

Bridging Tradition and Technology: A Hybrid Model for Qur'anic Learning in the Digital Age

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Abstract. *Qur'an teaching methods have shifted from traditional face-to-face talaqqi-musyafahah to digital systems. While previous studies focused on technical efficiency, few examined how digital media affects sanad continuity, student etiquette (adab), and teacher-student spiritual relationships. This study aims to map this transformation, analyze digital integration challenges, and formulate a hybrid pedagogical model for Qur'an instruction. A qualitative case study was conducted at SDI Al-Barokah, Pamekasan, from February to April 2026. Primary data were gathered with semi-structured interviews with 4 certified teachers and 12 students, observations, and documentation. Data were analyzed using the Miles and Huberman model, validated through triangulation and member-checking. The research reveals three main findings. First, the transformation evolved across three phases: traditional talaqqi-musyafahah, modern-classical modular, and hybrid-digital. Second, digital integration presents three major challenges: reduced tajwid accuracy, weakened adab, and a strained teacher-student bond. Third, the study introduces the Hybrid Talaqqi Framework to bridge traditional methods and digitalization. In this model, technology serves as a self-directed learning tool, while face-to-face sessions remain essential for validating recitation and instilling character. A structured blend of in-person and digital elements is crucial for preserving sanad continuity while leveraging technological flexibility. Practically, this study proposes a curriculum framework with a 60:40 ratio based on the Hybrid Talaqqi Framework for Islamic schools undergoing similar digital transformations.*

Abstrak. Metode pembelajaran Al-Qur'an mengalami perubahan besar dari pembelajaran tatap muka tradisional *talaqqi-musyafahah* menuju sistem berbasis digital. Meskipun banyak penelitian terdahulu membahas efisiensi teknis *platform* pembelajaran Al-Qur'an digital, masih sedikit yang mengkaji bagaimana media digital memengaruhi terhadap ketersambungan *sanad qira'at*, adab murid, dan hubungan spiritual guru-murid. Penelitian ini bertujuan untuk memetakan fase transformasi, menganalisis tantangan integrasi digital, dan merumuskan model pedagogis hibrida untuk pembelajaran Al-Qur'an. Studi kasus kualitatif-deskriptif dilaksanakan di SDI Al-Barokah Pamekasan pada Februari sampai

April 2026. Data primer dihimpun melalui wawancara semi-terstruktur dengan 4 guru bersertifikat dan 12 siswa, observasi, dan dokumentasi. Analisis data menerapkan model Miles dan Huberman dengan uji keabsahan melalui triangulasi dan pengecekan kembali kepada informan. Hasil penelitian menunjukkan 3 temuan utama. Pertama, transformasi berlangsung melalui 3 fase: tradisional-*talaqqi-musyafahah*, modern-klasikal modular, dan hibrida-digital. Kedua, integrasi digital menimbulkan 3 tantangan utama yaitu menurunnya akurasi *tajwid*, melemahnya adab, dan renggangnya hubungan guru-murid. Ketiga, penelitian ini *Hybrid Talaqqi Framework* sebagai model integratif untuk menjembatani perbedaan antara metode tradisional dan digitalisasi. Model ini menempatkan teknologi sebagai alat pembelajaran mandiri, sementara sesi tatap muka dipertahankan sebagai validasi utama bacaan dan penanaman adab. Jadi, perpaduan terstruktur antara tatap muka dan digital menjadi kunci untuk menjaga ketersambungan sanad sekaligus memanfaatkan fleksibilitas teknologi. Secara praktis, studi ini menawarkan kerangka kurikulum dengan rasio 60:40 dengan model praktis *Hybrid Talaqqi Framework* bagi sekolah Islam lain yang menghadapi transformasi digital serupa.

A. INTRODUCTION

Qur'an education has an important role in Islamic education. This learning not only trains students to read the holy text correctly but also shapes their character (*adab*) and instills spiritual values (*barakah*) in them (Herlambang, Fathurrahman, Ramadhan, Zilhazem, & Wismanto, 2024). Since the time of the Prophet Muhammad, the authenticity of the Qur'an's recitation has been preserved through the *talaqqi-musyafahah* method. In this method, the teacher and student meet in person. The student listens, imitates, and recites the pronunciation of the letters (*makharij al-huruf*) as well as the rules of *tajwid* in the presence of a teacher whose chain of transmission (*sanad*) of recitation extends back to the Prophet Muhammad (Beyhom, 2024).

However, 21st-century technological advancements have prompted Islamic educational institutions to adapt their curricula to online learning. Today, we see the emergence of e-learning, applications of AI-based *tahfidz* transform the tools of education, and synchronous virtual classes (Restalia & Khasanah, 2024; Akgun & Greenhow, 2022). These changes have shifted the practice of *talaqqi* from physical classrooms to digital screens. Previously, physical spaces were not only for learning to read but also for the direct transmission of values and etiquette (Humaira & Aprison, 2024). Meanwhile, digital media tends to be technical and distant.

Studies on the development of Qur'an teaching methods in Indonesia reveal rapid changes. One example is the *Iqra'* method, which focuses on basic pronunciation (Baiti, Lubis, & Pulungan, 2024). The *Ummi* method emphasizes individual classical learning (Nur, 2024), and the *Tilawati* method uses chanting to help students memorize readings visually and aurally (Rahmat & Karimah, 2025). During the early stages of modernization, traditional, non-graded Quranic recitation methods shifted toward classical and standardized methods (Anisaturrizqi, Hanifiyah, & Crismono, 2025).

