



Strategic Management of Digitalization in PPTQ (Pondok Pesantren Tahfidz Al-Qur'an) to Enhance the Effectiveness and Quality of Al-Qur'an Learning

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Abstract: Digitalization of Islamic education often prioritizes technical efficiency over spiritual authenticity, creating a tension between technological demands and the preservation of *talaqqi* and *sanad* traditions in Qur'anic learning. This article examines the strategic management of digitalization within the Qur'anic Recitation Development Program (PPTQ) at Ma'had al-Jami'ah, UIN Siber Syekh Nurjati Cirebon. A qualitative case study was conducted involving 25 participants (program leaders, managers, five tutors, and fifteen students) through semi-structured interviews, passive observation, and document analysis. Data were analyzed using Miles, Huberman, and Saldaña's framework with Mintzberg's Five-P Strategy. Six main findings emerged: digitalization improves administrative efficiency and learning flexibility; data-driven management enhances program effectiveness; students' recitation quality increases significantly; *talaqqi* and *sanad* remain irreplaceable; digitalization is perceived as a means (*wasilah*) not an end (*ghayah*); and spiritual concentration declines during online sessions. The study contributes a novel Hybrid Sanad-Based Digital Management model that integrates Mintzberg's Five-P Strategy with Qur'anic values through a three-layer hierarchical structure (Qur'anic values as strategic foundation, *talaqqi* as core pedagogical authority, and digital as supporting infrastructure). This model demonstrates that technology can strengthen, rather than weaken, traditional Qur'anic pedagogy when properly bounded by epistemological and affective-spiritual limits. These findings challenge the dominant dichotomous assumption that technology and tradition must be opposed, offering an integrative framework for Qur'anic learning digitalization that preserves *sanad* and *adab* in the digital era.

Keywords: strategic management; digitalization; Qur'anic learning; *talaqqi*; *sanad*.

Abstrak: Digitalisasi pendidikan Islam kerap mengutamakan efisiensi teknis dan mengabaikan otentisitas spiritual, sehingga menimbulkan ketegangan antara tuntutan teknologi dan pelestarian tradisi *talaqqi* serta *sanad* dalam pembelajaran Al-Qur'an. Artikel ini menganalisis manajemen strategi digitalisasi Program Pengembangan Tilawah Al-Qur'an (PPTQ) di Ma'had al-Jami'ah UIN Siber Syekh Nurjati Cirebon. Penelitian menggunakan pendekatan kualitatif dengan studi kasus mendalam, melibatkan 25 informan (pimpinan, pengelola, lima tutor, dan lima belas mahasiswa) melalui wawancara semi-terstruktur, observasi partisipatif pasif, serta studi dokumentasi. Analisis data mengacu pada model Miles, Huberman, dan Saldaña dengan kerangka Five-P Strategy Mintzberg. Ditemukan enam hasil utama: digitalisasi membantu administrasi dan fleksibilitas belajar; efektivitas pengelolaan meningkat berbasis data; kualitas bacaan

mahasiswa membaik; talaqqi dan sanad tetap tidak tergantikan; digitalisasi dipahami sebagai wasilah bukan ghayah; serta kekhusyukan menurun saat pembelajaran daring. Kontribusi utama artikel ini adalah model Hybrid Sanad-Based Digital Management yang memadukan Five-P Strategy Mintzberg dengan nilai-nilai Qur'ani melalui struktur hierarkis tiga lapis (nilai Qur'an sebagai fondasi strategis, talaqqi sebagai otoritas pedagogis inti, dan digital sebagai infrastruktur pendukung). Model ini membuktikan bahwa teknologi justru dapat memperkuat pedagogi Qur'ani tradisional jika dibatasi oleh batas epistemologis dan afektif-spiritual yang jelas. Temuan ini menggugat asumsi dikotomis yang masih dominan bahwa teknologi dan tradisi harus dipertentangkan, dan menawarkan kerangka integratif bagi digitalisasi pembelajaran Al-Qur'an yang menjaga sanad dan adab di era digital.

Kata kunci: manajemen strategi; digitalisasi; pembelajaran Al-Qur'an; talaqqi; sanad.

