

Reconstructing Kiai Digital Leadership Based on Pesantren Values for Good Governance in Islamic Boarding Schools

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ABSTRACT

Digital transformation has reached pesantren, yet little is known about how kiai lead it while preserving the values behind their authority. This study aimed to reconstruct a model of kiai digital leadership based on pesantren values that supports good governance in pesantren. It used a qualitative multiple-case design in three pesantren in Madura, East Java. Data came from in-depth interviews with 15 participants, participant observation, document analysis, and focus group discussions. They were analyzed within and across cases using the interactive model of data condensation, display, and verification. The findings show that digitalization did not replace the kiai's authority but changed how it was exercised. Kiai kept religious legitimacy and final decisions and delegated technical work to competent staff. Values such as *amanah*, *shūrah*, and *khidmah* gave digital change a religious meaning and set limits on its use. Digital practices improved transparency, accountability, and efficiency, although participation remained largely consultative. The study proposes the Value-Anchored Mediated Authority model, which explains digital leadership in pesantren as a redistribution of the kiai's authority carried by values rather than a replacement of tradition by technology. Theoretically, the model extends digital leadership theory to faith-based institutions, where legitimacy must be built before technology can take hold. Practically, it offers pesantren leaders and policymakers a reference for digital programs that strengthen governance without eroding pesantren identity.

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INTRODUCTION

Pesantren are among the oldest and most influential Islamic educational institutions in Indonesia. They serve not only as centers of religious learning but also as institutions that shape the character, culture, and leadership of the communities around them (Asrol et al., 2023; Hanisy & Anam, 2022; Sofi et al., 2025). Over the past decade these institutions have faced growing pressure to digitalize. Application-based administration, digital financial management, technology-assisted learning, and institutional communication through social media are now common features of pesantren life (Alip Nur Yanto et al., 2023; Nuha et al., 2024; Tantowi et al., 2025). Digital transformation, however, involves more than the adoption of devices, because it changes how organizations communicate, make decisions, manage resources, and account for their work (Liu et al., 2025; Yusuf et al., 2023). For pesantren, this change raises a question that is both practical and theoretical. How can institutions built around the personal authority of the kiai develop governance that is transparent, accountable, and participatory without losing the values that define them?



Recent scholarship on this question has developed along two largely separate lines. The first examines how kiai authority persists and reshapes itself under modernization. Ethnographic, review, and genealogical studies agree that the kiai remains the center of the pesantren and that charismatic authority is increasingly combined with participatory governance, strategic planning, and professional management (Bukhari et al., 2026; Masuwd et al., 2026; Sofi et al., 2025). The second line examines digital systems themselves. Studies of administrative applications and digital management report gains in efficiency, documentation, accuracy, and accountability, and they show that staff generally accept such systems when the systems are useful and easy to operate (Liu et al., 2025; Nuha et al., 2024; Tantowi et al., 2025). Read together, these studies suggest that pesantren are neither resisting change nor abandoning tradition but negotiating a balance between the two. Yet each line keeps the other in the background. Studies of authority treat digitalization as a context rather than as an object of leadership, while studies of digital systems treat the kiai as an enabling condition rather than as an actor whose legitimacy shapes adoption. Much of this work also relies on a single institution, library research, or technology acceptance surveys, which limits what it can reveal about how leadership, values, and governance interact across different pesantren.

This division leaves a clear gap in the literature. Little is known about how kiai actually lead digital transformation, how pesantren values enter that process, and how the combination shapes governance outcomes such as transparency, accountability, and participation. The gap is sharper in Madura, where pesantren are marked by an especially strong culture of respect for the kiai and by extensive socio-religious networks. Existing work on kiai authority in Madura has relied on library research rather than fieldwork, and research on quality management in Madurese pesantren has not addressed digital leadership (Bukhari et al., 2026; Saadatul Ummah, 2023). The present study responds to this gap in three ways. In terms of context, it examines pesantren in Madura, where the tension between traditional authority and digital governance is likely to be most visible. In terms of method, it uses a multiple-case design with within-case and cross-case analysis and confirms the resulting model through focus group discussions. In terms of focus, it moves beyond asking whether digital tools work and asks how pesantren values legitimize digital change and how far participation actually extends. Taken together, these three elements distinguish the study from earlier research and allow it to reconstruct, rather than merely describe, a model of kiai digital leadership.