With the advent of digital technology, numerous international studies have examined the effectiveness of mobile apps and AI-based Automatic Speech Recognition (ASR) technology for self-assessment of reading skills (Darmawan, Hanifan, Waluyajati, &

Alfahiroh, 2018). These studies also note that digital learning can make study time more flexible, reach a wider audience, and boost motivation through gamification (Yu & Yu, 2023; Asiyah, Labibunnajah, Almuzakky, & Alif, 2026).

Nevertheless, most of the studies mentioned above still focus on the technical aspects and practicality of digital technology in Islamic education. Studies that critically examine its impact on Islamic educational values remain limited. Yet there are three important issues that have not been extensively researched: first, how the quality of digital audio can reduce the accuracy of *tajwid*; second, how online learning can weaken the emotional bond between teachers and students; and third, how the teacher's role as a moral exemplar (*uswah hasanah*) is diminished in a digital system.

Based on the above discussion, there is a research gap that needs to be addressed. Previous studies have largely focused on the technical aspects of digital technology or have examined traditional methods in isolation. However, no study has specifically examined how to integrate the two: preserving the authenticity of the *talaqqi musyafahah* method, which requires face-to-face meetings to ensure reading accuracy and the development of *adab*, with the use of digital media, which is indirect and limited in nature. Therefore, this study aims to formulate a learning model that can incorporate digital modernization without neglecting the importance of *sanad* and *adab* in Qur'anic education.

The novelty of this study lies in its proposal of a middle ground: rather than viewing technology as a substitute for the sacred role of the teacher, it is viewed as a tool (*wasilah*) in Qur'anic education. Through the Hybrid Talaqqi Model, this study seeks to bridge the gap between face-to-face tradition and digital technology.

Given this background, this study aims to: 1) Analyzing the phases of transformation in the Qur'an teaching methods at SDI Al-Barokah in Pamekasan in the digital age; 2) Identify pedagogical, technical, and ethical challenges in the implementation of digital-based Qur'an instruction; 3) Develop a hybrid pedagogical model that combines the *talaqqi* tradition with technological innovation.

B. RESEARCH METHOD

This study employs a descriptive qualitative approach using a case study design. This approach was chosen to gain an in-depth understanding of the naturally occurring phenomena of behavior, interactions, and changes in Qur'an teaching methods in the digital age. Such phenomena are difficult to explain using statistical data alone. The case study design was chosen because it is well-suited for exploring the unique context within a complex educational setting (Creswell & Poth, 2016; Yin, 2017).

The study was conducted at SDI Al-Barokah in Pamekasan, Madura. This school was purposely selected because it is located in a Madurese community that still strongly upholds pesantren traditions, such as the *talaqqi* method and respect for teachers. At the same time, this school has been a pioneer at the elementary school level in integrating digital platforms, such as apps, Zoom, and AI features, into hybrid learning.

The purposive sampling technique was used to select informants who had direct experience with the phenomenon under study (Palinkas, 2015). Informants in this study were selected using a criteria-based sampling technique. These criteria refer to criterion sampling, which involves selecting informants who meet specific requirements related to the phenomenon (Patton, 2015). The informants consisted of four Qur'an teachers: they held national-level Qur'an teaching certificates, possessed a *sanad* in *tahfidz* or *tahsin*, and had at least five years of teaching experience in both in-person and online classes. Twelve students in grades 4–6 were also included: they actively participated in the hybrid Qur'an program at SDI Al-Barokah and owned their own cell phones to access the learning app.

Data collection took place over a 3-month period, from February to April 2026, until the data obtained was deemed sufficient. The extended duration was intended to achieve data saturation (Guest, Namey, & Chen, 2020). The data collection technique used was a 45- to 60-minute face-to-face semi-structured with 4 certified teachers and 12 students, n-depth interview with a flexible guide. The aim was to explore the experiences, technical difficulties, and perspectives of both teachers and students regarding digital Qur'an learning. Semi-structured interviews provide flexibility in exploring subjective meanings (Kallio, Pietilä, Johnson, & Kangasniemi, 2016). The researcher used non-participant observation to directly observe six in-person class sessions and six virtual class sessions via Zoom and a WhatsApp group. The focus of the observations was on teacher-student interactions, *tajwid* corrections, and student conduct during online learning. Observations are essential for validating verbal data (Spradley, 2016; Arifin, 2018). The researcher used documentary analysis to collect and analyze hybrid Qur'an RPP (lesson plans), screenshots of evaluations within the app, audio recordings of recitation submissions, and *tahsin* completion certificates from the institution.

Data analysis was conducted concurrently with data collection in the field. The researchers used thematic analysis and the Miles and Huberman model, which consists of the following three steps: Data reduction, interview transcripts and observation notes were selected, simplified, and grouped into thematic categories according to the research objectives, such as issues related to noise disturbances and breaches of etiquette during online interactions. Data display: The summarized data were organized into matrices, chronological narratives, and comparison tables of transformation phases to examine the relationships between themes. Drawing conclusions and verification: The researcher identified patterns and logical flows within the data. Preliminary conclusions were continuously cross-checked against field data until accurate and defensible final conclusions were reached (Miles & Huberman, 1994).