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Introduction

The development of digital technology in the era of the Industrial Revolution 4.0 has transformed nearly all facets of life, including education. The integration of artificial intelligence, cyber connectivity, and automated learning systems has shifted the educational paradigm from conventional models toward a flexible and integrated digital ecosystem (Bates, 2015; Ghazy et al., 2025). In the context of Islamic education, digital transformation is not merely a technical issue but also an epistemological one: how to harness technology without losing the spiritual values that form the core of the Islamic scholarly tradition. Research over the past decade indicates that Islamic educational institutions in Indonesia have begun adopting Learning Management Systems (LMS), e-learning, and other digital platforms (Juhaidi et al., 2023; Muttaqin et al., 2021). Namun, However, most of these studies still focus on the aspects of technology adoption and the general effectiveness of online learning, without deeply exploring how strategic digitalization management is designed to bridge the demands of digital efficiency with the imperative of preserving the authenticity of the *talaqqi* tradition (direct recitation in the presence of a teacher) and *sanad* (the chain of scholarly transmission (Al Qattan, 1971; Al-Jazari, 1990)).

To date, studies on the digitalization of Islamic education can be grouped into three main streams. First, studies oriented toward pedagogical-technological aspects, such as LMS adoption (Muttaqin et al., 2021), post-pandemic e-learning implementation (Juhaidi et al., 2023), and the effectiveness of online learning in Islamic Religious Education (Idris et al., 2023; Zurqoni et al., 2022). Second, studies highlighting institutional management transformation, such as the digitalization of madrasa governance (Diah Khoirohnissah, 2023) and data-based management innovation (Azis & Ramdani, 2024). Third, studies discussing the general challenges

and opportunities of digitalizing Islamic education (Jannah et al., 2023; Mudiono, 2025). Despite their diversity, these three streams share a fundamental conceptual weakness: they all treat digitalization as a value-neutral technical variable, without questioning how digitalization strategies should be designed to respond to the epistemological characteristics of Al-Qur'an education, which is based on *sanad* and *talaqqi*. In other words, these studies remain confined to a technocratic approach, assuming that the effectiveness of digitalization is solely determined by infrastructure availability and technical competence, without considering that in Al-Qur'an learning, scholarly validity is determined not only by procedural correctness but also by the continuity of the transmission chain (*sanad*) and the spiritual authority of the teacher. A methodological weakness is also evident: most studies employ survey or descriptive-qualitative approaches that have not yet led to the formulation of an applicable and contextually tested strategic model. Consequently, no study has specifically constructed a strategic digitalization management framework that integrates modern management theory with Al-Qur'anic values and the *sanad* tradition within the context of a *ma'had* at a cyber-university.

The gap between the available digital infrastructure and the still-conventional learning practices is clearly evident at Ma'had al-Jami'ah UIN Siber Syekh Nurjati Cirebon. As the first state Islamic religious university based on a cyber system in Indonesia, this campus possesses mature digital infrastructure, including an integrated LMS, digital repositories, and online conferencing facilities. However, based on a preliminary study conducted by the researcher from March to June 2025 through in-depth interviews with the Director of the Ma'had, two *musyirif* (tutors), and observations of five students it was found that approximately 85% of the learning activities of the Program Pengembangan Tilawah Al-Qur'an (PPTQ) still take place conventionally face-to-face. Technology utilization is limited to administrative coordination, such as sending schedules and announcements via chat groups. Yet, Al-Qur'an learning normatively demands continuity between technical dimensions (*tajwid*, *makhraj*), spiritual dimensions (*adab*, devotion), and managerial dimensions (planning, evaluation). This disparity indicates the absence of an integrated digitalization strategy management framework based on Al-Qur'anic values. This research aims to close this gap by offering a strategic construction that does not merely transfer learning to the digital realm but also formulates how technology can coexist with the *talaqqi* and *sanad* traditions. The argument posited is that digitalization is not a threat to spiritual authenticity; rather, it can serve as an enabler if managed with the right strategy.

To formulate the right strategy, a theoretical framework capable of bridging the logic of modern management efficiency and the logic of the authenticity of the Islamic scholarly tradition is required. The Five-P Strategy framework was chosen because it offers a multidimensional understanding of strategy not merely as a