Accordingly, this study aims to reconstruct a model of kiai digital leadership based on pesantren values that can support good governance in pesantren. More specifically, it seeks to explain how kiai leadership changes in the digital era, how digital transformation reshapes organizational culture, how values such as *amanah*, *shūrā*, and *khidmah* function within digital leadership, and how these practices affect pesantren governance. In pursuing these aims, the study extends the literature in two directions. It brings the question of legitimacy into research on digital leadership, which has been developed largely in corporate and public sector settings and tends to take the leader's authority for granted (Liu et al., 2025; Yusuf et al., 2023). It also brings digital governance into research on kiai leadership, which has focused mainly on charisma, culture, and organizational identity (Masuwd et al., 2026; Sofi et al., 2025). The study is relevant beyond academic debate as well. Pesantren leaders, foundations, and policymakers need models that improve accountability and service quality without undermining the authority of the kiai or the identity of the pesantren (Solihin & Mubarak, 2024; Tantowi et al., 2025).

The central argument of this study is that digital transformation in pesantren does not replace the traditional authority of the kiai but changes the way that authority is exercised. Digital platforms extend the kiai's reach, while pesantren values supply the moral language through which technological change becomes acceptable to the community. On this view, good governance in pesantren is achieved neither by importing technology nor by imitating

corporate management. It emerges when digital practices are anchored in values that the pesantren community already recognizes as legitimate. As a qualitative inquiry, the study therefore seeks an in-depth understanding of how kiai, administrators, teachers, santri, and alumni experience and interpret this process in their daily institutional life. It pays particular attention to three aspects: the channels through which the kiai exercises authority, the values invoked to justify digital change, and the extent to which digital tools widen participation in decision-making. The following section describes the research design, the selection of cases and participants, and the procedures used to collect and analyze the data.

RESEARCH METHOD

This study used a qualitative approach grounded in a constructivist paradigm and adopted a multiple-case study design. The constructivist orientation suited the purpose of the study, which was to understand how kiai, pesantren leaders, teachers, and other stakeholders construct and enact digital leadership in their own institutional and socio-religious settings rather than to measure variables or test predetermined hypotheses (Creswell & Creswell, 2023; Hennink et al., 2020). A multiple-case design was chosen because it allows each pesantren to be examined in depth while also revealing similarities, differences, and patterns across cases, which gives the reconstructed model a firmer analytical foundation than a single case could provide (Priya, 2021; Takahashi & Araujo, 2020). The study was conducted in three pesantren in Madura, East Java, Indonesia, selected purposively on four criteria. Each pesantren was led by a kiai with significant religious and institutional authority, had implemented or was developing digitalization in its institutional management, used information technology in administrative or educational services, and was willing to take part in the study. Participants were likewise selected purposively on the basis of their knowledge of and direct involvement in leadership, management, digital transformation, and governance. They included kiai or caretakers, foundation leaders, heads of educational units, administrative staff, information-system managers, teachers, santri, and alumni. Snowball sampling was then used to reach additional informants who emerged during fieldwork, and recruitment continued until data saturation was reached, that is, until further interviews yielded no substantially new information (Braun & Clarke, 2021; Campbell et al., 2020; Hennink & Kaiser, 2022). The distribution of the 15 participants by role and case is presented in Table 1.

Table 1. Distribution of Research Participants by Role and Case

Role/Position	Case 1	Case 2	Case 3	Total	Area of Responsibility
Kiai/pesantren caretaker	1	1	1	3	Leadership and governance
Foundation leader	1	1	–	2	Institutional management
Head of educational unit	1	1	–	2	Educational management
Head of administration	1	–	–	1	Administration
Information-system manager	1	1	–	2	Digital transformation
Teacher/ustaz	1	–	1	2	Teaching and technology
Santri	–	1	1	2	Student experience
Alumni	–	1	–	1	Alumni perspective
Total	6	6	3	15	

