

Digitalizing Quality Management in Islamic Boarding Schools: An Application of the Deming Framework

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Abstract:

This study aims to examine the educational quality management cycle in the digital transformation of Islamic boarding schools based on the Deming framework. This research used a qualitative approach with a multiple-case study design. Data were collected through in-depth interviews, observation, and documentation, then analyzed using an interactive data analysis model. The results indicate that the digital quality planning stage begins with the development of an institutional information platform and communication system to increase transparency and administrative efficiency. During the implementation phase, Islamic boarding schools deploy various digital services, including online student registration, an alum tracking system, a financial services platform, and an institutional data management system that supports educational operations. Quality evaluation is conducted through a data-driven monitoring system that allows administrators to assess program effectiveness and alumni development more measurably. Furthermore, continuous improvement is realized through the integration of digital platforms and curriculum innovations that combine traditional Islamic boarding school values with modern educational management practices. This research contributes to the development of digital education management literature in faith-based institutions and recommends strengthening digital governance and sustainable technological innovation within Islamic boarding schools.

Keywords: *Digital Transformation, Quality Management, Deming Cycle*

Abstrak:

Penelitian ini bertujuan mengkaji siklus manajemen mutu pendidikan dalam transformasi digital pesantren Islam berdasarkan kerangka kerja Deming. Penelitian ini menggunakan pendekatan kualitatif dengan desain studi multi-kasus. Data dikumpulkan melalui wawancara mendalam, observasi, dan dokumentasi, kemudian dianalisis menggunakan model analisis data interaktif. Hasil penelitian menunjukkan bahwa tahap perencanaan mutu digital diawali dengan pengembangan platform informasi institusional dan sistem komunikasi untuk meningkatkan transparansi serta efisiensi administrasi. Pada tahap implementasi, pesantren menerapkan berbagai layanan digital, seperti pendaftaran siswa daring, sistem pelacakan alumni, platform layanan keuangan, serta sistem manajemen data institusional yang mendukung operasional pendidikan. Evaluasi mutu dilakukan melalui sistem pemantauan berbasis data yang memungkinkan pengelola menilai efektivitas program dan perkembangan alumni secara lebih terukur. Selanjutnya, peningkatan berkelanjutan diwujudkan melalui integrasi platform digital dan inovasi kurikulum yang menggabungkan nilai-nilai tradisional pesantren dengan praktik manajemen pendidikan modern. Penelitian ini berkontribusi pada pengembangan literatur manajemen pendidikan digital di lembaga berbasis keagamaan serta

merekomendasikan penguatan tata kelola digital dan inovasi teknologi yang berkelanjutan di lingkungan pesantren.

Kata Kunci: *Transformasi Digital, Manajemen Mutu, Siklus Deming*

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INTRODUCTION

Digital transformation has become a strategic necessity for educational institutions worldwide as they seek to improve efficiency, accessibility, and service quality in response to rapid technological and societal changes (Mursid et al., 2026; Wadi et al., 2023). The integration of digital technology enables educational organizations to streamline administrative processes, improve communication, strengthen information management, and support evidence-based decision-making (Ripai et al., 2025; Shinta Nento, 2025). Educational management scholars emphasize that digitalization significantly enhances institutional effectiveness by improving performance monitoring, resource allocation, and service delivery (Mahsusi et al., 2024). Furthermore, stakeholders increasingly expect educational institutions to provide transparent, responsive, and technology-supported services. Consequently, digital transformation is no longer viewed merely as technological innovation but as a fundamental strategy for ensuring institutional sustainability, competitiveness, and continuous quality improvement in contemporary education.

Despite these potential benefits, many educational institutions continue to face challenges in adapting their management systems to technological developments. The gap between technological advancement and institutional readiness often leads to inefficiencies in administrative, communication, and quality assurance processes. These challenges are particularly evident in religious-based educational institutions, where organizational structures and educational traditions are deeply embedded in long-established cultural values. Successful digital transformation requires not only technological infrastructure but also leadership commitment, organizational readiness, and strategic planning (Abidin et al., 2025; Aspandi et al., 2025). Therefore, understanding how traditional educational institutions integrate digital systems into their management practices remains an important issue for both researchers and practitioners.

This phenomenon is particularly visible in Islamic boarding schools (pesantren), which have historically played a vital role in Islamic education, character formation, and community development in Indonesia (Bashori et al., 2024; Budiharso & Suharto, 2022). Although some pesantren have begun adopting digital technologies to support administrative services and institutional communication, many still rely on conventional management practices (Suryadi et al., 2024). As a result, pesantren face the challenge of balancing modernization with the preservation of their religious traditions and educational values. This situation highlights the need to examine how digital transformation can be implemented effectively without compromising the distinctive identity of pesantren institutions.