formal plan but also as a ploy (tactic), pattern (consistency), position (institutional positioning), and perspective (value system) (Mintzberg, 1994). These five dimensions allow for the analysis of digitalization strategy not only at the technical-administrative level but also at the cultural, identity, and value levels that shape the direction of institutional transformation. This choice is based on the consideration that conventional strategic management models, such as SWOT analysis (Humphrey, 2005), only provide situational analysis without guidance for value implementation, while the Balanced Scorecard (Kaplan & Norton, 1996) is too oriented toward financial and operational performance indicators. Consequently, neither is capable of capturing the spiritual and epistemological dimensions characteristic of Al-Qur'an education (Nahdliyah, 2023; Nisa & Hanifuddin, 2023; Ya'cub et al., 2026). However, Mintzberg's theory, formulated in the context of secular and value-neutral organizations, needs to be infused with normative content to be relevant to the context of Islamic education. Therefore, this research integrates the Five-P Strategy with Al-Qur'anic values (*adab, sanad, amanah*) as well as the principles of *talaqqi* and *musyafahah*. This integration is crucial because existing digitalization models in Islamic education, such as technology adoption frameworks (Muttaqin et al., 2021) or an institutional transformation model (Jannah et al., 2023) have not explicitly considered how digitalization strategies should preserve the continuity of *sanad* and the internalization of *adab*. Thus, the novelty of this research lies in formulating a *Hybrid Sanad-Based Digital Management* model that explicitly integrates modern strategic management theory with the Islamic scholarly tradition, a synthesis not previously proposed in the literature. This model is expected not only to address the technical issues of digitalization but also to preserve the continuity of *sanad* and the internalization of *adab* in the digital age. Specifically, this research aims to: (1) analyze the planning and tactics of PPTQ digitalization based on the *plan* and *ploy* dimensions; (2) explore the strategic patterns and positions of PPTQ within the *ma'had*'s digital ecosystem based on the *pattern* and *position* dimensions; (3) identify the Al-Qur'anic value perspectives underlying the digitalization strategy based on the *perspective* dimension; and (4) analyze the implications of the digitalization strategy on the effectiveness and quality of Al-Qur'an learning. No hypotheses are proposed in this study, as the approach is exploratory-qualitative, not hypothetico-deductive quantitative. The results of this research are expected to serve as a reference for Islamic educational institutions, pesantren, and *ma'had* across Indonesia facing a similar challenge: how to advance in digital transformation without losing the roots of the scholarly tradition.

Method

This research employs a qualitative approach with an in-depth case study design. This approach was chosen because the focus of the research is not on the

quantitative measurement of variables but on a comprehensive understanding of the processes, meanings, and dynamics of the digitalization management strategy of the Program Pengembangan Tilawah Al-Qur'an (PPTQ) within its natural context. No variables are hypothesized or statistically tested in this study. The central focus is on how the actors (leaders, managers, tutors, and students) perceive, design, and implement the digitalization strategy at Ma'had al-Jami'ah UIN Siber Syekh Nurjati Cirebon.

The selection of a single research site (single case study) is based on strong methodological considerations, as argued by Yin (2014) regarding critical cases and revelatory cases. UIN Siber Syekh Nurjati Cirebon was chosen not merely for accessibility but for its institutional uniqueness as the only state Islamic religious university based on a cyber system in Indonesia that structurally faces the direct tension between modern digital infrastructure and the classical scholarly tradition (*sanad*). This case can be categorized as a *critical case* because if digitalization faces challenges even in an institution with the most mature infrastructure, similar challenges are certain to be experienced by other institutions with more limited technological capacity. On the other hand, this case is also *revelatory* because the researcher has rare access to observe in depth how a pesantren institution within a cyber-campus environment formulates a digitalization strategy that still maintains the authority of *sanad*. Thus, while findings from a single case study cannot be statistically generalized, they possess high transferability (Stake, R. E, 1995) as they provide a deep understanding of the mechanisms and dynamics that are highly likely to occur in similar institutions. This approach is appropriate for the exploratory and constructive objectives of this research, namely to formulate a conceptual model that can later be tested in broader contexts.

The research was conducted at Ma'had al-Jami'ah UIN Siber Syekh Nurjati Cirebon during the even semester of the 2025/2026 academic year, lasting for six months. The research subjects or informants were grouped into three levels. The first level comprised leaders and managers, including the Director of the Ma'had, the Secretary General, the Head of Academic Affairs, the Head of Information Technology, and the PPTQ Program Coordinator. The second level comprised implementers, namely five tutors or *musyrif* who had been teaching in the PPTQ program for three to ten years. The third level comprised users, namely fifteen active students from three different study programs (Islamic Religious Education, English Language Education, and Biology Education), all holding non-resident status. Informants were selected using purposive sampling with the following criteria: directly involved in the PPTQ program, having at least one semester of experience, and willing to participate voluntarily. The diversity of informant levels allowed the researcher to obtain rich and multi-layered data from various perspectives.