Data were collected through four complementary techniques: in-depth interviews, participant observation, document analysis, and focus group discussions (FGDs). Semi-structured in-depth interviews explored participants' experiences of digital leadership, organizational change, pesantren values, and governance practices. Participant observation focused on the daily use of digital administrative systems, communication platforms, financial management systems, and educational technologies. It also covered meetings and decision-making processes in which pesantren values such as *amanah*, *shūrah*, *al-'adl*, *mas'ūliyyah*, and *khidmah* were expressed. Document analysis examined institutional records, including digital meeting records, financial reports, activity documentation, and information-system

reports. FGDs were held after the initial analysis and brought together representatives of the teaching staff, institutional administrators, and specialists in pesantren information systems to confirm and refine the draft model of kiai digital leadership (Hennink et al., 2020; Naeem et al., 2023). Each technique compensated for the limitations of the others. Interviews captured meanings and perceptions, observation recorded practice as it actually occurred, documents offered a more stable record of institutional activity, and FGDs tested the emerging model collectively (Creswell & Creswell, 2023; Natow, 2020; Priya, 2021). Fieldwork was supported by interview protocols, observation guidelines, document analysis sheets, field notes, audio recorders, cameras, and qualitative data management software (Hennink et al., 2020; Miles et al., 2020).

Data were analyzed using the interactive model, which runs concurrently with data collection through three streams of activity: data condensation, data display, and conclusion drawing and verification (Miles et al., 2020; Naeem et al., 2023). In the condensation stage, interview transcripts, field notes, and documents were coded and grouped into categories related to leadership, digital practice, pesantren values, and governance. In the display stage, these categories were arranged into matrices and tables that made patterns within and across cases visible. In the final stage, tentative conclusions were drawn and repeatedly checked against the data. The analysis proceeded at three levels. Within-case analysis first built a detailed picture of digital leadership in each pesantren. Cross-case analysis then compared the three cases to identify shared patterns and case-specific variations (Priya, 2021; Takahashi & Araujo, 2020). The cross-case findings were finally formulated as conceptual propositions and assembled into the reconstructed model, which was then confirmed through the FGDs. The trustworthiness of the findings was established through source, technique, and time triangulation, prolonged engagement in the field, member checking, peer debriefing, and an audit trail. Together these strategies addressed the credibility, transferability, dependability, and confirmability of the study (Johnson et al., 2020; Motulsky, 2021; Stahl & King, 2020).

RESULT AND DISCUSSION

Results

The within-case and cross-case analyses of the three pesantren produced five interrelated themes: (1) the shift in kiai leadership in the digital era, (2) digital transformation and the reshaping of organizational culture, (3) pesantren values as the ethical foundation of digital leadership, (4) kiai digital leadership and the strengthening of pesantren governance, and (5) the reconstructed model of kiai digital leadership. Each theme draws on evidence from interviews, observations, documents, and focus group discussions. Before the themes are examined in detail, the dimensions of kiai digital leadership that emerged across the cases are summarized in Table 2.

Table 2. Dimensions of Kiai Digital Leadership across the Three Cases

Dimension	Key Activities	Source of Evidence	Contribution to Good Governance
Digital vision	Formulating digital plans and institutional goals	Kiai interviews; institutional documents	Gives clear direction to digital development
Digital transformation	Using digital technology in administration, education, and communication	Interviews; observations; documents	Improves efficiency and service quality
Pesantren values	Applying <i>amanah</i> , <i>shūrah</i> , and <i>kehidmah</i> in digital practices	Kiai and teacher interviews; observations	Anchors digital practice in ethical responsibility
Participation	Involving teachers and staff in digital initiatives	Interviews; FGDs; observations	Widens participation and collaboration
Governance outcomes	Improving transparency, accountability, and institutional services	Documents; interviews; observations	Supports effective and accountable governance

Kiai Leadership Shifts from Personal Presence to Mediated Direction

Across the three cases, the kiai remained the central source of religious authority, moral guidance, and final decision-making. What changed was the channel through which this authority reached the pesantren community. Kiai who once relied almost entirely on face-to-face instruction, personal visits, and oral announcements now also directed teachers, administrators, and santri through WhatsApp groups, digital announcements, and recorded religious lessons. This shift did not diminish the kiai's authority. Informants described it instead as an extension of that authority into spaces the kiai could not reach in person, such as coordinating staff outside working hours or addressing alumni and parents beyond the pesantren. The distinction matters for the central question of this study. A leadership model that treats technology as a replacement for the kiai would misread what informants reported, whereas a model that treats technology as a new medium for an existing authority fits the evidence more closely.

