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The Use of Emerging Technologies for the Preservation and Dissemination of Islamic Traditions

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ABSTRACT

In the digital era, the preservation and dissemination of Islamic traditions face both disruption and opportunity due to the rapid proliferation of emerging technologies. This study aims to systematically identify how technologies such as artificial intelligence (AI), augmented and virtual reality (AR/VR), blockchain, and social media have been applied to support Islamic education, cultural heritage preservation, and religious communication. Using the PRISMA 2020 framework, a systematic literature review was conducted on 26 peer-reviewed studies published between 2020 and 2025 across Scopus, Google Scholar, ScienceDirect, and Taylor & Francis databases. The findings reveal diverse technological applications, from AI-based Qur'anic interpretation tools and VR-based ritual simulations to blockchain-driven manuscript authentication. These technologies contribute to educational innovation, cultural preservation, and digital da'wah while raising concerns over theological authenticity, spiritual commodification, and ethical alignment with Islamic values. The study concludes that emerging technologies offer meaningful pathways and cautionary implications for sustaining Islamic traditions in the digital age. Strategic engagement and ethical integration are crucial to ensuring that technological innovation reinforces rather than dilutes Islam's spiritual, cultural, and communal dimensions.

Keywords: Islamic traditions, emerging technologies, digital da'wah, systematic literature review.

INTRODUCTION

The wave of digital transformation marked by the Fourth and Fifth Industrial Revolutions has significantly impacted various sectors of life, including the social, educational, and cultural domains. These two phases of industrial advancement emphasize the integration of cutting-edge technologies—such as Artificial Intelligence (AI), Virtual Reality (VR), and blockchain—to enhance productivity while reinforcing humanistic values. In education, for instance, AI facilitates personalized learning experiences by tailoring content to individual learning styles, thereby significantly improving learning outcomes (Ulasan, 2023). This adaptive approach also strengthens learners' motivation and engagement in the educational process. Furthermore, VR has transformed the delivery of educational content through immersive experiences that foster more profound understanding and information retention (Ulasan, 2023).

In the social sector, AI has been employed to increase the efficiency of public and private services, including social welfare programs targeted at vulnerable groups (Kurhayadi, 2022; Seniutis et al., 2024). However, these advancements have also raised concerns about potential disruptions in the labor market, where many repetitive jobs are being replaced by automation, thus widening social inequality (Lusiana et al., 2024). In response, the Fifth Industrial Revolution emphasizes a human-centered approach, advocating for creating new jobs that require distinctly human skills (Mourtzis et al., 2022). Meanwhile, blockchain offers enhanced transparency and security in data sharing, academic certification verification, and the distribution of social assistance (Rehman & Alfaify, 2023). In the cultural domain, technologies such as VR are used to create virtual representations of heritage sites threatened by climate change and to foster new forms of artistic expression that provoke ethical discussions on originality and authorship (Ryan, 2022; Sesana et al., 2021).

On a broader scale, digitalization has triggered profound changes in social structures, collective behavior, and the cultural identity of global societies. Furthermore, it is important to acknowledge that the development and dissemination of Islamic traditions have historically been influenced by the unique geographical position of the Middle East. Located at the crossroads of Asia, Africa, and Europe, the region has served as a crucial hub for trade, migration, and the exchange of knowledge, which has contributed to the rich diversity and adaptability of Islamic culture. This geographical factor continues to shape how Islamic values and traditions interact with emerging technologies in different parts of the world (Muttaqin, 2025). In education, digital technologies facilitate personalized learning through big data analytics, online platforms, and collaborative strategies that enhance digital literacy and future workplace adaptability (Luger et al., 2025; Zhang & Leong, 2025). Conversely, the academic world faces increasing pressure to foster interdisciplinary collaboration between social sciences and technological disciplines to address the social dynamics resulting from digital technologies (Baryshev et al., 2022). Cultural and technological integration has also become crucial, particularly in the context of Islamic education, where the success of educational technology (edu-tech) implementation heavily depends on the extent to which it reflects local cultural and spiritual values (Mohammadian & Wittberg, 2024). This cultural-technology integration is further complicated by the geographical and ethnographic diversity of Muslim societies, ranging from the arid deserts and multicultural cities of the Middle East to the archipelagic environments of Southeast Asia. These geographical distinctions have historically contributed to the formation of local Islamic practices and educational approaches, highlighting the need for technological solutions that are both adaptable and sensitive to local contexts (Muttaqin, 2025).