Data were collected through three complementary techniques. First, in-depth interviews using a semi-structured model. The researcher developed an interview guide derived from Mintzberg's Five-P Strategy framework (*plan, ploy, pattern, position, perspective*). Each interview lasted between 45 to 90 minutes, conducted face-to-face at the Ma'had office or via video conference for

informants unable to attend in person. All interviews were recorded with the informants' consent and subsequently transcribed verbatim. Second, passive participatory observation. The researcher directly observed PPTQ learning activities, both face-to-face sessions (*talaqqi*) at the mosque and online sessions via the LMS and WhatsApp groups. The researcher did not participate in the activities but sat as an independent observer, noting interaction dynamics, how tutors provided corrections, student responses, and technical obstacles encountered. Observations were conducted eight times (four offline and four online). Third, documentation study. The researcher collected and reviewed official Ma'had documents, including the Ma'had Profile, the Ma'had Roadmap 2025-2029, the PPTQ Semester Learning Plan (RPS), the Ma'had Standard Operating Procedures (SOP), and digital archives such as student recitation video recordings, grades, and tutor feedback stored in the LMS.

The primary instrument in this research was the researcher herself (human instrument). To maintain consistency, the researcher prepared interview guide sheets, observation sheets, and a list of documents to be collected. The interview guide contained open-ended questions grouped into the five strategic dimensions. The observation sheet contained aspects to be observed, such as LMS usage, tutor-student interaction, recording quality, and technical constraints. All instruments were pilot-tested on two informants not included in the main sample to ensure clarity and relevance. To ensure the credibility of the findings, the researcher applied source triangulation, technique triangulation, and member checking. Source triangulation was conducted by comparing information obtained from leaders, tutors, and students. Technique triangulation was performed by cross-checking interview results, observations, and documentation studies. Member checking was carried out by presenting summaries of interview results to key informants (the Ma'had Director, two tutors, and three students) for confirmation. Following confirmation, no substantial discrepancies were found, only minor adjustments to the wording of quotations.

Data analysis was conducted through four systematic operational stages to ensure transparency and rigor. The first stage was data organization and familiarization. All interview recordings were transcribed verbatim, while field notes from observations were compiled into a unified text database. The researcher read through all data repeatedly to gain a holistic understanding before commencing coding. The second stage was open coding. Using NVivo 14 software, the researcher identified meaning units from each informant's statements relevant to the digitalization strategy. This process generated dozens of initial codes emerging from the data, such as "automatic attendance," "recitation videos," "asynchronous correction," "decreased solemnity," "irreplaceable sanad," and "digital as a tool." Coding was not solely deductive based on the theoretical framework but also inductive, allowing new codes to emerge from the data (*in vivo coding*). The third stage was axial coding. The researcher grouped the emerging

codes into broader thematic categories. This categorization was guided by the Five-P Strategy framework as an analytical lens while also accommodating unexpected themes from the field. Through the constant comparative method, similar codes were merged and overlapping ones separated, resulting in six main themes that became the research findings. The fourth stage was conclusion drawing and verification. The researcher conducted an in-depth interpretation of the relationships between themes and compared them with relevant theories. Verification was performed continuously by re-examining raw data, comparing across data sources, and confirming tentative findings with key informants through additional member-checking sessions. To strengthen construct validity, NVivo 14 was used not only for coding but also to run matrix coding queries to detect patterns of perceptual differences between informant groups (leaders, tutors, and students) and to create network visualizations of relationships between themes. The entire analytical trail (from initial codes, categorization, to final findings) is documented in the NVivo project, accessible for audit trail purposes. Other researchers wishing to replicate this study can follow the same procedures, from site selection, informant criteria, data collection techniques, to analysis stages, as described above.

Results And Discussion

Results

This research generated six main themes obtained through triangulation of in-depth interviews with 25 informants, passive participatory observation conducted over eight sessions, and a review of official Ma'had documents and digital learning archives. These six themes are summarized in Table 1 below.