Interview data showed that the kiai now use WhatsApp to coordinate and communicate with teachers, administrators, and santri, which has made leadership communication considerably faster and more flexible. Teachers confirmed that directives from the pesantren leadership are now distributed through digital media. They also reported that part of religious instruction has been adapted into digital formats such as videos, presentations, and online materials. Field observations added a further layer of evidence. Digital systems had begun to support routine scheduling, the circulation of pesantren announcements, and the documentation of daily organizational management.

These accounts suggest that kiai leadership in all three cases operated on two layers. The first was traditional and personal, grounded in the kiai's scholarly standing, *barakah*, and daily presence in the pesantren. The second was mediated and ran through digital platforms that allowed instructions, teaching materials, and institutional news to circulate faster and more widely. Interviews with santri and alumni indicated that this second layer carried the kiai's influence beyond the physical boundaries of the pesantren, particularly through its social media accounts. The kiai did not, however, operate these platforms personally. They delegated the technical work to staff and information-system managers, and this pattern held consistently across the three cases. The kiai retained the role of setting the direction of digitalization, while competent members of the pesantren took on its technological and managerial responsibilities. Technology, in other words, did not erode the kiai's leadership. It redistributed the tasks through which that leadership was carried out. The main interview findings for this theme are presented in Table 3.

Table 3. Interview Findings on the Shift in Kiai Leadership

Aspect	Findings from Participants	Interpretation
Digital communication	Kiai use WhatsApp to communicate with teachers, administrators, and santri.	Leadership communication has become faster and more flexible.
Digital teaching	Some learning activities use videos, presentations, and online materials.	Traditional religious instruction is extended into digital formats.
Management	Digital tools are used for schedules, announcements, and documentation.	Technology supports routine pesantren management.
Social media	Pesantren activities are shared through social media.	The kiai's influence extends beyond the physical pesantren.
Leadership adaptation	Kiai maintain religious and moral values while using technology.	Leadership practice changes without abandoning traditional values.

The first theme therefore establishes that digital transformation in these pesantren altered how the kiai exercised authority rather than whether the kiai held it. This finding prepares the ground for the second theme, which examines how these new leadership channels affected the working culture of the wider pesantren community.

Digital Transformation Reshapes Organizational Culture Unevenly

Informants in all three pesantren reported that the adoption of digital work systems had fostered greater collaboration, accelerated communication, and gradually cultivated a more adaptive and innovative organizational culture. Once digital platforms became part of daily routines, the ways staff communicated, documented their work, and coordinated activities began to change. Administrative staff noted that schedules, announcements, and records had moved from paper notices and verbal instructions to shared digital channels. This shift made information easier to access and reduced the delays that previously arose when instructions passed through several intermediaries. Teachers described a gradual move toward collaboration across units, since digital groups placed staff from different sections in the same communication space.

The change was not uniform, however. Informants identified several obstacles to this cultural transformation, namely resistance to change, low digital competence and literacy, limited supporting infrastructure, and concern that pesantren traditions might erode. Resistance was most visible among senior teachers and staff with limited digital skills. Some informants also voiced a more fundamental doubt. They warned that digital innovation adopted without sufficient care could weaken the religious identity of the pesantren and the continuity of traditions that had long been rooted there. This dissenting view is significant because it shows that digitalization was not accepted as self-evidently good and that its legitimacy had to be negotiated.

Limited infrastructure, such as unstable internet access and insufficient devices, further slowed adoption in units and pesantren where the digital literacy of staff remained uneven. The pace of cultural change depended on the availability of infrastructure, the support of the leadership, and the capacity of human resources in each case. Within these constraints, the kiai played a decisive role in managing tension. By endorsing digital initiatives publicly and explaining their purpose in religious terms, the kiai lent legitimacy to changes that some staff would otherwise have resisted. The relationship between digital transformation, organizational culture, and leadership change observed across the cases is mapped in Table 4.