Quantitative data indicates a significant rise in digital technology adoption among Muslim communities worldwide. In Southeast Asia—particularly in Indonesia—over 90% of Muslims utilize digital devices such as smartphones and e-wallets for various religious activities (Sulistyowati et al., 2025). Young Muslims, especially in urban areas, increasingly rely on platforms like Instagram and YouTube to access Islamic teachings, often supplanting traditional religious authorities (Zaid, Fedtke, Shin, El Kadoussi, Ibahrine, et al., 2022). Even

in Germany, Muslim communities expanded their digital services via social media during the COVID-19 pandemic (Tabti, 2022). Another report highlights that approximately 70% of Muslim University students in Turkey access religious information online, and over 66% spend more than three hours per day using digital media (Kandemir & Toprak, 2023). Additionally, technology-based applications such as VR for Hajj training and AR for Qur'anic studies have been rapidly developed between 2018 and 2024, although precise data on their prevalence remains limited (Acim, 2022; Ahmad, 2023; Idharoel Haq, 2024).

Nonetheless, a significant challenge in preserving Islamic cultural and spiritual values is alongside these advancements. Globalization and intercultural interactions have pressured traditional Islamic value systems, which must now adapt to digital realities. Religious content disseminated through social media is often unverified, leading to an information anarchy that threatens the depth of spiritual understanding (Whyte, 2022). Social media influencers lacking scholarly legitimacy play a significant role in shaping religious perspectives, often favoring popularity over substance (Zaid, Fedtke, Shin, El Kadoussi, Ibahrine, et al., 2022). Islamic educational institutions face the challenge of integrating technology without compromising the spiritual essence of Islamic teachings (Hudia et al., 2023; Ningsih et al., 2024). Some institutions have even shown resistance to adopting technology due to concerns over its effectiveness in conveying Islamic values (Solichah & Zuhroh, 2023).

In this context, emerging technologies such as VR, AR, AI, and blockchain present great potential as tools for preserving and disseminating Islamic values. Within Islamic education, these technologies enrich pedagogical methods, improve access to classical texts, and promote deeper understanding through more interactive and contextualized approaches (Ibrahim et al., 2024; Utari et al., 2024). In the domain of da'wah (Islamic outreach), social media and other digital platforms facilitate broad and dynamic dissemination of Islamic teachings, including Sufi practices and popular expressions of Islam (Noorthaibah & Maula, 2022; Rozi & Azhar, 2024). Furthermore, blockchain technology is employed in preserving ancient manuscripts and the transparent distribution of digital waqf (charitable endowments) (Ibrahim et al., 2024).

Despite the increasing number of studies exploring these technological initiatives, current research is mainly fragmented—focused on isolated case studies, implementation within Islamic education, or conceptual discussions of digital da'wah. No systematic review has mapped how emerging technologies are explicitly utilized to preserve and disseminate Islamic traditions. Previous studies have not adopted a comprehensive framework such as the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Therefore, this study aims to fill that gap by offering a novel, systematic mapping of how cutting-edge technological innovations intersect with preserving Islamic spiritual and cultural values in the digital era. This approach provides a foundation for interdisciplinary research bridging Islamic Studies, technology, and cultural studies. The massive digital transformation taking place in the era of the Fourth and Fifth Industrial Revolutions has presented both opportunities and challenges for the preservation and dissemination of Islamic traditions, which are increasingly encountering new dynamics in social, educational, and cultural spheres.

In an increasingly complex digital era, preserving and disseminating Islamic values can no longer rely solely on conventional approaches. Cultural globalization and technological disruption have accelerated changes in how Muslim communities, especially the younger generation, interact and learn. This phenomenon poses a risk to the continuity of Islamic cultural heritage and spirituality due to unrestricted access to a wide array of religious content that may lack scholarly validation. Traditional authorities in religious transmission are transforming, increasingly replaced by digital figures who may enjoy popularity but often lack academic or theological legitimacy. On the other hand, emerging technologies such as Artificial Intelligence (AI), Virtual Reality (VR), Augmented Reality (AR), and blockchain offer innovative potential to support Islamic learning, the preservation of ancient manuscripts, and the broader and more adaptive dissemination of da'wah. However, there remains a lack of systematic studies that map how these technologies are being utilized in preserving and spreading Islamic values—whether in terms of the types of technologies, their intended purposes, or their sociocultural and spiritual impacts. This absence of mapping indicates a gap between technological advancement and a holistic, contextual vision for Islamic preservation.