Table 1
Summary of the Six Main Research Themes

Theme	Brief Description	Primary Data Sources
Digitalization as Administrative Support and Learning Flexibility	Automatic attendance, anytime access to materials via LMS and WhatsApp	Interviews with 5 leaders, 5 tutors, 15 students; LMS observation
Effectiveness of Data-Based Management	Real-time monitoring, organized documentation, asynchronous feedback	Interviews with PPTQ Coordinator; LMS dashboard data
Improvement in Students' Recitation Quality	Independent practice, self-reflection, documented corrections	Digital portfolios of 15 students; tutor interviews; practical exam scores
<i>Talaqqi</i> and <i>Sanad</i> as Non-Negotiable Principles	Direct interaction required for precision correction and <i>sanad</i> transmission	Interviews with Ma'had Director and all tutors; institutional policies

Digitalization as <i>Wasilah</i> (Means), Not <i>Ghayah</i> (End)	Technology as a tool; Al-Qur'anic values as the control mechanism	Interviews with leaders and tutors; observation of digital interactions
Decreased Solemnity and Motivation During Online Learning	Lack of social interaction and unsupportive religious atmosphere	Interviews with 14 out of 15 students; online observations

Source: Field data processed (2026)

All informants from all three levels (leaders, tutors, and students) conveyed consistent views regarding the contribution of digital technology to administrative matters and flexible access to learning. Based on interviews with five leaders and managers, the digital attendance system integrated with the LMS has replaced manual record-keeping, which was previously prone to errors and time-consuming. One lecturer (Lec-2) stated: "I used to struggle with manually recording attendance. Now everything is automatically recorded." Similarly, the PPTQ Coordinator (M-4) explained that the distribution of learning materials such as *tajwid* guides, recitation examples, and instructional videos can now be uploaded to the LMS and accessed by students without time or place restrictions. From the students' perspective, all 15 informants acknowledged the ease of access to digital materials. A student from the English Education program (St-7) stated: "If I want to submit my recitation video, I use the LMS. But if I just want to ask questions or request recitation examples, I use WhatsApp more often. It's quick and I don't need to open my laptop." Based on observation notes, students accessed digital materials an average of two to three times per week, with peak access times between 8:00 PM and 10:00 PM local time after the Isha prayer. This access pattern indicates that students utilize evening hours for independent study outside of face-to-face sessions.

The leaders and program coordinators identified that digitalization enables faster, more accurate, and more structured monitoring of student progress. The PPTQ Coordinator (M-4) explained: "Now I can see data on who has submitted assignments, who is still lacking, and their recitation progress over time. Everything is neatly stored in the system." Based on the LMS dashboard data reviewed by the researcher, the system automatically records assignment submission frequency, student participation rates, and the history of each student's recitation improvements.

The digital documentation stored in the LMS includes three types of archives: (1) weekly video recordings of student recitations; (2) tutor correction results, including written notes and audio recordings; and (3) improvement histories showing progress over time. Based on interviews with five tutors, this system allows them to assess student recordings outside of face-to-face sessions, so that offline sessions (*talaqqi*) can be focused on more in-depth and substantive corrections. One tutor (Lec-4) stated: "I used to be overwhelmed managing administrative tasks and

teaching. Now the system helps with administration, so I can be more focused during *talaqqi*." LMS data shows that students spent an average of about two to three hours per week on independent practice through recording and self-evaluating their recitation.

Data from the digital portfolios of 15 students showed longitudinal evidence of improved recitation quality. Within the qualitative research framework, evaluation was conducted through content analysis of the digital portfolios (recitation recordings and tutor comments) stored in the LMS, as well as comparisons between beginning- and end-of-semester achievements based on a consistent assessment rubric. Based on data compiled from the LMS, the average practical *tilawah* exam score for the 15 students increased from 72 at the beginning of the semester to 81 at the end of the semester, with individual increases ranging from 5 to 15 points.

This improvement was driven by two mechanisms identified from interviews and observations. First, the obligation to submit recitation video recordings encouraged students to practice more before the face-to-face sessions. A student from the English Education program (St-4) admitted: "The feedback from the *musyirif* on the LMS is very clear. He gives notes at which minute I made a mistake and how to correct it. I can review that correction anytime, unlike in class where I sometimes forget." Second, the process of listening back to one's own recitation, identifying errors, and correcting them before submitting the video was found to encourage self-reflection. One lecturer (Lec-1) added: "I used to rely only on memory. Now I can open a recording from three months ago and compare it with the latest one." Based on observations of *talaqqi* sessions, students who had submitted recordings beforehand arrived better prepared and were able to identify some of their own mistakes before being corrected by the tutor.

This theme emerged consistently from all informants without exception and became the most emphatic theme in the research. The Ma'had Director (L-1) stated: "Sanad cannot be built through a screen. Direct interaction enables precise makhraj correction." Based on interviews with five tutors, all affirmed that *talaqqi* and *musyafahah* (reading directly in front of the teacher while observing lip movements) remain the core of learning that cannot be replaced by digital media.

