes to the literature on digital leadership by examining its practice in a tradition-oriented Islamic educational organization, while offering context-specific insights into how pesantren leaders manage digital change in relation to their institutional values and educational practices.

Method

This study employs a qualitative approach using a case study design to examine leadership practices in managing digital transformation within Salafi Islamic education. This design was chosen because it focuses on leadership practices within a specific institutional context, particularly the management of technological change in relation to established educational traditions (Sugiyono, 2011). The Al-Anshoriyah Islamic Boarding School in Pamekasan was selected based on initial observations indicating the utilisation and development of digital infrastructure, whilst Salafi educational traditions remain the institution's primary identity. This context allows for an analysis of how leaders determine the direction and scope of digitalisation whilst taking into account the organisation's needs and the sustainability of the pesantren's values. The analysis focuses on leadership decisions regarding the use of technology, organisational adaptation, and the relationship between digital transformation and institutional traditions.

This study involved three informants who were purposively selected based on their roles and involvement in the leadership and management of the organisation, namely the leader/manager of the pesantren (P1), the head of administration at the pesantren (P2), and the headteacher (P3). P1 provided information on priorities, leadership decisions, policies, and the relationship between digitalisation and pesantren traditions. P2 explained administration, institutional communication, the implementation of technology policies, and the management of digital resources. P3 provided information on the use of technology in school management and educational activities, the organisation's response to change, and the link between digitalisation and established educational practices. The three informants offered perspectives on leadership, administration, and educational management in understanding digital transformation.

Data were collected through semi-structured interviews, observation and documentation (Creswell & Poth, 2016). Face-to-face interviews were conducted using a guide based on the research questions, with Q1 focusing on the objectives, priorities, technological decisions and the preservation of pesantren values; Q2 on the application of technology in administration, communication, decision-making and the regulation of its use; and Q3 on the utilisation of technology in school management and learning, responses to change, and its implications for educational practice. Follow-up questions were asked to clarify information and explore relevant issues in greater depth. Observations covered infrastructure and the use of digital technology, administrative activities, institutional communication, and educational practices. Documentation included institutional policies, publications, activity records, administrative documents, and digital media to supplement and verify data from the interviews and observations.

Data analysis was conducted iteratively through the transcription and review of interviews, the coding of issues relating to leadership, digitalisation, decision-making, the use of technology,

organisational responses, and the continuity of pesantren traditions. The codes were grouped into categories and themes that illustrate how leaders navigate digital transformation. The themes were then compared with observational data and documentation to identify similarities, differences and inconsistencies between sources. The final interpretation was carried out by linking these themes within the context of Salafi Islamic education, following the stages of data condensation, data presentation, and the drawing and verification of conclusions (Miles dkk., 2014).

The credibility of the findings was strengthened through source triangulation by comparing the accounts of P1, P2 and P3 as well as technical triangulation, achieved by cross-checking data from interviews, observations and documentation. Any discrepancies in the data were examined in light of their source and context. The interpretation of key findings was confirmed with the relevant participants where possible. The entire process of data collection, coding, categorisation and interpretation was systematically documented to maintain an audit trail and ensure the traceability of findings.

Research Findings and Discussion

Finding

Leadership Direction in Digital Transformation

The findings indicate that digital transformation at the Al-Anshoriyah Islamic boarding school is taking place selectively and in stages. Technology is utilised to support administration, communication, the dissemination of information and publications, without replacing the core practices of Salafi Islamic education. P1 explains that the implementation of technology is not carried out simultaneously, but is prioritised in areas that provide tangible benefits to the institution. Thus, decisions regarding digitalisation are based on the organisation's needs, rather than merely following technological developments.

"Technology does not have to be used for everything. We first look at the needs. If it helps with administration, communication, information, or publication, then we use it. However, it still has to be consistent with the values and needs of the pesantren."

P2, the head of the pesantren management board, emphasized the practical dimension of this policy. He explained that technology is used to support administrative work and facilitate communication among members of the pesantren community.

"We adjust the use of technology to the needs of the management. It is very helpful for communication and information dissemination. Some administrative tasks are also now supported by computers, making them easier to manage."

P3, the school principal, similarly explained that technology is introduced in the school environment according to educational and administrative needs. Technology is viewed as a supporting instrument rather than a replacement for established educational practices.

“At school, we use technology when it supports our work and learning. However, this does not mean that every activity has to use technology. Some activities continue as before because they are part of our educational system.”