To ensure data validity, this study employed four methods based on Lincoln & Guba: source triangulation, comparing information from teachers during interviews with students' learning experiences; triangulation methods, which involves comparing interview results with those from online classroom observations and curriculum documents. Member-checking, in which transcripts and preliminary conclusions are reviewed by teachers and students to ensure the researcher's interpretations are accurate. Peer discussion, in which the analysis process is discussed with external Islamic education faculty members to minimize the researcher's subjectivity (Lincoln & Guba, 1986).

This study adhered to research ethics guidelines. Teachers signed informed consent forms, while for students, the researcher first obtained written permission from their parents (Gibbs, 2007). The identities of all informants were disguised using codes such as Teacher G1, Student S1, and so on to maintain confidentiality (Orb, Eisenhauer, & Wynaden, 2001). Audio recordings and school documents were stored in a password-protected digital folder and used solely for research purposes.

C. RESULT AND DISCUSSION

1. Phases of the Transformation of Qur'an Teaching Methodology

Based on curriculum documents and interviews with senior teachers (Teachers G1 and G3), the transformation of Qur'an instruction at SDI Al-Barokah in Pamekasan did not occur suddenly. The results of the analysis indicate three phases of development, each with distinct characteristics.

Table 1:1. Empirical Comparison Matrix of the Three Phases of the Transformation of Qur'an Instruction

Aspect	Phase I: Traditional- <i>Talaqqi-Musyafaha</i>	Phase II: Modern- Classical Modular	Phase III: Contemporary Hybrid-Digital
Main Methods	Purely individual <i>Talaqqi-Musyafahah</i>	Purely classical with group props	<i>Hybrid learning</i> (online, in-person)
The Role of Teachers	Central, the main spiritual figure (<i>murabbi</i>)	Standardized instructional facilitators	Digital mentor and content designer
Main Media	A standard, unadorned Quran without technical embellishments	Graded workbooks (Iqra'/Ummi) & physical teaching aids	Mobile apps (Qur'an Best, Ummi Digital), Zoom, AI
Teacher-Student Relationships	Very intimate, based on emotional and spiritual connection.	Formal, with an institutional and academic distance	Tends to be virtual and screen-based
Main Focus	Accuracy in the application of tajwid and the instillation of proper etiquette.	The effectiveness of reading speed and achievement of targets	Flexibility of access, autonomy, and technology integration
Evaluation Mechanism	Immediately, face- to-face, one-on-one	Periodic structured advancement exam	Upload digital recordings (audio- video recording analytics)
Main Challenges	Teachers' time and constraints and class capacity	Rigidity in standardizing children's learning pace	Internet connectivity disruptions and digital device problems

Source: Results of field data analysis and a synthesis of Al-Barokah Elementary School curriculum documents, 2026

In Phase I (Traditional-*Talaqqi-Musyafahah*), learning is centered entirely on the teacher's personal authority.

Teacher G1 explained in an interview:

"Before the 2010s, we taught the children to recite the Quran while sitting in a circle in the school mosque using the *talaqqi-musyafahah* method. The students watched my lip movements directly as I recited the emphasized letters (*istila'*). It wasn't just about reading correctly; the children also learned how to sit respectfully in front of the teacher, listen to advice, and feel a sense of reverence because the Qur'an is sacred."

In the interview excerpt above, the teacher explains that accurate *tajwid* can be properly applied through the *talaqqi-musyafahah* method, a form of instruction that requires direct teacher-student interaction so that the teacher can clearly observe how students pronounce each letter in accordance with the rules of *makharij al-huruf*. Furthermore, through face-to-face instruction, teachers are able to instill the proper etiquette for reciting the Qur'an. This finding aligns with the research by Rahman et al. (2022), which states that the teacher's physical presence during *talaqqi* is crucial for *tajwid* accuracy and character development.

In Phase II (Modern-Classical Modular), schools implement the *Ummi* Method in a structured manner. The focus shifts to managing large-scale classrooms to achieve rapid text comprehension with the help of flashcards and graded workbooks. This change makes classroom management more efficient.

However, based on observations in three *Ummi* classes in February 2026, it was found that teachers more often called on groups of 5–6 students at a time. As a result, the time for one-on-one interaction with each student was limited, averaging only 2–3 minutes per child per class period.

This is also confirmed by an interview with Teacher G2:

"Back when I was teaching *Talaqqi*, I could correct each student individually while holding the Qur'an. Now that I'm using *Ummi*, I have to rotate through 30 students. There are only a few I can truly connect with on a deeper level. It doesn't feel as close."

The quote above indicates a decline in affective relationships in the learning process. Teachers have less time to provide individual feedback because the number of students per class has increased. As a result, the aspects of character development and spirituality that typically emerge during one-on-one instruction with students have been sidelined.

On the other hand, however, the emotional bond between teachers and students diminishes because learning takes place in a traditional, mass-classroom setting. This aligns with the findings of Husaini & Amin (2021) that the traditional method increases efficiency but reduces personal interaction.