Institutional policy, as stipulated in the Ma'had's Standard Operating Procedures (SOP), limits online meetings to a maximum of three times per semester, with the remainder mandatory face-to-face. One tutor (Lec-3) stated: "We are aware that recordings can be replayed. But that is not a problem; in fact, it trains them. The important thing is that during direct *talaqqi*, we can truly assess them. The video is only for preparation." Another tutor (Lec-1) affirmed: "I can explain *tajwid* through video, I can send example recitation recordings, but I cannot transfer the blessings and *sanad* through a screen. That only happens when we sit together." Based on policy documentation, no certification or validation of recitation is conducted online.

The entire process of validating recitation and endorsing sanad is carried out directly in face-to-face sessions.

The collective awareness that digitalization is merely a means, not an end, emerged consistently from all informant levels and became the most philosophically fundamental theme. One leader (L-2) stated: "Digital is just a tool, not a goal. The main priority remains recitation quality and the blessing of *sanad*." This principle is not only expressed verbally but is also reflected in daily practices observed during the research process. Based on observations of digital interactions, students demonstrated behaviors reflecting the internalization of *adab* in the digital space. A student from the Islamic Education program (St-9) said: "Even if it's just a chat or a comment on the LMS, I still try to be polite. I always start with a greeting, address them as 'Ustadz,' and use good language." Observations of eight online learning sessions showed that all students turned on their cameras, dressed modestly, and did not engage in other activities during the sessions. This indicates that the values of *adab* instilled in the pesantren environment can be adapted to the digital realm.

Although digitalization brings various conveniences, one aspect was consistently reported by informants to be declining: the solemnity and motivation to learn. Of the 15 students interviewed, 14 (93.3%) admitted feeling less solemn when learning through a screen compared to face-to-face learning. A student from the English Education program (St-4) expressed: "Learning through a screen is not as profound as learning directly with the teacher and friends." Another student from the Islamic Education program (St-1) added: "I actually find it more difficult; the online atmosphere makes me less focused." The motivational aspect also showed a declining trend. As many as 12 out of 15 students (80%) admitted their learning motivation decreased due to the lack of direct interaction, both with teachers and with peers. One lecturer (Lec-4) acknowledged: "The functional role of the *murobbi* remains the same, but the blessing diminishes when there is no direct face-to-face contact." Based on observation notes, this decline in solemnity and motivation was especially evident during online learning sessions lasting more than 60 minutes, when students began to show signs of fatigue and loss of focus. This finding indicates that while digitalization is effective for administrative aspects and independent practice, it has certain limits on the affective-spiritual dimension that can only be fulfilled through direct interaction.

Discussion

The discussion in this section does not merely confirm the findings with existing literature but critically compares, questions, and expands the theoretical understanding of Al-Qur'an learning digitalization. Each theme is discussed by referencing relevant theories and prior research findings, while also explicitly demonstrating the new contributions offered by this study.

The finding that digitalization enhances administrative efficiency and material access flexibility confirms Bates's (2015) argument that educational digitalization

functions as a tool to improve system effectiveness. This finding also aligns with research showing that LMS adoption in Islamic higher education improves learning governance (Muttaqin et al., 2021; Nugroho, A, 2024).

However, this research goes beyond these findings by demonstrating that the flexibility offered by digitalization is not an unconditional advantage. Empirical data show that students still require direct interaction for certain aspects, such as *makhraj* correction and *adab* development. In other words, administrative efficiency and access flexibility do indeed increase, but this efficiency cannot be uniformly applied to all dimensions of learning. This limit is not acknowledged in previous studies, which tend to view flexibility as a universally positive value. The contribution of this research lies in empirically identifying the epistemological limits of digital flexibility in the context of Al-Qur'an learning something that has been overlooked in the Islamic education digitalization literature.

The finding that digitalization enables real-time data monitoring and improves student recitation quality (Karimah, U, 2024) aligns with research on enhanced accountability and quality control through digitalization (Papadakis, S, 2022). However, this research offers a deeper explanation of why this improvement occurs. It is not merely because of technology, but rather the combination of digital-based independent practice and direct correction during *talaqqi* sessions. Students accustomed to recording and self-evaluating their recitations arrive at face-to-face sessions better prepared they have already identified some of their own mistakes and come with specific questions for the tutor. Consequently, the limited *talaqqi* time is no longer spent on basic corrections but can be focused on deeper and more substantial improvements. This mechanism which the researcher terms the *enabler effect* is rarely discussed in the Islamic education digitalization literature. Most studies remain trapped in the dichotomous debate over whether technology is "good" or "bad" for learning, without mechanistically explaining how technology can function as a catalyst that strengthens existing pedagogical practices. This research fills that gap by showing that digitalization, when designed as a *preparation tool* rather than a *substitute*, actually enhances the quality of the core interaction (*talaqqi*) by making it more efficient and profound.