Existing studies have demonstrated that digital transformation can improve administrative efficiency, facilitate stakeholder communication, strengthen data management, and support institutional decision-making (Hidayat et al., 2024; Najiburrahman et al., 2025; Tantowi et al., 2025). Research on educational management also highlights the importance of systematic quality improvement processes involving planning, implementation, evaluation, and continuous refinement (Maimunah et al., 2025; Mursid et al., 2026; Suro & Anggraeni, 2024). However, most of these studies focus on formal schools, universities, and corporate learning environments, providing limited evidence regarding the implementation of digital transformation within Islamic boarding schools and other traditional religious educational institutions.

Research on the modernization of pesantren has primarily examined curriculum reform, educational innovation, and institutional adaptation to contemporary challenges (Roqib, 2021; Zainal et al., 2022). While these studies provide valuable insights, they rarely explore how digital systems are integrated into institutional governance and quality management processes. Existing research tends to emphasize digital learning practices rather than investigating the contribution of digitalization to organizational planning, monitoring, evaluation, and continuous quality improvement. Consequently, there remains a significant empirical gap regarding the relationship between digital transformation and quality management systems in pesantren institutions.

To address this gap, the present study examines digital transformation in Islamic boarding schools through the lens of quality management and continuous improvement, drawing on Deming's framework. Unlike previous studies that focus primarily on digital learning technologies or curriculum modernization, this research investigates how digital systems support institutional governance, administrative efficiency, performance evaluation, and quality assurance processes. Specifically, the study seeks to answer two questions: how do Islamic boarding schools design and implement digital transformation within their management systems, and how does digital transformation contribute to educational quality improvement and institutional performance? This study argues that digital transformation can strengthen quality management when technology is systematically integrated into planning, implementation, evaluation, and continuous improvement processes while remaining aligned with the cultural values and traditions of pesantren institutions.

RESEARCH METHODS

This study employs a qualitative, multi-case study design to explore the processes of digital transformation and educational quality management in Islamic boarding schools. A qualitative approach was chosen because it enables researchers to gain an in-depth understanding of social phenomena, institutional practices, and managerial processes within educational organizations (Hirose & Creswell, 2023). The multi-case study design enables the researcher to examine similarities and differences in the implementation of digital transformation across

different institutional contexts. Through this approach, the study seeks to analyze how planning, implementation, evaluation, and continuous improvement of digital systems are carried out in Islamic boarding schools as part of their quality management cycle. The research focuses on two pesantren that have actively adopted digital management systems, namely *Pondok Pesantren Nurul Jadid* and *Pondok Pesantren Zainul Hasan Genggong*. These institutions were selected because they represent Islamic boarding schools undergoing institutional transformation through the integration of digital technology into educational management and services. Using a multi-case design, this study aims to develop a comprehensive understanding of how digital transformation supports quality management processes in pesantren institutions.

The research subjects in this study consisted of pesantren leaders, administrators, teachers, and staff members who are directly involved in the management and implementation of digital systems within the institutions. These participants were selected through purposive sampling, which allows the researcher to select informants with relevant knowledge and experience related to the research topic. The leadership of the pesantren plays an important role in planning and directing digital transformation policies. At the same time, administrators and technical staff are responsible for managing digital platforms and institutional information systems. Teachers and educators also contribute to the implementation of digital systems within educational activities and curriculum management. The research was conducted at two Islamic boarding schools in Probolinggo, East Java, which have actively integrated digital platforms into their management systems. These institutions have developed several digital services, including online admission systems, institutional information platforms, alum tracer systems, and digital administrative services. The selection of these two pesantren allows the researcher to analyze how digital transformation is implemented within different institutional structures while maintaining pesantren's educational traditions.

Data were collected through in-depth interviews, observations, and documentation studies to obtain a comprehensive understanding of digital transformation and quality management practices in Islamic boarding schools. Interviews with pesantren leaders, administrators, teachers, and staff explored the planning, implementation, evaluation, and development of digital systems. At the same time, observations examined the use of digital platforms in administrative, communication, and educational activities. Documentation analysis included institutional policies, curriculum documents, digital platform records, and program reports. The collected data were analyzed using the interactive model of Miles, Huberman, and Saldaña (2014), comprising data condensation, data display, and conclusion drawing/verification. This approach enabled the researcher to systematically identify themes, explore relationships among findings, and ensure the validity of conclusions through continuous comparison and triangulation of data from multiple sources.