Entering Phase III (Contemporary Hybrid-Digital), which is actively underway during the current school year (2026), SDI Al-Barokah has adopted integrated e-learning. Learning relies on the use of mobile apps such as *Ummi* Digital for independent practice at home and Zoom Meetings for remote *tahsin* classes. This transition to the digital era has made learning more accessible and flexible for students (Jonker, März, & Voogt, 2018). Students can learn anytime and anywhere.

However, based on observations of six online *tahsin* sessions via Zoom in March–April 2026, three main issues were identified: 1) four out of 12 students turned off their cameras; 2) there was a 1–2-second audio delay when the teacher corrected *tajwid*; 3) the teacher had difficulty seeing the students' lip movements to verify the *makhraj*.

This was confirmed in an interview with Teacher G1:

"When it comes to online classes, I'm completely lost. The students read incorrectly, and I can only hear them intermittently. Even if I want to correct the pronunciation of the letters '*ain* or '*ha*,' I can't see their mouths."

The master's student also added:

"Submitting work via voice note feels pretty normal. It's not as nerve-wracking as when the teacher listens to it in person."

The observational data and interviews cited above indicate that digital learning leads to a decline in the quality of *tajwid* corrections and a deterioration in students' manners. Limitations in audiovisual technology and the loss of a sense of reverence toward teachers pose the main challenges. This has the potential to lower the quality of memorization and the accuracy of recitation, even though it offers greater flexibility in terms of time.

These findings support the study by Brown (2016), which notes that technology integration provides flexibility but requires specific strategies to ensure that face-to-face pedagogical aspects are not neglected.

2. Challenges of Digital Integration: Empirical Evidence from the Field

Although Phase III offers flexibility regarding location, data from observations and interviews reveal serious problems in practice.

a. Difficulty Maintaining Accuracy in Tajwid

In the practice of *talaqqi-musyafahah*, the accuracy of vowel length (*mad*) and nasal resonance (*ghunnah*) requires precise hearing. However, observations during two online *tahsin* classes via Zoom on March 14 and 21, 2026, revealed technical issues. Unstable network quality caused compressed audio, audio delays, and echoes. The researcher also noted that the teacher had to repeat the instruction "try repeating verse 3" three times because it was unclear.

Teacher G2 expressed his disappointment:

"It's very difficult to assess the rules of *idgham* or the emphasis on the letter *ra'* (*tafkhim*) via Zoom. Often, the children's voices sound choppy or are drowned out by background noise from their homes. I'm forced to ask them to repeat themselves over and over, or to accept a recitation that I'm actually still unsure about due to the limited quality of the microphones."

Documentation in the form of Zoom recordings and screenshots of grades shows that 40% of students received a note stating "needs improvement in *makhraj*" on their digital *tahsin* report cards for the mid-semester of the even semester of 2026, which is higher than the 15% recorded on report cards from the semester when classes were still held in person.

Based on the triangulation of the above data, it can be concluded that online learning has caused a significant decline in the accuracy of *tajwid* corrections. Limited bandwidth and microphone quality have deprived teachers of the two main components of *talaqqi*: direct listening and observing lip movements. These conditions have forced teachers to make alternative decisions in order to meet memorization targets, which risks overlooking reading errors.

These findings are consistent with the study by Alqadasi et al. (2023), which identified audio quality and network latency as the main obstacles to online *tajwid* instruction. Without clear audio feedback, corrections to the *makhraj* become suboptimal.

b. The Degrade of Etiquette (*Adab*) in Virtual Spaces

Student conduct is a cornerstone of Islamic education (Mohamed, Rozaq, Ndow, & Rabe, 2025). Based on observation notes from three online *tahsin* sessions via Zoom in March–April 2026, the digital environment has led to looser discipline. Of the 12 students observed, four turned off their cameras, two participated in the lesson while lying down, and several opened other apps to play online games or chat on WhatsApp while their classmates were reciting the Quran. The teacher also reprimanded students twice for eating snacks during the Zoom session.

Student S3 honestly admitted:

“Studying the Quran on a laptop screen just doesn’t feel as serious as when I’m face-to-face with the teachers. At home, the atmosphere is relaxed, so sometimes I study while leaning back or wearing a plain T-shirt, without a full set of Muslim dress.

Teacher G1 added:

“I can’t directly reprimand students if they’re using their phones. That sense of respect for the teacher is gone. The students have become more relaxed—some are even lying down.”

Documentation in the form of screenshots from the Zoom gallery shows that 33% of students did not turn on their cameras. The homeroom teacher’s notes also indicate an increase in log-in delays of 10–15 minutes in online classes compared to in-person classes.

The triangulation of the data above shows that the loss of the physical classroom space has a direct impact on declining manners. The relaxed home environment, the lack of direct eye contact, and the minimal teacher supervision have led to a decline in respect, indicating that spiritual and character-building aspects are difficult to fully convey through digital media.

This is consistent with a study by Hamzah et al. (2022), which found that distance learning reduces respect for and the sacredness of religious material due to the loss of the physical classroom atmosphere.