The finding that *talaqqi* and *sanad* remain irreplaceable by digital media is the most significant finding and differentiates this research from previous studies. On one hand, this finding confirms the warning that digital transformation in Al-Qur'an education must preserve the continuity of *sanad* as the foundation of scholarly authority (Zein, M, 2025). However, this research explicitly rejects the dichotomous view still dominant in Islamic education discourse (Al-Attas, 1980; Azra, 1999) which tends to pit technology against tradition. Empirical data show that properly designed digitalization is not a threat but rather a reinforcement for *talaqqi* and *sanad*. Students who have practiced independently through video

recordings arrive at *talaqqi* sessions better prepared, making the *talaqqi* process deeper and more efficient. This is not merely a practical compromise but a redefinition of the relational dynamic between technology and tradition: technology does not replace but serves and strengthens tradition. The theoretical contribution of this research is offering a hierarchical (rather than equal or antagonistic) relational model between technology and tradition, where technology is subordinately positioned as an instrument that strengthens core pedagogical goals. This is fundamentally different from conventional blended learning models, which tend to place both elements in parallel or even equal standing.

The finding that digitalization is understood as a means (*wasilah*) rather than an end (*ghayah*) reveals a collective awareness rooted in the classical Islamic principle of *al-wasā'il lahā aḥkām al-maqāṣid* (means are governed by the rulings of objectives). In his work *Ihya' 'Ulum al-Din*, Al-Ghazali (Al-Ghazali, 2015). affirms that every activity, including the use of technology, must be judged by its intention and purpose. This finding aligns with the thought on the need for the Islamization of knowledge and tools (Al-Attas, 1980), but this research provides empirical evidence that has remained abstract in philosophical discourse: these values can indeed be internalized in contemporary digitalization practices at educational institutions. Students continue to maintain *adab* in the digital space turning on cameras, dressing modestly, initiating communication with greetings, and addressing teachers as "Ustadz." This shows that the pesantren tradition of *adab* is not lost but adapted and transformed into the digital realm. This finding enriches the discourse on digital ethics in Islamic education (Selwyn, N, 2022) which has thus far focused more on privacy and security issues without concretely addressing the internalization of *adab*. This research demonstrates that digital ethics in the context of Islamic education is insufficient if it only discusses data protection or cybersecurity; it must encompass character formation and *adab* in digital interactions a dimension that has been neglected.

The finding that solemnity and motivation decrease during online learning serves as a reminder that digitalization has limits that cannot be surpassed not only on the epistemological dimension (*sanad*) but also on the affective-spiritual dimension. As many as 14 out of 15 students admitted feeling less solemn during online learning (Rasheed et al., 2020) and (Selwyn, N, 2022) that online learning often reduces social presence and the sacred atmosphere that can only be created through physical interaction. However, this research goes beyond these findings by demonstrating that in the context of Al-Qur'an learning, solemnity is not merely a psychological factor but also an integral part of *adab* and spirituality. Al-Ghazali (2015) emphasizes that recitation (*tilawah*) performed with solemnity is more valuable than mere technical fluency. Thus, the limits of digitalization lie not only in epistemological validity (technology's capacity to transmit *sanad*) but also in

affective-spiritual validity (technology's capacity to evoke solemnity and motivation). The contribution of this research is the empirical identification of two types of digitalization limits in Al-Qur'an learning: epistemological limits (*sanad* cannot be transmitted online) and affective-spiritual limits (solemnity and motivation are difficult to cultivate through a screen). These two limits are interrelated and must be considered in every digitalization strategy design.

Based on the synthesis of the six findings and critical discussion with theory, this research produces a conceptual model called *Hybrid Sanad-Based Digital Management*. This model does not merely combine online and offline learning like conventional blended learning concepts; rather, it offers a three-tier hierarchical structure that is fundamentally different.