In response to these issues, this study aims to address the need for a systematic scientific approach to understanding the relationship between digital technology and the preservation of Islamic values. Specifically, the study seeks to identify and classify the forms of emerging technology used in preserving and disseminating Islamic traditions, based on the latest academic literature. Furthermore, it aims to analyze the roles and impacts of such technologies on the sustainability of Islamic spiritual and cultural values in various societal contexts, including education, culture, and religious outreach.

To achieve these aims, two main research questions are formulated as the focus of this study: 1. How have emerging technologies been used to support preserving and disseminating Islamic traditions in current academic literature? 2. What are emerging technologies' social, cultural, and spiritual impacts on the sustainability of Islamic values?

This study offers novelty through a systematic approach based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology to evaluate the use of emerging technologies in Islamic tradition preservation and dissemination. Unlike previous studies, which generally focus on either technology or Islamic education in isolation, this research integrates both dimensions, emphasizing the connection between technological innovation and preserving Islamic spirituality. Thus, the study is expected to fill a gap in the academic literature concerning the synergy between advanced technology and the preservation of Islamic spiritual-cultural heritage. It aims to provide both a conceptual and practical roadmap for technology developers, educators, and Muslim communities to adopt technology ethically and positively while also fostering new directions in interdisciplinary research at the intersection of Islamic Studies, technology, and culture from a global perspective.

METHOD

This study employs a Systematic Literature Review (SLR) approach grounded in the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)

framework (Page et al., 2021). The SLR method was chosen to systematically identify, evaluate, and synthesize academic literature regarding the use of emerging technologies to preserve and disseminate Islamic traditions. This method aims to develop a comprehensive understanding of current research patterns, technological implementations, sociocultural impacts, and existing knowledge gaps in the intersection between digital innovation and Islamic spiritual-cultural preservation.

The SLR process followed four main stages in line with PRISMA 2020 guidelines: identification, screening, eligibility assessment, and inclusion. In the identification stage, a structured literature search was conducted using four major academic databases: Scopus, Taylor & Francis, ScienceDirect, and Google Scholar. The search strategy involved Boolean keyword combinations reflecting the research focus on Islamic traditions and digital technology. The primary search string used was:

("Islamic traditions" OR "Islamic heritage" OR "Islamic culture" OR "Islam") AND ("preservation" OR "dissemination" OR "education" OR "cultural transmission") AND ("emerging technologies" OR "artificial intelligence" OR "AI" OR "virtual reality" OR "VR" OR "augmented reality" OR "AR" OR "blockchain" OR "IoT" OR "digital technology" OR "smart technology").

This query resulted in 57 documents in Scopus, which were refined to 24 articles after applying filters for publication year (2020–2025), article type, and English language. From Taylor & Francis, a total of 6,002 articles was narrowed to 1,559 with the same filters. The raw search yielded approximately 1,460,000 results in Google Scholar, refined to 134,000 documents within the 2020–2025 range. A complementary search using a simplified string:

("Islam") AND ("dissemination" OR "education" OR "cultural transmission") AND ("technology" OR "digital technology") was conducted in ScienceDirect, returning 27,197 documents, which were narrowed down to 4,452 research articles based on filters for open access, English language, and publication year (2020–2025).

In the screening stage, all articles were assessed based on their titles and abstracts to ensure alignment with the core theme of the study. The inclusion criteria were defined as follows: (1) peer-reviewed academic articles or proceedings; (2) published between 2020 and 2025; (3) written in English; and (4) containing discussions of emerging technologies in Islamic contexts—specifically focusing on cultural, educational, or religious applications. Exclusion criteria included non-academic materials, inaccessible full texts, duplicates, and articles with only general references to technology without substantive Islamic relevance.