The three accounts indicate that the leadership determines digital priorities according to institutional needs and the perceived benefits of technology rather than pursuing comprehensive digitalization.

Observations, interviews and documentation indicate that the internet/Wi-Fi, computers and digital media are utilised to support administration, communication, the dissemination of information and the publication of pesantren activities, whilst Salafi educational and religious practices continue. These findings confirm that digitalisation does not entirely replace the existing educational system, but is selectively integrated to meet institutional needs. Digital publications, administrative documents and activity records reinforce these findings, whilst also demonstrating that the leadership directs the use of technology without eliminating established educational practices.

Managing Digital Change

The findings indicate that digital transformation at the Al-Anshoriyah Islamic boarding school is managed through communication, coordination, support and gradual adaptation. The leadership not only provides technological facilities, but also facilitates the adaptation of the school's management, teachers and members, taking into account their varying levels of competence and readiness. P1 emphasises that change cannot be implemented instantly, as members of the boarding school need time to understand and adapt to new technological practices.

“Change cannot happen immediately. People need to learn and adapt. Therefore, we observe their responses, identify the difficulties they face, and make improvements gradually.”

P2 described the importance of coordination in implementing technological changes. He noted that members of the organization have different levels of technological competence and therefore require different forms of assistance.

“People have different abilities. When there is new technology, communication and coordination are necessary. If someone does not know how to use it, we help them. The important thing is that technology should not make the work more difficult.”

From the school perspective, P3 explained that teachers also need to adapt to changes in technology use. Such adaptation occurs gradually because not all teachers have the same level of familiarity with digital tools.

“Teachers also need to adapt. Some are already familiar with technology, while others still need to learn. Therefore, its use is introduced gradually and adjusted to individual capabilities.”

These accounts indicate that leadership in digital transformation involves not only decisions concerning technological adoption but also the management of human responses to organizational change.

Field observations indicate that the use of technology varies across institutional activities. A number of administrative and communication activities have adopted digital tools, whilst others continue to rely on conventional methods. Documentary evidence, such as administrative records, digital communication materials and activity documentation, also suggests that technology is beginning to be integrated into the organisation's day-to-day operations, although conventional practices are still maintained. Overall, the observational and documentary evidence reinforces the findings from the interviews that digital transformation is taking place selectively and gradually. This process is managed through communication, coordination and guidance from leadership, rather than through a sudden and comprehensive shift to digitalisation.

Negotiating Technology and Tradition

The findings indicate that pesantren leaders view technology as a supporting tool rather than the primary aim of education. Its implementation takes into account institutional values, educational needs and the characteristics of Salafi Islamic education, meaning that digital transformation becomes a process of negotiation between the adaptation of technology and the preservation of pesantren traditions. P1 emphasises that technology is accepted provided it benefits education or the organisation without compromising the fundamental character of Salafi education.

"Technology is a tool. Education remains the main goal. We take advantage of technology, but technology should not cause our educational traditions to disappear."

P 2 explained that this principle is reflected in the management of pesantren activities. Certain institutional functions can make extensive use of technology, whereas other educational activities continue to follow established traditions.

"For administration, communication, information, and publication, technology makes things easier. However, for certain educational activities, we continue to follow the system that has become part of the pesantren tradition."

P3 provided a similar perspective from the school environment. According to P3, technology can assist teachers and schools, but its use must remain appropriate to the characteristics of learning and the needs of students.

"Technology helps teachers, but that does not mean that all learning has to become digital. Some materials and activities are more appropriately conducted in the way we have traditionally done them in the pesantren."

Taken together, the three accounts indicate that the leadership does not perceive technology and tradition as mutually exclusive. Instead, technology is assigned a supporting role while core educational traditions remain protected.

Field observations and documentary evidence indicate that digital technology and established Salafi educational practices coexist. The internet/Wi-Fi, computers and digital media are used to support communication, administration, the dissemination of information and institutional publications, whilst religious activities, teacher pupil interactions and core educational practices are maintained. These findings suggest that digitalisation is not intended to alter the identity of the pesantren, but is selectively integrated into specific organisational and educational functions. Interviews with leaders make it clear that the adoption of technology is based on organisational and educational benefits, whilst taking into account the institution's values and the pesantren's educational priorities.