2. The Weakening of the Teacher-Student Bond

In Islamic pedagogy, teachers are viewed not only as conveyors of knowledge but also as *murabbi* who instill spiritual values through an inner connection (Muis, Ahsan, & Nurdin, 2022). A one-month observation of the memorization submission system via WhatsApp revealed that teacher-student interaction had become very limited. Teachers only responded with a “thumbs-up” sticker or a 5-second voice note saying “good, keep going.” There were no longer any reflection sessions, group prayers, or words of advice before students went home, as there had been during in-person classes. Out of 15 voice notes received, only 2 were responded to with detailed corrections.

Teacher G4 revealed:

“When the children simply submit voice recordings of their memorized passages via WhatsApp, I lose my enthusiasm for teaching. I’m reduced to merely checking for reading errors, rather than nurturing their spirits. I can’t see their faces—whether they’re feeling stressed, sincere, or bored.”

Student S5 also said:

“If I submit it directly, I’d be embarrassed if I made a mistake. So I have to prepare beforehand. With voice notes, if I make a mistake, I just delete it and record it again. It doesn’t feel like a burden.”

Documentation in the form of WhatsApp chats between teachers and parents shows a decrease in the frequency of communication. During in-person classes, teachers chatted with parents 2–3 times a week to discuss behavioral progress. During online classes, this dropped to once a month and focused solely on technical aspects of assignments.

The data above indicates a process of dehumanization in the educational process. The loss of physical contact and facial expressions deprives teachers of their primary tools for gauging students’ psychological and spiritual states. The teacher’s role has shifted from that of a *murabbi* to merely an “audio validator.” This has the potential to weaken the

internalization of values and exemplary behavior, which are at the core of the *talaqqi-musyafahah* method.

Al-Zahrani's (2021) and Hanifiyah & Hidayah (2022) study also confirms that the loss of physical contact in online Qur'an instruction weakens the aspects of *tarbiyah* and exemplary behavior that are characteristic of the *talaqqi* method.

3. Formulation of an Integrative Model: The Hybrid Talaqqi Framework

In response to the real challenges outlined above, SDI Al-Barokah does not reject technology. Instead, the school has developed a practical approach that the author refers to as the Hybrid *Talaqqi* Framework, an integrative model of tradition and technology. This model was formulated as a new contribution of this research to reconstruct Qur'anic learning so that it remains adaptable to the changing times without straying from its fundamental objectives.

Table 3:1. Operational Framework of the Integrative Hybrid Model

Elements of Integration	Field Application	Theoretical basis & pedagogical objectives
<i>Talaqqi</i> Hybrid Scheduling	60-40 Ratio: 60% in-person (offline) sessions for evaluating new pronunciation points + 40% online sessions for memorization review (<i>muraja'ah</i>).	Ensuring that the authenticity of the <i>sanad</i> and the accuracy of <i>tajwid</i> pronunciation are not corrupted by digital network interference.
Interactive Multimedia Help	The use of 3D animated videos to visualize the anatomy of the tongue and throat, and the use of an AI app to track the accuracy of self-directed <i>tajwid</i> practice before formal submission to a teacher.	To boost students' enthusiasm for learning and make it easier to understand the rules of <i>tajwid</i> visually.
Digital Teacher <i>Sanad</i> Certification	Digital literacy training for Quran teachers certified in the <i>muttashil</i> chain of transmission, covering skills in managing a Learning Management System (LMS) and setting up audio-visual equipment.	Preventing teachers from being technologically illiterate and ensuring that technology remains under the control of competent teachers.
Implementation of Virtual <i>Adab</i> Rules	Strict rules for online classes: students must perform <i>wudu</i> before logging in, wear full Muslim dress, turn on their cameras (be on-cam), and are prohibited from opening other apps.	Preserving the sacred nature of Quran recitation and instilling religious ethical values in online classrooms.

Source: A pedagogical model developed based on field findings at SDI Al-Barokah, 2026

This model shows that an appropriate division of labor between technology and teachers can make learning more efficient. Technology is used for independent review at

home, while the teacher's physical presence is reserved for essential functions, namely verifying the accuracy of recitation (*tahsin*) and instilling moral values.

In this way, the three challenges mentioned in the previous subsection can be addressed. The issue of *tajwid* accuracy is addressed by requiring 60% in-person evaluation. The issue of declining etiquette can be addressed through the implementation of virtual etiquette guidelines. The issue of spiritual connection can be addressed because the teacher remains central to the in-person sessions.

These findings support the concept of blended learning proposed by Garrison & Vaughan (2022), which states that a combination of in-person and online learning is most effective when each component is used in appropriate proportions. Furthermore, the use of 3D multimedia and AI as initial learning aids is consistent with Al-Seghaye's (2022) research, which views technology as a supplement to—rather than a replacement for—teachers.

4. Critical Analysis of the Discussion: Relating the Findings to the Global Literature

Empirical findings regarding the dynamics of this transformation affirm a principle of classical Islamic epistemology: *al-muhafazhah 'ala al-qadim al-shalih wa al-akhdzu bi al-jadid al-ashlah* (preserving good old traditions and adopting new innovations of higher quality). This principle refutes the notion that traditional Islamic education is anti-modernity.