The conceptual structure of the model consists of three interrelated and hierarchically nested layers. The first (innermost) layer is the Core Pedagogical Authority, comprising *talaqqi*, *musyafahah*, and *sanad* transmission. This layer is the inviolable epistemological foundation. All activities in the layers above must ultimately reinforce this core. If this layer is lost or compromised, the learning loses its scholarly authority and spiritual legitimacy. The second (middle) layer is the Supporting Digital Infrastructure, encompassing the LMS, recitation video recordings, digital portfolios, and data-based monitoring systems. This layer functions as an enabler that facilitates and strengthens the core layer but never replaces it. The third (outermost) layer is Qur'anic Values as Strategic Foundation, comprising the values of *adab*, *sanad*, *amanah*, and *ikhlas*. This layer acts as a filter and controller that determines the direction and limits of technology use. Technology is accepted insofar as it strengthens the core layer and is rejected or restricted when it begins to threaten it.

The operational mechanism of the model can be described as follows: (1) Students access materials and practice independently through the digital infrastructure layer (LMS, video recordings); (2) This independent practice process prepares students technically before entering the *talaqqi* session; (3) During the *talaqqi* session (core layer), the tutor performs precision correction, validates recitation, and transmits *sanad*; (4) The entire process is supervised and directed by the values layer (*adab*, *sanad*, *amanah*), ensuring digitalization does not deviate from the ethical framework of Islamic education.

The fundamental differences from existing concepts are summarized in the following table:

Aspect	Conventional Blended Learning	Hybrid Sanad-Based Digital Management Model
Relationship between technology and tradition	Equal or parallel	Hierarchical: technology serves tradition

Primary objective	Efficiency and accessibility	Preservation of <i>sanad</i> and spiritual authenticity
Limits of technology use	Flexible, determined by practical needs	Fixed, determined by epistemological (<i>sanad</i>) and affective-spiritual (solemnity) principles
Teacher's role	Learning facilitator	Pedagogical and spiritual authority with functions of validation and <i>sanad</i> transmission
Evaluation	Based on academic achievement	Dualistic: technical (<i>tajwid</i> , <i>makhraj</i>) and transcendental (<i>adab</i> , <i>sanad</i>)
Value filter	Not explicit	Explicit: Al-Qur'anic values as control mechanism

Thus, this model offers an integrative path for Al-Qur'an learning digitalization that does not merely adopt technology for efficiency but consciously designs a digitalization strategy that preserves *sanad* and *adab* in the digital age. This model is fundamentally different from the technocratic approach dominant in the Islamic education digitalization literature and offers a value-based alternative rooted in the Islamic scholarly tradition while remaining responsive to contemporary demands.

Conclusion

This research concludes that digitalization does not necessarily threaten the authenticity of Al-Qur'an learning. When implemented within clear epistemological boundaries, it can strengthen the traditions of *talaqqi* and *sanad*. The submission of recitation videos before *talaqqi* sessions improves students' preparedness and makes the correction process more focused and efficient. Nevertheless, online learning significantly reduces solemnity, as experienced by 14 of the 15 students. This finding confirms that technology is effective for administration and independent practice but cannot replace the sacred atmosphere, spiritual depth, and blessings of direct teacher-student interaction. Thus, digitalization functions simultaneously as a means of strengthening *sanad* and as a potential factor in weakening the affective-spiritual dimension of Al-Qur'an learning.

The main theoretical contribution of this research is the Hybrid *Sanad*-Based Digital Management Model, which integrates Mintzberg's Five-P Strategy with Qur'anic values, *sanad*, *talaqqi*, and *musyafahah*. The model consists of three hierarchical levels: Al-Qur'anic values as the controlling foundation, *talaqqi* as the core pedagogical authority, and digital technology as supporting infrastructure. Unlike conventional blended learning, this model positions technology as subordinate to tradition and directs its use toward preserving *sanad*, spiritual

authenticity, and the internalization of adab, rather than merely improving efficiency. It therefore offers an integrative framework in which digitalization reinforces, rather than replaces, the core pedagogical traditions of Islamic education.

This research is limited by its focus on a single institution, 25 informants, non-resident students from only three study programs, a one-semester research period, and a qualitative approach that cannot statistically test causal relationships. Consequently, the model's transferability to traditional, modern, urban, rural, residential, and non-cyber Islamic educational institutions remains to be examined. Future research should employ experimental quantitative designs to measure its effects on tajwid mastery, recitation fluency, and memorization stability; comparative studies to test its applicability across institutional contexts; and longitudinal studies of at least three years to evaluate its long-term impact on the continuity of sanad and students' spiritual development. Such research would strengthen the empirical foundation for formulating more appropriate institutional and national policies on the digitalization of Al-Qur'an learning.

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