Table 4. Digital Transformation, Organizational Culture, and Leadership Change

Digital Transformation	Organizational Culture	Leadership Change
Increased use of technology	More adaptive work culture	Kiai encourage organizational change
Growth of digital communication	Faster communication	Kiai become more responsive
Implementation of digital work systems	Greater collaboration across units	Kiai facilitate teamwork
Easier access to information	Greater transparency	Kiai communicate more openly
Technology embedded in daily activities	Emerging culture of innovation	Kiai act as facilitators of change

Table 4 shows that the cultural effects of digital transformation depended on leadership. Technology alone did not produce a more collaborative or transparent culture. It did so where the kiai actively endorsed its use, gave staff room to experiment, and connected the change to the mission of the pesantren. Where this endorsement was weaker or infrastructure was limited, the cultural shift was slower and more partial. The degree of change also varied across the three pesantren, since each institution differed in its resources, in how centralized the kiai's leadership was, and in its technological readiness. The next theme examines the values through which the kiai legitimized these changes.

Pesantren Values as the Ethical Foundation of Digital Leadership

Observations of meetings and daily coordination showed that the kiai and staff consistently framed digital practices in the language of pesantren values rather than in technical or managerial terms. Organizational interactions and decisions about

transformation were held together by the practice of *amanah*, *shūrā*, *al-'adl*, *mas'ulīyyah*, and *khidmah*. Three of these values appeared most often: *amanah* (trustworthiness), *shūrā* (consultation), and *khidmah* (service). Each shaped a different aspect of digital practice. *Amanah* framed the handling of digital records and finances. Staff responsible for financial systems and santri data described their work as a trust for which they would be answerable both institutionally and religiously. Digital financial and administrative management was applied strictly as an expression of *amanah*, with the explicit aim of improving transparency and the integrity of institutional reporting.

Shūrā shaped how digital initiatives were decided. Several informants reported that the kiai consulted teachers and staff before introducing new systems, sometimes through digital groups and sometimes in face-to-face meetings. Informants also regarded digital communication platforms as useful spaces for interaction, the exchange of ideas, and collegial consultation involving caretakers, teachers, foundation administrators, and parents of santri. *Khidmah* framed digital services to santri, parents, and alumni as a form of service rather than a technical obligation. Informants understood the development of information technology services as an act of *khidmah* intended to deliver administrative and academic services that were effective, efficient, and up to date.

Taken together, these accounts show that pesantren values did more than decorate digital practice. They supplied the moral justification that made digital change acceptable within a religious institution, and they set limits on how technology should be used. The values also linked digital leadership to governance, since *amanah* corresponds closely to accountability and *shūrā* to participation. Beyond these three, *al-'adl* (proportional justice) and *mas'ulīyyah* (responsiveness and responsibility) also shaped digital interaction and governance in practice. The fourth theme turns to these governance outcomes.

Kiai Digital Leadership Strengthens Pesantren Governance

The fourth theme concerns the effects of kiai digital leadership on governance, examined through the principles of transparency, accountability, participation, effectiveness, and efficiency. Document analysis provided the clearest evidence for this theme. Digital meeting records, financial reports, and activity documentation allowed the kiai and foundation leaders to monitor decisions and activities that had previously been recorded inconsistently or not at all. Digital administrative records, information-system reports, and increasingly structured financial management together formed the basis of managerial oversight.

Interview data from different positions in the organization pointed in the same direction. At the leadership level, informants reported that digital documentation and data-based record-keeping had strengthened the caretakers' capacity to monitor operations, evaluate programs, and track activity outcomes, which in turn supported accountable governance. Teachers described a different benefit. For them, digital communication channels had reduced hierarchical barriers and opened direct opportunities for educational staff to offer constructive feedback. The perspectives of santri and alumni added a further dimension. Two-way access to information made administrative and educational matters more open and allowed administrators to respond more quickly to the needs of santri.