In the eligibility assessment phase, selected full-text articles were reviewed comprehensively to determine their relevance to the study's research questions. A thematic analysis was conducted to classify each article based on the type of technology involved, its primary purpose (religious education, cultural preservation, or dissemination of Islamic values), and the reported social, cultural, and spiritual impacts. As a result of this process, 26 articles met all inclusion criteria and were included as the final data set for analysis.

To ensure academic rigor and methodological transparency, each selected article was reviewed based on structured relevance, clarity of contribution, and consistency with the

research objectives. This approach supports the integrity and reliability of the findings while ensuring that the review accurately reflects the State of research in this emerging area.

By applying this structured methodology, the review provides a solid foundation for understanding how digital innovation intersects with Islamic traditions. The outcome intends to contribute conceptually and practically to scholarly discourse, educational design, and ethical technological adoption in the Islamic world. To clarify the scope and systematic focus of the literature search, this study applies the Population, Intervention, Comparison, Outcome, and Context (PICOC) framework as a conceptual guide for formulating the article search and selection criteria.

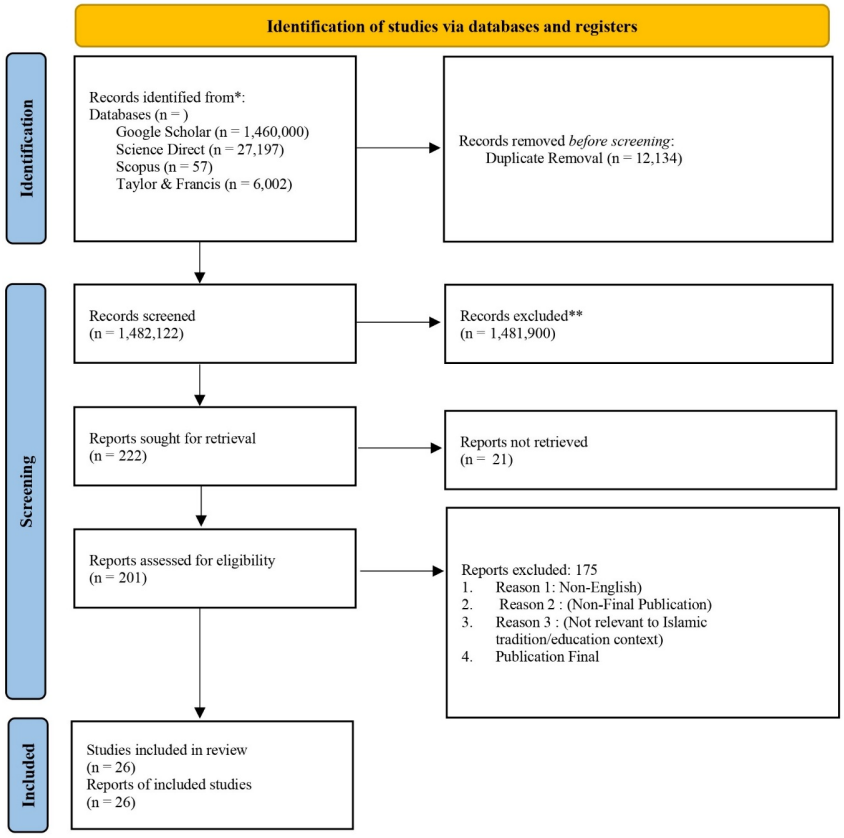

Figure I. PRISMA 2020 Flow Diagram for Study Selection

Based on Figure I, a total of 1,494,256 records were initially identified from four major academic databases: Google Scholar (1,460,000), ScienceDirect (27,197), Scopus (57), and Taylor & Francis (6,002). After removing 12,134 duplicate records, 1,482,122 entries were screened based on their titles and abstracts. Of these, 1,481,900 records were excluded due to irrelevance to the research scope. 222 articles were sought for complete retrieval, with 21 reports not successfully accessed. Subsequently, 201 full-text articles were assessed for eligibility, excluding 175 articles for reasons including non-English language, non-final publication status, lack of relevance to Islamic tradition or education, or insufficient scholarly quality. Ultimately, 26 studies met all inclusion criteria and were included in the final review. This rigorous and structured process ensures the resulting synthesis is comprehensive, credible, and aligned with established systematic review standards. A predefined set of inclusion criteria

was developed and applied during the screening and eligibility assessment stages to maintain the consistency, objectivity, and relevance of the studies included in this review. These criteria ensured that each selected study aligned with this systematic review's research objectives and scope.