RESULTS AND DISCUSSION

Results

Islamic Boarding School Quality Planning

These findings indicate that digital transformation in Islamic boarding schools begins with strategic planning to strengthen institutional communication, administrative management, and educational services through integrated digital systems. Both Islamic boarding schools studied viewed digitalization not merely as technology adoption but as a strategic effort to improve transparency, information accessibility, service efficiency, and institutional governance while preserving traditional Islamic educational values. This planning process involved identifying institutional needs, mapping technological resources, and developing digital platforms, including an official website, social media channels, and an information system that served as a hub for communication and information dissemination. At Nurul Jadid Islamic Boarding School, this initiative was reflected in the development of an official website that provides academic information, institutional announcements, activity documentation, and educational updates, demonstrating how digital planning serves as a foundation for an integrated, sustainable digital ecosystem that supports institutional management and educational service delivery.

The planning for digital transformation at *Pondok Pesantren* Nurul Jadid is also supported by statements from pesantren administrators emphasizing the importance of digital platforms for institutional development. One of the administrators, Ahmad, explained that digital platforms have become an essential instrument for managing institutional information and communication. He stated, "In the past, information about pesantren activities was only shared through internal announcements or printed media. Now we use the official website and social media to ensure that information can reach the wider community quickly and transparently." This statement reflects the pesantren's awareness of the importance of digital communication in modern educational management. Another administrator, Rahman, also highlighted the strategic role of digital planning in strengthening the pesantren's institutional image. He explained, "Digital platforms help us introduce the pesantren to a broader audience. Through the website and social media, people can see our educational activities, programs, and achievements." These interview findings demonstrate that digital transformation planning in the pesantren is not only focused on administrative efficiency but also on strengthening institutional visibility and public engagement.

The findings indicate that both *Pondok Pesantren* Nurul Jadid and *Pondok Pesantren* Zainul Hasan Genggong have strategically planned digital transformation as part of their institutional management and communication systems. This planning is reflected in the development of official websites and active social media platforms that provide information on educational programs, institutional activities, announcements, and religious events. Observations revealed that these digital platforms are regularly updated, integrated across multiple channels, and function as tools for information dissemination, stakeholder communication, and institutional promotion. Interviews with administrators further highlighted that digital transformation is viewed as a

necessary response to contemporary communication patterns, enabling pesantren to expand public access to information, strengthen transparency, and enhance institutional credibility. As emphasized by the administrators, digital platforms not only facilitate communication but also serve as strategic instruments for promoting the pesantren's educational mission, building public trust, and reinforcing institutional reputation.

Table 1. Comparison of Digital Transformation Planning in Pesantren

Planning Aspect	Nurul Jadid	Zainul Hasan Genggong
Digital Planning Orientation	Strengthening institutional information systems	Strengthening institutional communication and public engagement
Official Website	Developed as central information platform	Developed as institutional publication platform
Social Media Utilization	Used for information dissemination and documentation	Used for publication and promotion of pesantren activities
Information Transparency	Emphasis on open access to institutional information	Emphasis on public communication and institutional image
Communication with Stakeholders	Focus on educational announcements and updates	Focus on community engagement and activity dissemination

Table 1 shows that both Nurul Jadid and Zainul Hasan Genggong Islamic Boarding Schools demonstrate a strong commitment to digital transformation through the development of official websites and social media platforms as integrated communication systems. Although each institution emphasizes different strategic priorities, both utilize digital platforms to disseminate information, promote educational activities, strengthen institutional image, and enhance stakeholder engagement. These technologies improve transparency, expand communication networks, and increase public access to information, highlighting the growing role of digital technology in educational management. Consequently, digital planning serves as a foundation for sustainable institutional development and educational quality improvement.

Implementation of Digital Transformation

Digital transformation in Islamic boarding schools is achieved through the development of technology-based services that support educational management, administrative processes, and communication with stakeholders. Digital transformation is not limited to introducing technological tools but involves the systematic integration of digital systems into institutional operations. Through this implementation stage, pesantren attempt to improve efficiency, accessibility, and transparency in educational services. Several digital platforms have been developed to facilitate administrative processes, student services, and information management. In addition, digital infrastructure such as internet networks becomes a crucial element supporting the operation of these systems. The implementation of digital transformation also reflects the readiness of pesantren institutions to adapt to technological developments while maintaining their educational traditions. Therefore, digital systems are used to support institutional management, student services, and curriculum development, enabling pesantren to respond to the increasing demands of modern educational environments.