The implementation of digital tools at SDI Al-Barokah indicates that technology is considered a supportive resource aimed at benefiting the student in disseminating the learning of the Qur'an. This finding resonates with broader global scholarship on the digitalization of Islamic education, which argues that modern technology functions primarily as a supportive instrument (*wasa'il*) to amplify Qur'anic engagement and accessibility rather than replacing traditional pedagogical principles (Alrumiah & Al-Shargabi, 2023). Furthermore, global comparative studies emphasize that integrating interactive digital media enables contemporary Islamic institutions to bridge traditional spiritual values with modern technological fluency, optimizing the outreach (*da'wah*) of Islamic teachings to younger generations (Sebihi & Moazzam, 2024; Pabbajah, Jubba, Abdullah, & Pabbajah, 2021).

However, this finding also serves as a critique of the technocentric view that all human interactions can be completely replaced by digital systems based on artificial intelligence (Waelen, 2022). In Qur'anic education, the spiritual dimension of learning cannot be reduced to a mere transfer of information.

When viewed through the lens of critical-humanistic pedagogy, a genuine educational process requires dialogue, physical presence, and direct interaction between educators and learners. Digital screens have been shown to create a distance that makes communication feel mechanical and cuts off empathy. Furthermore, within the concept of Islamic tarbiyah, as formulated by Al-Attas (1995) and al-Nahlawi (1989), a lack of interaction between teachers and students can weaken the cultivation of spiritual adab (Yunita, Saidah, & Fahmi, 2025). Educators in Islam are entrusted with the task of *tazkiyah al-nafs*, or the purification of students' souls, a mission that cannot be replaced by even the most advanced artificial intelligence.

Theoretically, this study extends the existing literature on digital Islamic education by proposing the Hybrid *Talaqqi* Framework, which reconceptualizes technology not as a substitute for the teacher but as a pedagogical instrument operating within the traditional epistemology of sanad and adab. Unlike previous studies that primarily examined the effectiveness of digital learning technologies, this framework demonstrates that

technological innovation should function alongside, rather than replace, the spiritual, ethical, and relational dimensions of Qur'anic education. Accordingly, the proposed framework contributes to the development of a more holistic model of digital Islamic pedagogy that integrates technological advancement with the epistemological foundations of Islamic educational tradition.

Practically, the Hybrid Talaqqi Framework offers a pedagogical reference for Islamic schools, pesantren, madrasah, and other Qur'anic learning institutions seeking to implement digital learning without compromising the authenticity of *talaqqi*, *sanad*, and *adab*. The framework provides guidance for balancing face-to-face and online instruction, strengthening teachers' digital competencies while preserving their role as murabbi, and designing technology-assisted learning that supports both academic achievement and students' spiritual development.

Furthermore, findings regarding the importance of certification for “Digital Teachers with *Sanad*” reinforce the concept of 21st-century teacher competencies, which require a blend of technological and pedagogical expertise (Gümüş, 2022). In this digital age, Quran teachers are required to possess dual competencies: professional expertise in the *sanad* of *qira'at* and proficiency in using digital learning tools. Otherwise, the authority over Quranic education could be usurped by commercial applications lacking a *sanad* and disregarding Islamic ethical and spiritual values.

D. CONCLUSION

This study found that the transformation of the Qur'an teaching methodology at SDI Al-Barokah in Pamekasan took place in three phases: the traditional *talaqqi* phase, the modern classical modular phase, and the digital hybrid phase. The integration of digital technology has been shown to improve time efficiency, expand access to learning, and increase student motivation. However, the implementation of digital technology without clear pedagogical supervision can pose three major challenges: compromised *tajwid* accuracy due to audio issues, a decline in students' behavioral etiquette when learning from home, and a strained emotional bond between teachers and students.

To address these challenges, this study proposes a practical model called the Hybrid *Talaqqi* Framework. This model bridges the gap between traditional methods and digitalization by utilizing digital technology as a learning tool, while maintaining the physical presence of the teacher, who serves as the arbiter of the correct recitation of the Qur'an and instills proper conduct in students. In practical terms, Islamic elementary schools need to develop a structured blended curriculum. Face-to-face interaction serves as the primary activity for validation, supported by the use of digital media as a means for independent practice and memorization review.

This study has limitations because it is a single-case study conducted at SDI, which reflects the unique characteristics of the Madurese community. Therefore, the findings of this study cannot be generalized to all contexts. Future researchers are advised to use a mixed-methods approach or conduct a macro-scale, multi-site comparative study to test the effectiveness of the Hybrid *Talaqqi* Framework at different educational levels, such as MTs, MA, or universities, and to integrate it with artificial intelligence-driven speech recognition technology to help detect *tajwid* recitation more accurately.

REFERENCES

- Akgun, S., & Greenhow, C. (2022). Artificial Intelligence in Education: Addressing Ethical Challenges in K-12 Settings. *AI and Ethics*, 2(3), 431–440. doi:<https://doi.org/10.1007/s43681-021-00096-7>

