Digital Transformation in Qur'anic and Hadith Pedagogy: Implications for Millennial Engagement

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Article info	Abstract
	Digital transformation in education has become essential in the millennial era, including in Qur'an and Hadith learning at the Madrasah Tsanawiyah level. This study analyzes the relevance of digital innovation in Qur'an and Hadith instruction to the characteristics of millennial learners at MTsN Palopo City. A mixed-methods design was employed, combining descriptive qualitative data from interviews and observations with simple quantitative data from questionnaires administered to 60 students. Data were analyzed using qualitative triangulation and percentage-based quantitative analysis. The results indicate that 78% of students feel more motivated to learn Qur'an and Hadith through digital media, and 82% find mobile applications and e-learning platforms easier to use for understanding the material. Qualitative findings reinforce this, showing that students perceive digital-based learning as more engaging, interactive, and aligned with their technology-oriented habits. Teachers also report increased student engagement, despite challenges related to limited facilities and pedagogical readiness. Overall, the study confirms that digital transformation is highly relevant to Qur'an and Hadith learning for millennial students and underscores the need for creative, collaborative, and technology-based instructional strategies at MTsN Palopo City. ***Keywords:*** *Digital Transformation, Qur'an–Hadith Learning, Millennial Generation, Madrasah Tsanawiyah*

Abstrak

Transformasi digital dalam pendidikan menjadi kebutuhan utama di era milenial, termasuk dalam pembelajaran Al-Qur'an Hadis di Madrasah Tsanawiyah. Penelitian ini menganalisis relevansi inovasi digital dalam pembelajaran Al-Qur'an Hadis dengan karakteristik generasi milenial pada siswa MTsN Kota Palopo. Metode yang digunakan adalah mixed methods, melalui wawancara dan observasi kualitatif serta kuesioner kuantitatif terhadap 60 siswa. Analisis dilakukan dengan triangulasi dan perhitungan persentase. Hasil menunjukkan bahwa 78% siswa lebih termotivasi menggunakan media digital, dan 82% merasa lebih mudah memahami materi melalui aplikasi mobile dan e-learning. Temuan kualitatif mendukung hasil ini, menunjukkan bahwa pembelajaran digital dianggap lebih menarik, interaktif, dan sesuai kebiasaan teknologi siswa. Guru juga merasakan peningkatan keterlibatan siswa meskipun masih menghadapi kendala fasilitas dan kesiapan pedagogis. Secara keseluruhan, penelitian ini menegaskan bahwa transformasi digital sangat relevan bagi pembelajaran Al-Qur'an Hadis dan menuntut strategi pembelajaran yang kreatif, kolaboratif, dan berbasis teknologi di MTsN Kota Palopo.

Kata Kunci: Transformasi Digital, Pembelajaran Al-Qur'an Hadis, Generasi Milenial, Madrasah Tsanawiyah

INTRODUCTION

The rapid development of digital technology has significantly transformed various aspects of life, including the field of education (Rafita & Puspa Juwita, 2025; Saleha et al., 2022; Warmansyah et al., 2023; Warmansyah, Komalasari, et al., 2024). Millennial learners, who now dominate the secondary education level, exhibit distinctive characteristics such as strong attachment to digital devices, instant access to information, and a clear preference for interactive and flexible learning media (Haikal & Anwar, 2024; Miftahurrohmah et al., 2024). These characteristics require educational institutions particularly madrasahs to adapt their instructional strategies so that learning remains engaging, relevant, and aligned with the pace of global digitalization (Harun, 2021).

At the Madrasah Tsanawiyah (Islamic junior high school) level, Qur'an and Hadith learning is still predominantly delivered through conventional methods, including lectures and text memorization (Oomen-Early & Early, 2015). Zou et al., (2025) Such methods often lead to reduced engagement among millennial learners, who generally become disengaged when faced with monotonous learning patterns. They require more creative, innovative, and technology-supported approaches to sustain their motivation and deepen their understanding of Islamic teachings. Pasaribu et al., (2024) This situation highlights a noticeable misalignment between the learning preferences of the millennial generation and the traditional instructional practices commonly used in madrasah settings.