The implementation of digital transformation appears extensive through the development of multiple technology-based service systems that support various aspects of pesantren management. One of the prominent innovations is the online student admissions system, which allows prospective students to register via digital platforms without requiring in-person visits to the pesantren. At *Pondok Pesantren Nurul Jadid*, the pesantren has developed a tracer study system that enables the institution to track alum activities and maintain communication with graduates. Another important innovation is the E-Bekal system, a digital financial service that enables students to manage their daily financial transactions within the pesantren environment. The pesantren also provides an online reservation system for student visits, known as the *sambang santri* reservation system. Furthermore, the *Pedatren* platform serves as an integrated system for managing institutional administration and student data.

The findings show that both *Pondok Pesantren Nurul Jadid* and *Pondok Pesantren Zainul Hasan Genggong* have implemented digital transformation by developing technology-based systems that support educational services and institutional management. At *Nurul Jadid*, digital transformation is reflected in the integration of online admission services, the *Pedatren* administrative platform, the E-Bekal digital financial system, and the Internet NJ network, which collectively enhance administrative efficiency and service accessibility. Similarly, *Zainul Hasan Genggong* has adopted online admission and alumni tracer platforms while strengthening educational innovation through the *Pesantren-Based Curriculum (KBP)*, which integrates traditional Islamic values with contemporary educational needs. These initiatives demonstrate that digital transformation serves not only as a technological innovation but also as a strategic mechanism for improving institutional effectiveness, educational quality, and organizational adaptability in contemporary pesantren education.

Observational data further supports the implementation of digital transformation at *Pondok Pesantren Zainul Hasan Genggong*. During the observation process, several digital platforms were identified as part of the pesantren's educational service system. The online admission platform provides clear procedures for student registration, including information about requirements, registration schedules, and application forms. The tracer alum platform serves as a database to monitor alum activities and maintain institutional communication with graduates. In addition, the implementation of the *Pesantren-Based Curriculum* is reflected in the integration of traditional religious studies with structured academic programs.

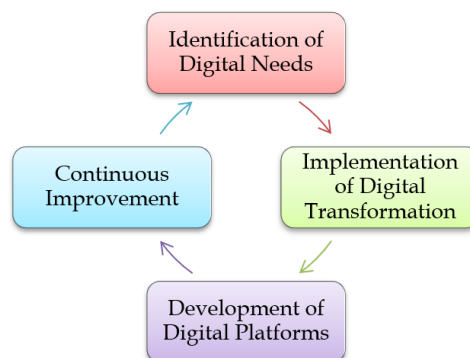


Figure 1. Implementation Concept

Figure 1 shows the implementation of digital transformation across both Islamic boarding schools, reflecting a strategic effort to improve institutional efficiency and educational service quality. Pondok Pesantren Nurul Jadid demonstrates broader digital implementation through the development of multiple integrated service platforms, including Pedatren, E-Bekal, and Internet NJ infrastructure. These systems support administrative management, financial services, and institutional communication within the pesantren environment. In contrast, Pondok Pesantren Zainul Hasan Genggong emphasizes integrating digital services into curriculum innovation through the development of the Pesantren-Based Curriculum. Both pesantren demonstrate a shared commitment to digital transformation by implementing online admission systems, alum tracer platforms, and digital services to improve management efficiency, accessibility, transparency, institutional responsiveness, and educational sustainability while preserving traditional Islamic values.

Digital Quality Evaluation

Digital quality evaluation in Islamic boarding schools is conducted through the utilization of digital information systems that allow administrators to monitor educational outcomes and institutional performance more systematically. Digital evaluation mechanisms provide access to data on students, alums, and institutional programs, enabling pesantren leaders to assess the effectiveness of educational management. Through digital platforms, information about graduates, student performance, and institutional activities can be documented and analyzed as part of the evaluation process. This approach helps pesantren institutions move toward data-based decision-making in educational management. Digital quality evaluation also allows administrators to identify strengths and weaknesses within educational programs and to adjust institutional strategies accordingly. Therefore, the use of digital platforms in evaluation processes contributes to greater transparency, stronger accountability, and continuous quality improvement in pesantren education.