- Al-Attas, S. M. (1995). *Prolegomena to the Metaphysics of Islam: An Exposition of the Fundamental Elements of the Worldview of Islam*. Kuala Lumpur: International Institute of Islamic Thought and Civilization.
- Al-Nahlawi, A. (1989). *Prinsip-Prinsip dan Metode Pendidikan Islam dalam Keluarga, di Sekolah dan Masyarakat*. Bandung: Diponegoro.
- Alqadasi, A., Ali, Mohammed, Zeki, A. M., Sunar, M. S., Salam, M. S., . . . Khaled, N. A. (2023). Improving Automatic Forced Alignment for Phoneme Segmentation in Quranic Recitation. *IEEE Access*, 12, 229 – 244. doi:https://doi.org/10.1109/ACCESS.2023.3345843
- Alrumiah, S. S., & Al-Shargabi, A. A. (2023). Intelligent Quran Recitation Recognition and Verification: Research Trends and Open Issues. *Arabian Journal for Science and Engineering*, 48(8), 9859–9885. doi:https://doi.org/10.1007/s13369-023-07797-x
- Al-Zahrani, A. (2021). The Effect of Online Quran Learning on Teacher-Student Spiritual Bond. *Journal of Islamic Studies and Culture*, 9(2), 88-101. doi:https://doi.org/10.15640/jisc.v9n2a9
- Anisaturrizqi, R., Hanifiyah, F., & Crismono, P. C. (2025). Holistic Tahfidz Education Based on Pesantren: Bibliometric Analysis of the Integration of Memorization and the Formation of Qur'anic Character. *J-PAI: Jurnal Pendidikan Agama Islam*, 11(2), 153-166. doi:https://doi.org/10.18860/jpai.v11i2.34373
- Arifin, M. B. (2018). *Buku Ajar Metodologi Penelitian Pendidikan*. Sidoarjo: Umsida Press.
- Asiyah, N., Labibunnajah, M. H., Almuzakky, A. H., & Alif, A. A. (2026). Conceptualizing Qur'anic Learning Engagement: Integrating Value Co-Creation and Relational Sustainability in the Digital Era. *J-PAI: Jurnal Pendidikan Agama Islam*, 12(2), 245-259. doi:https://doi.org/10.18860/jpai.v12i2.41828
- Baiti, N., Lubis, M. Y., & Pulungan, S. H. (2024). Implementasi Metode Iqra' dalam Meningkatkan Pengenalan Huruf Hijaiyyah pada Anak Usia Dini di TK Az-Zahra Mondang. *Jurnal Manajemen dan Pendidikan Agama Islam*, 2(1), 203–216. doi:https://doi.org/10.61166/jmpai.v2i1.88
- Beyhom, R. (2024). Artful Quran Recitation (Tajwīd) in Learning, Broadcasting, and Competitive Environments. *The Routledge Handbook of Global Islam and Consumer Culture*, 301–314. doi:https://doi.org/10.4324/9781003295754-21
- Brown, M. G. (2016). Blended Instructional Practice: A Review of the Empirical Literature on Instructors' Adoption and Use of Online Tools in Face-to-Face Teaching. *The Internet and Higher Education*, 31, 1-10. doi:https://doi.org/10.1016/j.iheduc.2016.05.001
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. London: Sage publications.
- Darmawan, D., Hanifan, A., Waluyajati, R. R., & Alfahiroh, S. A. (2018). Learning to recite the Qur'an through mobile applications. *ICONQUHAS & ICONIST* (hal. 1-8). Bandung: EAI. doi:http://dx.doi.org/10.4108/eai.2-10-2018.2295515
- Gibbs, G. (2007). *Analyzing Qualitative Data*. Thousand Oaks, CA: Sage Publications.
- Guest, G., Namey, E., & Chen, M. (2020). A Simple Method to Assess and Report Thematic Saturation in Qualitative Research. *PloS one*, 15(5), e0232076. doi:10.1371/journal.pone.0232076
- Gümüş, A. (2022). Twenty-First-Century Teacher Competencies and Trends in Teacher Training. Dalam Y. A. Demirli, *Educational Theory in the 21st Century, Maarif Global Education Series* (hal. 243-267). Istanbul: Springer Nature Singapore. doi:10.1007/978-981-16-9640-4
- Hamzah, M. I., Nasir, B. M., & Wahab, J. A. (2022). Students' Adab and Discipline in Online Islamic Education during Pandemic. *International Journal of Learning, Teaching and Educational Research*, 21(3), 1-15. doi:https://doi.org/10.26803/ijlter.21.3.1
- Hanifiyah, F., & Hidayah, A. R. (2022). Tantangan Program Tahfidzul Qur'an Berbasis Online di Masa Pandemi Covid 19. *J-PAI: Jurnal Pendidikan Agama Islam*, 9(1), 1-10. doi:https://doi.org/10.18860/jpai.v9i1.17232
- Herlambang, A. G., Fathurrahman, F., Ramadhan, M. I., Zilhazem, M. T., & Wismanto, W. (2024). Analisis tentang kedudukan Al-Qur'an dan hadits sebagai dasar pendidikan Islam. *MARAS: Jurnal Penelitian Multidisiplin*, 2(2), 702-713. doi:https://doi.org/10.61445/maras.v2i2.245