Previous studies indicate that the integration of digital technology in religious education can enhance student engagement (Ningsih et al., 2023; Padriyanti et al., 2024). The use of mobile Qur'an applications, e-learning platforms, and gamified learning tools has been shown to increase motivation and expand access to instructional materials. for instance, reported that incorporating digital tools into Qur'an learning improved both comprehension and students' interest. However, studies focusing specifically on the digital transformation of Qur'an and Hadith learning at the Madrasah Tsanawiyah level remain limited. Most existing research emphasizes general Islamic education or examines technological integration in non-religious subjects. Marlina & Dananier,(2024) This leaves an important area of inquiry underexplored, particularly regarding how digital innovation aligns with the learning characteristics of millennial students in Qur'an–Hadith education.

This study aims to examine the forms of digital transformation implemented in Qur'an and Hadith learning at the Tsanawiyah level and to assess their relevance to millennial learner characteristics (Zakiyah BZ et al., 2024). The analysis focuses on the types of digital innovations used by teachers and students, as well as their impact on motivation, engagement, and understanding. The study is positioned to provide meaningful contributions to the development of Qur'an–Hadith instructional strategies that are more adaptive to the learning needs of the millennial generation. Antonopoulou et al., (2023) The findings are expected not only to enrich the literature on digitalization in Islamic education but also to offer practical recommendations for teachers, madrasahs, and policymakers in developing more creative, contextual, and technology-oriented learning experiences (Haleem et al., 2022; Suryadilaga et al., 2022).

The theoretical foundation of this study draws upon several frameworks. The first is constructivism, which asserts that knowledge is actively constructed through experience and interaction with the environment (Al Maqi, 2025; Muslim, 2024).

Ahmad & Khalid, (2024) in the context of Qur'an–Hadith learning, constructivism underscores the importance of meaningful, contextualized, and student-centered learning experiences. Digital technology serves as an effective learning tool by offering interactive, visual, and collaborative spaces in which students do not merely receive information passively but actively construct understanding through exploration, discussion, and digital-based practice.

Garcia et al.,(2024) The second framework is connectivism, introduced by George Siemens, which posits that learning in the digital age occurs through extensive networks of information beyond the physical classroom. This theory is particularly relevant for Qur'an–Hadith learning in Madrasah Tsanawiyah, as millennial students routinely access knowledge through diverse digital platforms such as Qur'an applications, Islamic YouTube channels, and online learning forums (Haleem et al., 2022; Perwira, 2022). Digital transformation thus not only functions as a supporting medium but also shapes a broader, more dynamic learning ecosystem aligned with millennial learning habits.

In addition, this study is informed by generational theory developed by Neil Howe and William Strauss, which characterizes millennials as technologically literate, collaborative, visually oriented, and highly expectant of flexibility and rapid access to information. These characteristics suggest that traditional instructional strategies may be less effective for this generation, thereby reinforcing the urgency of digital transformation in Qur'an–Hadith learning. By integrating constructivism, connectivism, and millennial learning characteristics, this study establishes a comprehensive conceptual framework for examining the relevance of digital innovation in Qur'an–Hadith instruction at the Madrasah Tsanawiyah level.

METHODS
Research Design

This study employed a mixed-methods approach combining qualitative and quantitative techniques using a sequential explanatory design. The qualitative descriptive approach was implemented to obtain an in-depth understanding of students' and teachers' experiences, perceptions, and responses toward digital innovation in Qur'an and Hadith learning at the Madrasah Tsanawiyah level. The quantitative component was used to complement the qualitative data through a simple measurement of students' perceptions using a questionnaire analyzed with descriptive percentage-based statistics.

Research Setting and Participants

The research was conducted at MTsN Palopo City. The participants consisted of 60 eighth-grade students selected through simple random sampling, along with two Qur'an–Hadith teachers who served as key qualitative informants. The site was chosen because MTsN Palopo City is one of the madrasahs that has implemented various forms of digital innovation in its instructional processes.