Discussion

Research findings indicate that digital leadership in Salafi Islamic education is a process of managing technological change that takes into account organisational needs, the readiness of human resources, and the continuity of institutional traditions. At the Al-Anshoriyah Islamic Boarding School in Pamekasan, this process is realised through three interrelated practices: the selective adoption of technology, gradual organisational adaptation, and the negotiation between digital transformation and boarding school traditions. These findings are in line with (Nagel dkk., 2026), who emphasise strategic vision, empowerment, collaboration, innovation, and dynamic adaptation in digital leadership. Lin (2024) also identifies strategic thinking, digital empowerment, change management, and talent development as key dimensions of digital leadership. Meanwhile, (Wiener dkk., 2025a) view digital transformation as organisational change involving the adjustment of strategies and institutional structures. However, the Al-Anshoriyah case broadens this perspective by demonstrating that digital leadership is not only concerned with the ability to facilitate change, but also with assessing the form and scope of change that aligns with the educational identity of the pesantren.

In this context, the selective adoption of technology reflects the strategic dimension of digital leadership. The prioritisation of technology use in administration, communication, information dissemination and publication indicates that decisions regarding digitalisation at Al-Anshoriyah are based on the benefits and relevance to institutional needs. This finding is consistent with Asriadi and (Asriadi & Esti Andriani, 2026), who emphasise the importance of strategic vision, digital competence and organisational capacity in educational transformation. Lin (2024) also identifies strategic thinking as a key capability in determining the direction of digital change, whilst (Bahri dkk., 2024) highlight the role of religious leaders (kiai) in guiding the use of technology to enhance educational services in Islamic boarding schools. Further emphasise the integration of technology in the development of Islamic boarding school education (Ghuni dkk., 2025). However, this study places a different emphasis: digital leadership should not be assessed solely on the extent of

technology use, but also on leaders' ability to determine applications that align with educational objectives and institutional characteristics. Thus, selectivity represents a form of strategic alignment between technological opportunities and the needs of Islamic boarding schools, rather than an indication of resistance to innovation.

In addition to setting technological priorities, digital leadership also requires the ability to manage the organisation's readiness to face change. The second finding indicates that digitalisation at Al-Anshoriyah is taking place gradually through communication, coordination and mentoring, whilst taking into account differences in the technological competencies of the organisation's members. This finding is consistent with (Ghuni dkk., 2025; Hasan dkk., 2025), who emphasises communication, adaptability and change management as key elements of digital leadership. Yuliawati et al. (2025) also identify leadership competencies, organisational culture and teachers' capabilities as factors influencing digital transformation in education. In line with this, (Zeng dkk., 2025) highlight the importance of leadership support, professional development and the provision of resources in enhancing teachers' ability to integrate technology. Ahmed dkk., (2026) also found that the digital transformation of Islamic boarding schools requires the integration of strategic leadership, resource management, human capacity development and institutional adaptation. The findings from Al-Anshoriyah reinforce this perspective by showing that the pace of change needs to be aligned with the organisation's readiness. Thus, phased implementation can be understood as a strategy to facilitate change that takes into account the capacity of the organisation's members, rather than as an indicator of delayed digitalisation.

The third dimension relates to the balance between the utilisation of technology and the sustainability of Salaf educational traditions. The findings indicate that Al-Anshoriyah's leadership regards technology as a tool to support institutional activities without making it a complete replacement for established educational practices. This perspective is consistent with (Halimah dkk., 2024) , who discuss the opportunities for utilising technology alongside the challenges of preserving the values and educational traditions of the pesantren. Miftah dkk., (2026) also explain that the digital transformation of Islamic boarding schools is a process of negotiating values, religious authority and scholarly traditions, rather than merely a technical change. Meanwhile, (Cynthia Permata dkk., 2025; Fazira dkk., 2026) demonstrate that value-based leadership enables the adaptation of technology without neglecting the identity of the Islamic boarding school. This study expands upon these findings by positioning tradition as an active consideration in leadership decision-making. Thus, the continuity of Salaf educational practices does not necessarily indicate resistance to innovation, but may instead reflect leaders' efforts to align digital change with the values, authority and educational objectives of the pesantren.

The interconnection of these three findings demonstrates that digital transformation at Al-Anshoriyah takes place through a process of strategic selection, organisational facilitation and consideration of cultural sustainability. Strategic selection determines which institutional functions require technology; organisational facilitation supports members' adaptation to digital practices; whilst cultural considerations guide the assessment of how well changes align with pesantren traditions. These three processes do not operate in isolation but influence one another in decision-making and the implementation of technology. This interpretation aligns with (Obied, 2025), who emphasises the interconnection of leadership, governance, communication and adaptation in digital transformation, as well as (Wiener dkk., 2025), who link digital transformation to changes in strategy and organisational structure. Ahmed dkk., (2026) also demonstrate that digital change in Islamic boarding schools involves organisational learning and adaptive management. However, the findings of this study confirm that the interrelationships between these dimensions are also influenced by a commitment to the continuity of educational traditions. Therefore, digital transformation in the context of Salaf pesantren is more accurately understood as a process of continuous adjustment between technological choices, organisational readiness, and institutional values, rather than merely a linear process of technology adoption.