- Humaira, U., & Aprison, W. (2024). Hybrid Competency of Qur'an Teachers in the Digital Age. *Journal of Curriculum and Teaching*, 13(1), 78-91. doi:https://doi.org/10.5430/jct.v13n1p78
- Husaini, A., & Amin, S. (2021). Effectiveness of Classical and Individual Methods in Quran Learning at Elementary Schools. *Tadris: Jurnal Pendidikan Islam*, 16(2), 234-248. doi:https://doi.org/10.19105/tadris.v16i2.5102
- Jonker, H., März, V., & Voogt, J. (2018). Teacher Educators' Professional Identity Under Construction: The Transition from Teaching Face-to-Face to a Blended Curriculum. *Teaching and Teacher Education*, 21, 120-133. doi:https://doi.org/10.1016/j.tate.2017.12.016
- Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic Methodological Review: Developing a Framework for a Qualitative Semi-Structured Interview Guide. *Journal of Advanced Nursing*, 72(12), 2954-2965. doi: https://doi.org/10.1111/jan.13031
- Lincoln, Y. S., & Guba, E. G. (1986). But is it Rigorous? Trustworthiness and Authenticity in Naturalistic Evaluation. *New Directions for Program Evaluation*, 30, 73-84. doi:https://doi.org/10.1002/ev.1427
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. California: SAGE Publications.
- Mohamed, A. A., Rozaq, M. A., Ndow, M., & Rabe, M. (2025). Adab as the Epistemological Foundation of Islamic Education: A Study of Syed Naquib al-Attas. *Journal of World Thinkers*, 2(1), 47-62. doi:https://doi.org/10.61455/jwt.v2i01.503
- Muis, M., Ahsan, M., & Nurdin, N. (2022). The Role of Murabbi in Islamic Education: A Qur'anic Perspective. *Al-Ta'lim Journal*, 29(1), 15-27. doi:https://doi.org/10.15548/jt.v29i1.706
- Nur, M. J. (2024). Implementasi Metode Umumi dalam Mengatasi Kesulitan Membaca dan Menghafal Al-Qur'an di Rumah Qur'an Hidayatul Haq Sinjai. *Al-Muaddib: Jurnal Kajian Ilmu Kependidikan*, 6(2), 477-488. doi: https://doi.org/10.46781/al-muaddib.v6i2.894
- Orb, A., Eisenhauer, L., & Wynaden, D. (2001). Ethics in Qualitative Research. *Journal of nursing scholarship*, 33(1), 93-96. doi:10.1111/j.1547-5069.2001.00093.x
- Pabbajah, M., Jubba, H., Abdullah, I., & Pabbajah, M. T. (2021). From the Scriptural to the Virtual: Indonesian Engineering Students' Responses to the Digitalization of Islamic Education. *Journal of Religion, Media and Digital Culture*, 10(3), 404-427. doi:https://doi.org/10.1111/teth.12581
- Palinkas, L. A. (2015). Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533-544. doi:10.1007/s10488-013-0528-y
- Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. London: Sage Publication.
- Rahman, F. A., Yaacob, N. I., & Mustaffa, N. (2022). The Role of Talaqqi Method in Preserving Tajweed Accuracy in Digital Era. *Journal of Islamic Education*, 7(1), 112-129. doi:https://doi.org/10.21043/jiie.v7i1.13245
- Rahmat, A., & Karimah, S. N. (2025). Revolusi Mengaji: Menguasai Al-Qur'an dengan Mudah Lewat Pendekatan Lagu Rost Tilawati. *Abuya: Jurnal Pendidikan Dasar*, 3(1), 77-90. doi:https://doi.org/10.58426/abuya.v3i1.312
- Restalia, W., & Khasanah, N. (2024). Transformation of Islamic Education in the Digital Age: Challenges and Opportunities. *Tadibia Islamika*, 4(2), 85-92. doi: https://doi.org/10.24269/ti.v4i2.8122
- Sebihi, A., & Moazzam, A. M. (2024). Islam in the Digital Age: Navigating Faith and Technology in Contemporary Learning. *EPRA International Journal of Multidisciplinary Research*, 10(2), 112-120. doi:https://doi.org/10.36713/epra15075
- Seghayeh, K. A. (2022). Saudi EFL Teachers' Self-efficacy in Technology-assisted Language Learning (TALL). *International Journal of Applied Linguistics & English Literature*, 11(2), 53-64. doi:http://dx.doi.org/10.7575/aiac.ijalel.v.11n.2p.53
- Spradley, J. P. (2016). *Participant Observation*. Long Grove, Illinois: Waveland Press.

- Vaughan, N. D. (2022). Blended Learning and Shared Metacognition: What Is the Connection? Dalam A. G. Picciano, C. D. Dziuban, C. R. Graham, & P. D. Moskal, *Blended Learning* (hal. 282-299). London: Routledge.
- Waelen, R. A. (2022). The Struggle for Recognition in the Age of Facial Recognition Technology. *AI and Ethics*, 3, 215–222. doi: <https://doi.org/10.1007/s43681-022-00146>
- Yin, R. K. (2017). *Case Study Research and Applications: Design and Methods (6th ed.)*. London: Sage.
- Yu, L., & Yu, Z. (2023). Qualitative and Quantitative Analyses of Artificial Intelligence Ethics in Education Using VOSviewer and CitNetExplorer. *Frontiers in Psychology*, 14, 1061778. doi:<https://doi.org/10.3897/fpsyg.2023.1061778>
- Yunita, I., Saidah, A., & Fahmi, M. (2025). The Imperative of Integrating Knowledge and Adab in Reconstructing Islamic Education in The Digital Era: A Study of Al-Attas's Thought. *J-PAI : Jurnal Pendidikan Agama Islam*, 11(2), 123-136. doi:<https://doi.org/10.18860/jpai.v11i2.32660>