Digital quality evaluation is supported by the implementation of several digital systems that facilitate the monitoring of educational outcomes and institutional data management. One important system is the alum tracer platform, which allows the pesantren to track the professional and social activities of its graduates. Through this system, the pesantren can gather information about alum career paths, community involvement, and contributions to society. The Pedatren platform functions as an integrated data management system that records various aspects of student information and institutional administration. The availability of these digital records enables pesantren administrators to evaluate student development, educational activities, and institutional programs. Consequently, digital systems provide structured data that support a more systematic evaluation process within the pesantren.

Observational findings also confirm the implementation of digital evaluation systems at *Pondok Pesantren Nurul Jadid*. During field observations, the researcher identified that the Pedatren platform functions as a centralized database containing student records, administrative information, and educational

documentation. The system allows administrators to access data related to student enrollment, academic progress, and institutional activities. This centralized data management facilitates the monitoring of educational processes within the pesantren. In addition, the alum tracer system appears to function as a digital tool for maintaining connections with graduates and collecting information about their professional and social engagement. Through this platform, the pesantren can periodically update alum data and analyze trends related to graduate outcomes. The availability of digital data supports institutional discussions regarding program development and educational improvement.

These findings indicate that both Nurul Jadid Islamic Boarding School and Zainul Hasan Genggong Islamic Boarding School use digital evaluation systems to support continuous quality improvement and institutional accountability. Through digital platforms such as alum tracking systems, Islamic boarding school administrators monitor graduate outcomes, maintain communication with alums, and collect data that serves as feedback for evaluating educational programs and institutional performance. Furthermore, curriculum evaluations are conducted periodically to ensure educational programs remain relevant to community needs while preserving the core values of Islamic boarding school education. The integration of digital data into quality evaluation processes enables both institutions to make evidence-based decisions, enhance program effectiveness, strengthen organizational accountability, and better align their educational missions with a rapidly changing society.

Strengthening and Continuous Improvement

These findings suggest that strengthening and sustainable improvement in Islamic boarding schools is achieved through the development of an integrated digital ecosystem that enhances institutional management, educational services, and stakeholder engagement. At Nurul Jadid Islamic Boarding School, this process is reflected in the integration of various digital platforms, including the institutional information system, the E-Bekal financial services application, an online visit reservation system, and an administrative data management platform. The interconnectedness of these systems improves operational efficiency, service accessibility, transparency, and communication between Islamic boarding school administrators, students, parents, and other stakeholders. More broadly, sustainable improvement also involves refining educational programs and aligning traditional Islamic learning with contemporary educational needs, demonstrating how digital innovation supports sustainable institutional development and strengthens the responsiveness of Islamic boarding school management in the digital era.

These findings indicate that strengthening and sustainable improvement at both Islamic boarding schools are supported through the development of an integrated digital ecosystem and curriculum innovation. At Nurul Jadid Islamic Boarding School, digital transformation is reflected in the implementation of interconnected platforms, including an institutional information system and the E-Bekal application, which facilitates administrative management, information dissemination, and digital financial services. This integrated platform

demonstrates a shift toward comprehensive digital-based management. Meanwhile, Zainul Hasan Genggong Islamic Boarding School emphasizes continuous improvement through the development of a Pesantren-Based Curriculum (KBP) that integrates traditional Islamic values with modern educational approaches. Through regular curriculum evaluation and refinement, the Islamic boarding school ensures that its educational programs remain relevant to contemporary society while maintaining its religious identity. Together, these initiatives illustrate how digital innovation and curriculum development complement one another to improve institutional quality, sustainability, and educational relevance.

Students participate in classical Islamic studies, such as kitab learning, while also engaging in formal educational activities that meet modern academic standards. Observations also indicate that the pesantren organizes educational activities in a structured manner to support the implementation of the curriculum. Teachers and administrators appear to coordinate learning programs to ensure that both religious and academic components are effectively delivered. The integration of traditional and modern educational elements demonstrates the pesantren's effort to maintain its cultural identity while responding to contemporary educational demands.

Table 2. Strengthening and Continuous Improvement

Aspect of Improvement	Nurul Jadid	Zainul Hasan Genggong
Main Focus of Improvement	Integration of digital service platforms	Development of Pesantren-Based Curriculum
Institutional Strategy	Building a digital ecosystem for management and services	Integrating traditional and modern educational approaches
Key Innovation	E-Bekal, Pedatren, and online reservation systems	Kurikulum Berbasis Pesantren (KBP)
Impact on Institutional Management	Improved efficiency, transparency, and service accessibility	Strengthened curriculum relevance and educational quality
Orientation of Development	Digital management system	Curriculum innovation and educational integration

Table 2 shows that both Islamic boarding schools implement strengthening and continuous improvement strategies through different but complementary approaches. *Pondok Pesantren* Nurul Jadid focuses on developing an integrated digital ecosystem that enhances institutional management and service efficiency. The integration of multiple digital platforms enables the pesantren to provide more transparent and responsive services to students and stakeholders. In contrast, *Pondok Pesantren* Zainul Hasan Genggong emphasizes curriculum development as the main strategy for improving educational quality.