When compared with previous research, these findings reinforce the view that digital leadership requires strategic vision, technological competence, communication skills, organisational culture, and adaptability (Lin, 2024; Obied, 2025; Yuliawati dkk., 2025). Research on Islamic boarding schools also highlights the importance of leadership in the integration of technology and the preservation of Islamic educational values (Bahri dkk., 2024; Cyntia Permata dkk., 2025; Miftah dkk., 2026). However, these studies place varying emphases, ranging from technological readiness and organisational capacity to values-based leadership and the negotiation of traditions. The specific contribution of the Al-Anshoriyah study lies in its explanation of the relationship between the prioritisation of technology, the management of organisational adaptation, and considerations regarding the sustainability of traditions within leadership practice. Consequently, this study shifts the focus from the level of technology adoption towards the decision-making processes that determine the objectives, form and scope of digital transformation. This contribution is contextual in nature and is not intended as a generalisation applicable to all Salafi pesantren.

Based on the integration of these findings, this study proposes tradition-sensitive digital leadership (*tradition-sensitive digital leadership*) as a contextual analytical perspective for understanding the digital transformation of Salafi Islamic education. This perspective complements the dimensions of digital leadership put forward by (Lin, 2024; Nagel dkk., 2026), emphasising that strategic vision, change management, and organisational adaptation must be carried out whilst taking into account institutional values and identity. This concept is also linked to the work of

(Cyntia Permata dkk., 2025) on value-based leadership and (Afif dkk., 2025; Miftah dkk., 2026) on the negotiation of technology with tradition and religious authority. The distinction lies in the fact that this study positions leaders' assessments of the scope of change as the link between technology selection, organisational adaptation, and the sustainability of Salafi educational practices. Thus, *tradition-sensitive digital leadership* is positioned as a conceptual perspective derived from a single case study, rather than as a universal theory or a validated causal model. Testing through multi-site research is required to assess its applicability in different institutional contexts.

In practical terms, these findings underscore the importance of leadership that integrates strategic considerations, organisational readiness and institutional values in managing the digital transformation of Islamic boarding schools. Leaders need to prioritise technologies based on educational and organisational needs, provide communication and guidance to support members' adaptation, and evaluate the compatibility of changes with the educational traditions being upheld. These implications are consistent with (Yuliawati dkk., 2025; Zeng dkk., 2025), who emphasise leadership support and human capacity development, as well as (Ahmed dkk., 2026; Cyntia Permata dkk., 2025), who highlight the importance of adaptive and value-based leadership in the digitalisation of Islamic boarding schools. However, sensitivity to tradition does not mean preserving all old practices without evaluation or imposing an absolute restriction on innovation.

On the contrary, digital leadership must ensure that technology is utilised in a relevant, targeted manner that aligns with educational objectives. Thus, the main contribution of this research is to demonstrate that digital transformation in Salafi Islamic education can be managed through leadership decisions that simultaneously consider the benefits of technology, organisational capacity, and the sustainability of institutional identity.

Conclusion

This study concludes that digital transformation at the Al-Anshoriyah Islamic Boarding School is influenced by leaders' decisions regarding the scope of technological change, in line with institutional needs and established educational values. These findings suggest that digital leadership is not only concerned with the adoption of technology, but also with the purpose of its use, organisational adaptation, and the sustainability of the boarding school's core educational practices.

This study offers a contextual perspective on tradition-sensitive digital leadership by positioning the negotiation of institutional identity as an integral part of technological decision-making. This concept broadens the study of digital leadership, but it remains an evolving analytical perspective based on a single case study, rather than a universally validated model. Thus, digital leadership in Salafi Islamic education can be understood through efforts to align technological initiatives with institutional priorities and educational commitments.

This study is limited to a single pesantren and three key informants; consequently, its findings cannot yet be generalised to other institutions. Future research should compare several pesantrens, involve more institutional actors, and examine the implementation and experiences of digital leadership across diverse educational contexts. Such studies could clarify the application and explanatory power of a tradition-sensitive perspective on digital leadership.

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