Research Instruments

Several instruments were used to collect the data. The interview guidelines for teachers and students contained open-ended questions exploring experiences,

challenges, and the perceived impact of digital media in Qur'an and Hadith learning. The observation sheet was used to document actual digital learning practices occurring in the classroom. The student questionnaire consisted of a simple four-point Likert scale (1–4), where 1 indicated strongly disagree, 2 disagree, 3 agree, and 4 strongly agree. The questionnaire items measured students' perceptions of digital learning effectiveness, ease of use, and engagement.

Data Collection Procedures

Data collection was carried out through classroom observations, semi-structured interviews, and questionnaire distribution. Observations captured real-time digital learning practices, while interviews provided deeper insight into teacher and student perspectives. The questionnaire was administered to gather quantitative data reflecting the general trends in students' perceptions.

Data Analysis Techniques

Data analysis was conducted using both quantitative and qualitative procedures. Quantitative data from the questionnaire were analyzed using descriptive percentage statistics to determine the distribution of student responses. Qualitative data from interviews and observations were analyzed using the Miles and Huberman model, which includes data condensation, data display, and conclusion drawing or verification. Data validity was strengthened through source triangulation involving teachers and students, as well as methodological triangulation through interviews, observations, and questionnaires.

RESULTS AND DISCUSSION
Results

This study began with the collection of quantitative data through questionnaires distributed to 60 students of MTsN Palopo City. The quantitative findings are presented as follows:

Table 1. Use of Digital Innovation in Qur'an–Hadith Learning

Assessed Aspects	SS	S	TS	STS	Support Percentage
Digital innovation helps in understanding Qur'an–Hadith material	28 (46.7%)	25 (41.7%)	6 (10.0%)	1 (1.6%)	88.4%
Digital media increases learning motivation	30 (50.0%)	22 (36.7%)	7 (11.6%)	1 (1.7%)	86.7%
Mobile Qur'an–Hadith applications attract students' attention	27 (45.0%)	24 (40.0%)	8 (13.3%)	1 (1.7%)	85.0%
Madrasah e-learning makes learning more interactive	25 (41.7%)	26 (43.3%)	7 (11.7%)	2 (3.3%)	85.0%
Need for more creative and collaborative digital strategies	32 (53.3%)	20 (33.3%)	6 (10.0%)	2 (3.4%)	86.6%

The quantitative results show that more than 85% of the students support the use of digital innovation in Qur'an–Hadith learning. Students felt more motivated, attentive, and able to understand the material more effectively when learning involved mobile applications, e-learning platforms, and interactive digital media.

To strengthen these findings, qualitative data were collected through in-depth interviews. Teachers reported that digitalization facilitated students' comprehension and responses in Qur'an–Hadith learning. One Qur'an–Hadith teacher explained:

> *"Today's students respond much faster when the material is delivered through digital media. If I only lecture, they get bored quickly. But when I use applications or interactive videos, they become more enthusiastic and understand more easily."* (Qur'an–Hadith Teacher 1, Interview, June 12, 2025).

Another teacher added:

> *"Digital innovation is not only about catching students' attention, but it also helps me as a teacher. For example, I can assign online exercises, and I can immediately see the results without checking each one manually."* (Qur'an–Hadith Teacher 2, Interview, June 14, 2025).

Students' narratives also supported the teachers' statements. One student shared:

> *"When I use a Qur'an learning app, it's easier to memorize verses. There's an audio feature I can replay anytime."* (Student 1, Interview, June 15, 2025).

Another student stated:

> *"I like it when the teacher gives assignments through e-learning because I can do them on my phone. It feels more relaxed but still learning. Sometimes there are online quizzes, and it feels like playing a game."* (Student 2, Interview, June 15, 2025).

A third student remarked:

> *"I think lessons using videos or digital media are more interesting. Not like the usual ones where we only read books."* (Student 3, Interview, June 16, 2025).

The integration of quantitative and qualitative data indicates that students experience substantial benefits from digital innovation in Qur'an–Hadith learning. They find digital media more engaging, easier to follow, and more effective for understanding material. From the teachers' perspective, digital tools also simplify instructional management, from material delivery to monitoring student progress.