Through the implementation of the Pesantren-Based Curriculum, the institution integrates traditional Islamic education with modern academic approaches to ensure the relevance of its educational programs. Although the strategies differ, both pesantren demonstrate a commitment to continuous improvement in response to educational and societal changes. These findings suggest that strengthening pesantren education can be achieved through either

technological innovation or curriculum development, depending on institutional priorities and contextual needs.

Discussion

These findings indicate that digital transformation in Islamic boarding schools begins with strategic quality planning that integrates institutional vision, technology development, and educational management objectives. The two Islamic boarding schools studied demonstrate that digitalization is not merely the adoption of technology but a broader strategy to strengthen governance, transparency, and service quality. Digital planning provides the foundation for developing a sustainable digital ecosystem that supports institutional communication, administrative services, and educational management. These findings support previous studies that emphasize that successful digital transformation requires alignment between technology, organizational goals, and institutional culture (Elbolok et al., 2025, 2025; Steiber & Alvarez, 2025).

The implementation phase is reflected in the development of various digital platforms, including an online student admissions system, an alum tracking system, a financial services application, and an integrated institutional data management system. These technologies improve administrative efficiency, service accessibility, and institutional responsiveness while supporting the sustainability of educational management processes. Consistent with Aithal et al. (2024) and Mohammed et al. (2026), the findings indicate that digital infrastructure and technology-based services play a critical role in enhancing operational effectiveness and enabling educational institutions to adapt to contemporary challenges and stakeholder expectations.

The evaluation phase demonstrates the growing importance of digital systems in supporting evidence-based decision-making. Through alum tracking platforms and institutional databases, Islamic boarding school administrators can monitor graduate outcomes, assess program effectiveness, and evaluate educational quality more regularly. Digital evaluation mechanisms enhance accountability and provide valuable insights to improve institutional performance and curriculum relevance (Adeoye et al., 2025; Syahrir & Fandir, 2025). These findings indicate that digital data management has become a crucial component of educational quality assurance and evaluation in Islamic boarding schools.

Finally, continuous improvement is reflected in the ongoing integration of digital platforms, management innovations, and curriculum development initiatives. The findings indicate that digital transformation operates as a cyclical process involving planning, implementation, evaluation, and continuous improvement, in accordance with the quality management principles proposed by Deming. This process enables Islamic boarding schools to maintain their traditional educational values while embracing modern management practices and technological innovation. Therefore, this study proposes an integrated digital-based quality management model that combines strategic planning, technology implementation, digital evaluation, and continuous improvement to strengthen educational quality, institutional sustainability, and the role of Islamic boarding schools in the digital era (Hisyam & Hasan, 2025; Widiyanto, 2026).

This research demonstrates that digital transformation in Islamic boarding schools not only modernizes administrative systems but also establishes a more integrated educational quality management model through a data-driven cycle of planning, implementation, evaluation, and continuous improvement. These findings enrich the study of digital education management by confirming that technology integration can align with the values and character of Islamic boarding schools, while simultaneously improving governance effectiveness, service transparency, and the quality of evidence-based decision-making. The resulting model also provides conceptual and practical references for strengthening digital education systems that are adaptive, sustainable, and contextually aligned with the needs of traditional educational institutions in the digital era.

CONCLUSION

Digital transformation in Islamic boarding schools can significantly strengthen educational management when it is implemented through a systematic quality management cycle consisting of planning, implementation, evaluation, and continuous improvement. The findings show that digital planning begins with the development of institutional information systems and digital communication platforms, which are then implemented through various technology-based services that support administrative management, student services, and curriculum development. Digital platforms also play an important role in supporting quality evaluation through data-based monitoring systems such as alumni tracer platforms and institutional data management systems. Furthermore, the strengthening stage demonstrates that pesantren institutions continue to improve their management systems through the integration of digital platforms and curriculum innovation that combines traditional Islamic education with modern educational approaches. The study indicates that digital transformation enables pesantren institutions to develop more efficient, transparent, and responsive management systems while maintaining their educational values and institutional identity in the digital era.

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