Across the three cases, digital communication made information easier to share with teachers and staff, which supported transparency. Digital records helped leaders monitor decisions and activities, which strengthened accountability. Digital coordination made routine activities faster and simplified administrative processes. Digital groups also gave teachers and staff new channels for feedback, although this participation remained largely consultative and focused on operational input. Final strategic decisions continued to rest on the legitimacy of the kiai. The effects were also uneven. Differences in digital maturity, infrastructure, human resource capacity, and leadership style produced different levels of governance improvement across the three pesantren. The relationship between specific digital leadership practices and the governance principles they supported is summarized in

Table 5.

Table 5. Effects of Kiai Digital Leadership on Governance

Digital Leadership Practice	Governance Principle	Finding
Digital communication	Transparency	Information is shared more easily with teachers and staff.
Digital decision-making	Accountability	Digital records help leaders monitor decisions and activities.
Digital coordination	Effectiveness	Coordination becomes faster and easier.
Use of digital systems	Efficiency	Administrative and management processes are simplified.
Digital participation	Participation	Teachers and staff gain channels to give feedback.
Digital monitoring	Accountability	Kiai monitor activities through digital reports and communication.
Digital innovation	Adaptability	The organization adapts more readily to technological change.

These findings show that kiai digital leadership contributed to more transparent, accountable, and efficient governance in the three pesantren. The strength of this contribution, however, varied with the capacity of each institution. The final theme draws the four preceding themes together into a reconstructed model.

The Reconstructed Model of Kiai Digital Leadership

The cross-case analysis compared the four preceding themes across the three pesantren to identify the elements of kiai digital leadership that were common to all of them. This comparison yielded eight shared components: pesantren values, digital competence, digital communication, participative decision-making, collaboration, digital management, monitoring, and adaptive leadership.

These components were organized into a draft model and presented for confirmation in focus group discussions attended by representatives of the teaching staff, institutional administrators, and specialists in pesantren information systems. Participants agreed that the effectiveness of the model did not lie in technology itself. It lay in a form of pesantren leadership that draws on the operational advantages of technology without abandoning the ethical authority and religious responsibility of the kiai. The resulting model places pesantren values at its foundation, digital leadership practices as its operating layer, and good governance as its outcome, with the authority of the kiai connecting all three. The model also reflects four balances that emerged from the cross-case comparison: between tradition and innovation, between religious authority and professional management, between centralized legitimacy and participatory decision-making, and between technological progress and ethical responsibility. The structure of the model is illustrated in Figure 1.

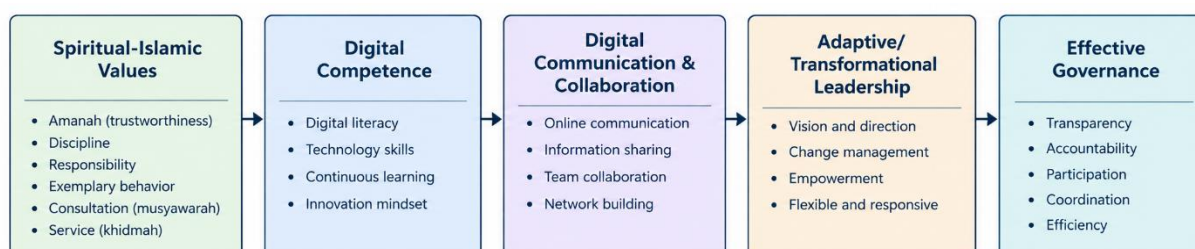


Figure 1. A Conceptual Model of Kiai Digital Leadership and Effective Governance

Discussion

This study set out to understand how kiai leadership is reconstructed in response to digital transformation while remaining rooted in pesantren values. The central finding is that digitalization in the three pesantren redistributed the work of the kiai's authority without

transferring the authority itself. The kiai continued to hold religious legitimacy and final decision-making power, while the technical and managerial tasks of digitalization moved to staff and information-system managers. This finding stands in an interesting relation to classical accounts of authority. Weber (1978) expected traditional and charismatic authority to give way to rational-legal forms as organizations modernize. Compared with this expectation, the pesantren in Madura followed a different path. They adopted rational-legal instruments such as digital records, financial reports, and information systems, yet these instruments served the kiai's traditional authority rather than competing with it. The finding also extends Geertz's (1960) portrait of the kiai as a cultural broker who mediates between the pesantren and the wider world. In the digital era the kiai still acts as a broker, but what he brokers has shifted from outside cultural and political influences to technology itself. Dhofier (1999) identified the kiai as the most essential element of the pesantren. The present findings suggest that this centrality survives digitalization, although it is now exercised through different channels.