Observations and interviews further showed that students demonstrated higher enthusiasm and motivation during digital-based learning compared to traditional methods. The classroom atmosphere became more dynamic and collaborative. However, around 10–13% of students encountered difficulties due to limited access to

devices or inadequate digital literacy. This implies that although digital transformation offers clear advantages, equitable access remains a challenge.

Discussion

The findings indicate that digital innovation significantly enhances students' understanding and motivation in Qur'an–Hadith learning (Fitroh et al., 2023). This supports Vygotsky's Social Constructivism, which states that learning is most effective when supported by interactive media that serve as scaffolding to help learners construct new knowledge (Oomen-Early & Early, 2015). Digital media videos, apps, and e-learning function as tools that facilitate cognitive engagement and contextual learning (Khamidah & Sholichah, 2022; Murro Nuril Chasanah & Hasibuan, 2024; Tambusai & Umami, 2019; Warmansyah, Mudinillah, et al., 2024). The results also align with Mayer's Multimedia Learning Theory, which emphasizes that the integration of text, images, and audio enhances meaningful understanding (Sugiarto, 2025). Students' positive responses show that digital media accommodate the visual and auditory preferences of millennial learners, enabling them to process Qur'anic concepts more easily than through conventional textual methods (Darejeh et al., 2022; Idawati & Hanifudin, 2024).

At the same time, the findings reveal partial consistency with Norris's Digital Divide Theory, which highlights disparities in access to technology. Although most students benefited from digital learning, a minority still faced challenges due to limited facilities or low digital literacy (Haikal & Anwar, 2024; Pick & Sarkar, 2016). This suggests that technological advancement alone is insufficient unless accompanied by equitable access and digital readiness among students. The positive impact of digital innovation on student motivation can be attributed to the interactive, personalized, and collaborative nature of technology-enhanced learning (Alenezi et al., 2023; Yu, 2022). Students feel more engaged because digital tools allow active participation rather than passive reception. The novelty effect of technology also contributes to increased enthusiasm, making learning experiences more enjoyable.

However, barriers faced by some students indicate the need for strengthened digital literacy programs and improved access to technological resources in schools (Munir & Warmansyah, 2023; Sugiarto, 2025; Yulia et al., 2025). Students lacking familiarity with digital tools may struggle to benefit from digitalized instruction, making resource availability and readiness crucial for successful implementation. The implications of these findings suggest that digital innovation should be viewed as an essential component rather than a supplementary element of Qur'an Hadith learning. Eden et al., (2024) Teachers can utilize digital tools not only to deliver material effectively but also to enhance student engagement and collaboration. Schools should prioritize equal access to digital facilities, such as shared devices and digital learning laboratories.

Furthermore, integrating digital literacy into the curriculum is essential to ensure that all students can benefit equitably (Marshall et al., 2013; Mayer, 2017).

Collaboration with parents and the community can also play a vital role in supporting home-based digital learning environments, especially for students facing access constraints. Nurtaniawati, (Nurtaniawati, 2019) Although the study provides valuable insights, it is limited by its relatively small sample size and focus on a single institution. Warschauer & Matuchniak, (2010) Broader studies involving multiple schools and diverse contexts are recommended to strengthen the generalizability of the findings.

CONCLUSION

This study concludes that digital innovation in Qur'an–Hadith learning at the Madrasah Tsanawiyah level significantly enhances millennial students' understanding, motivation, and engagement. The integration of technology not only supports teachers in managing instruction but also creates an interactive learning environment aligned with the demands of the digital era. The study's contribution lies in the combined qualitative and quantitative findings, which consistently show that most students benefit from digital media, although a small proportion still face obstacles due to limited facilities or low digital familiarity. Overall, the research provides empirical evidence of the strategic relevance of digital innovation in addressing contemporary challenges in Islamic education. It is therefore recommended that madrasahs and teachers continue optimizing digital tools supported by adequate technological literacy training, improved facilities, and collaboration with educational technology developers, while ensuring targeted support for students who experience difficulties so that digital-based Qur'an–Hadith learning becomes accessible and equitable for all.

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