The first two themes can be read against the literature on e-leadership and digital transformation. Avolio et al. (2000) argued that information technology changes the context in which leaders exercise social influence more than it changes the nature of leadership itself. The present findings support this argument, since the kiai used WhatsApp groups, recorded lessons, and social media to extend an influence that already existed. Vial (2019) described digital transformation as a process in which technology triggers changes in organizational structures, practices, and culture. The pesantren in this study showed the same pattern in their communication, documentation, and collaboration across units. The comparison also reveals an important difference. Studies of success factors in digital transformation stress the role of leadership and management support (Chang & Chen, 2025). In the pesantren, this support took a distinct form. The kiai did more than approve or fund digital initiatives. He explained them in religious terms and thereby made them acceptable to staff who might otherwise have resisted. The concern voiced by some informants that digitalization could erode pesantren identity shows that adoption was never a purely technical matter. In faith-based institutions, digital transformation appears to require religious legitimation before it can gain organizational acceptance. General models of digital leadership rarely address this condition.

The third theme develops this argument further. Previous studies of Islamic leadership have generally treated values such as *amanah* and *shūrā* as qualities of the leader's character or as foundations of good educational leadership (Solihin & Mubarak, 2024). Rustandi and Syafei (2025) likewise emphasized the integration of Islamic values into transformational leadership strategies aimed at institutional excellence. The present study agrees with these works on the importance of values but locates them differently. In the three pesantren, values functioned less as personal virtues and more as a working mechanism of organizational change. *Amanah* turned digital financial reporting into a religious trust. *Shūrā* shaped how new systems were introduced, and *khidmah* reframed digital services as service to santri and their parents. The values thus acted as a translation device that converted technical change into religious meaning. They also acted as a boundary that set limits on how technology should be used within the pesantren. This dual function helps explain why digital practices gained acceptance in institutions where concern for tradition remains strong. Studies that position Islamic values as a normative backdrop to leadership tell only part of the story. The present study shows how those values operate in the concrete decisions and routines of digital governance.

The fourth theme concerns governance outcomes. The finding that digital leadership improved transparency, accountability, and administrative efficiency is consistent with earlier research. Tantowi et al. (2025) reported that technology improved the effectiveness of administration and operations in pesantren. Liu et al. (2025) concluded in their scoping review that information and communication technology tends to strengthen educational administration. Yusuf et al. (2023) similarly linked digital leadership and digital

transformation to better organizational performance in the public sector. The present study differs from these works in one respect that deserves attention. Participation in the three pesantren expanded, but it remained largely consultative. Teachers and staff gained new channels for feedback, while final strategic decisions stayed with the kiai. Conventional good governance frameworks tend to assume that participation involves a real distribution of decision rights. The pesantren in Madura point to a different arrangement, which this study terms *bounded participatory governance*. Under this arrangement, transparency and accountability increase and consultation widens, yet ultimate authority remains centralized in the kiai. The arrangement reflects the socio-religious context of Madura, where respect for the kiai is particularly strong (Saadatul Ummah, 2023). It should therefore be understood as a contextual form of good governance rather than an incomplete version of a Western model.

Taken together, these findings point to a synthesis that this study proposes as the *Value-Anchored Mediated Authority* model of kiai digital leadership, presented in Figure 2. The model complements the conceptual model in Figure 1. Figure 1 identifies the components of kiai digital leadership, while Figure 2 explains how those components work together. The model begins with the kiai's traditional and charismatic authority, which passes through three linked mechanisms. The first is value legitimation, in which *amanah*, *shūrā*, *khidmah*, *al-'adl*, and *mas'uliyah* give religious meaning to digital change and set its limits. The second is mediated delegation, in which the kiai sets the direction of digitalization while competent staff operate the platforms and systems. The third is bounded consultation, in which digital channels widen participation while final decisions remain with the kiai. Together these mechanisms produce transparency, accountability, efficiency, and consultative participation. Their strength depends on four contextual conditions: digital maturity, infrastructure, human resource capacity, and the degree of leadership centralization. The novelty of the model lies in its central claim. Digital leadership in pesantren does not replace traditional authority with technology. It redistributes the work of that authority, and values carry the redistribution.

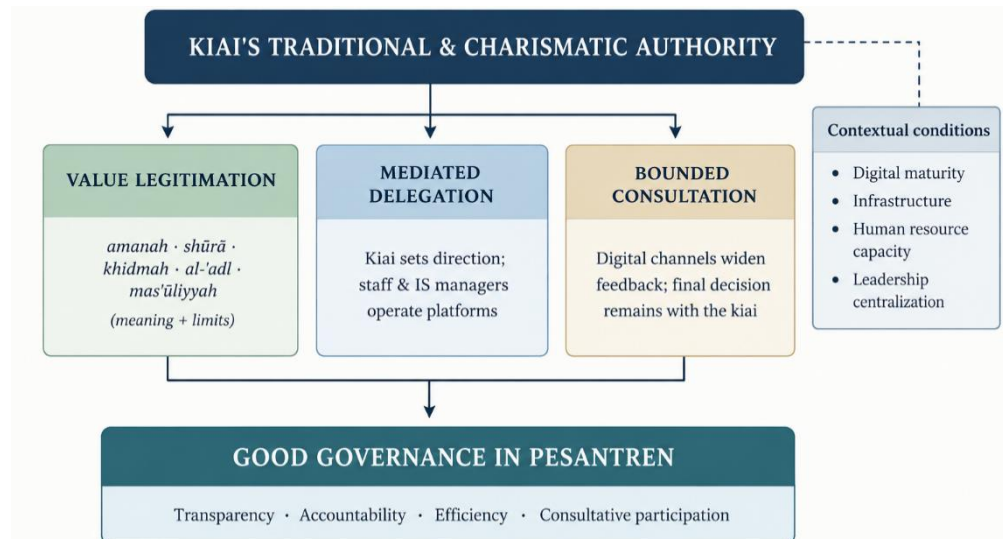


Figure 2. The Value-Anchored Mediated Authority Model of Kiai Digital Leadership

This study makes three specific contributions. First, it extends digital leadership theory to faith-based educational institutions. Existing frameworks, including the competency-based model developed by Munsamy et al. (2023), were built largely in corporate and public sector settings and tend to take the leader's legitimacy for granted. This study shows that in pesantren, legitimacy must be produced through religious values before digital practices can take hold. Second, the study contributes to Islamic educational management by offering an empirically grounded model that connects kiai leadership, pesantren values, and good governance within one framework. Earlier work has examined digitalization in a single

pesantren (Alip Nur Yanto et al., 2023) or transformational and spiritual leadership in Islamic higher education (Wakhid et al., 2026). In comparison, this multiple-case study provides a cross-case basis for identifying mechanisms shared across institutions. Third, the study adds to the literature on transformational leadership in Islamic education. It shows that the kiai acts as a transformational leader not by abandoning tradition but by making tradition the vehicle of change. In practical terms, the model gives pesantren leaders, foundations, and the Ministry of Religious Affairs a reference for designing digitalization programs that strengthen governance while respecting the authority of the kiai and the identity of the pesantren.

CONCLUSION

This study concludes that digital transformation in pesantren does not displace the authority of the kiai but reorganizes how that authority is exercised. Kiai continued to hold religious legitimacy and final decisions while competent staff carried out the technical work of digitalization. Pesantren values gave this change its moral grounding, and digital practices made governance more transparent, accountable, and efficient, although participation stayed largely consultative. These conclusions carry several limitations. The study drew on only three pesantren within a single region marked by strong deference to the kiai, and the number of informants in one case was smaller than in the others. The qualitative design also covered a limited period, so it cannot show how the model evolves or how strongly each mechanism affects governance outcomes. Future research could test the Value-Anchored Mediated Authority model in pesantren with different traditions and regions, follow digital transformation longitudinally, and develop measurement instruments for examining the model quantitatively or through mixed methods. Comparative studies involving madrasah or Islamic universities would clarify whether the model applies beyond pesantren.

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