RESULT AND DISCUSSION

To address the research objectives systematically, this section presents the findings derived from the analysis of 26 selected studies, organized and discussed according to thematic relevance, publication trends, and research questions.

Characteristics of the Included Studies

To provide a foundational overview of the selected literature, the characteristics of each study were extracted and synthesized based on seven key dimensions: author and publication year, technology focus, methodology, research objective or scope, type of Islamic tradition addressed, identified impact, and region or country context.

Selected studies exhibit significant diversity in terms of geographical distribution, research approaches, and thematic scope. While qualitative methodologies dominate—especially in case studies and interviews—experimental, mixed-method, and conceptual studies also exist. Most studies focus on integrating technologies such as AI, VR, AR, and digital platforms in Islamic education, da'wah communication, and cultural preservation. Notably, Indonesia emerges as a primary research context, followed by broader regional foci, including the Gulf, Malaysia, and transnational Muslim communities. The studies also highlight a wide range of Islamic traditions addressed, from Qur'anic learning and dhikr practices to architectural heritage and pilgrimage rituals, with most reporting positive social, cultural, or spiritual impacts enabled by technology while also noting ethical and theological tensions in some cases.

Trends in the Use of Emerging Technologies in Islamic Contexts

To further understand the evolving landscape of emerging technologies concerning Islamic traditions, this section presents visual analyses across four trend dimensions: publication year, types of technologies used, geographical distribution, and identified impact categories. These visualizations provide a clearer picture of how academic attention, technological focus, and regional engagement have developed between 2020 and 2025.

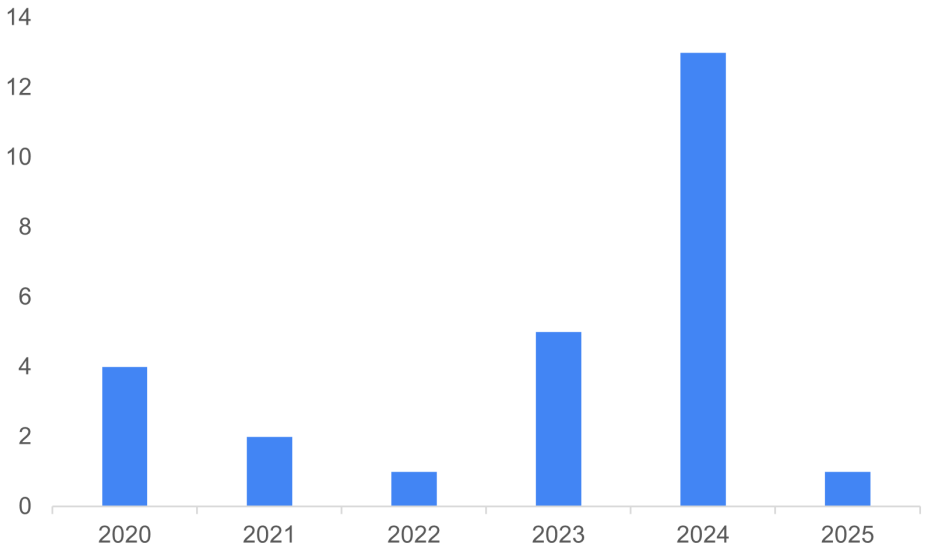

Figure 3. Yearly Publication Trend in Reviewed Studies (2020–2025)

Based on Figure 3, scholarly interest in the use of emerging technologies for Islamic tradition significantly increased in 2024, which accounts for the highest number of publications among the review period. While initial engagement started in 2020 with modest output, there was a notable surge after 2023. This spike may reflect post-pandemic academic focus on digital religious practices and an increased demand for virtual religious engagement. The relatively low number of studies in 2025 may be attributed to the incomplete nature of that year's publication cycle at the time of review. Another important dimension in the trend analysis involves identifying the geographical contexts in which emerging technologies have been studied within the framework of Islamic tradition.

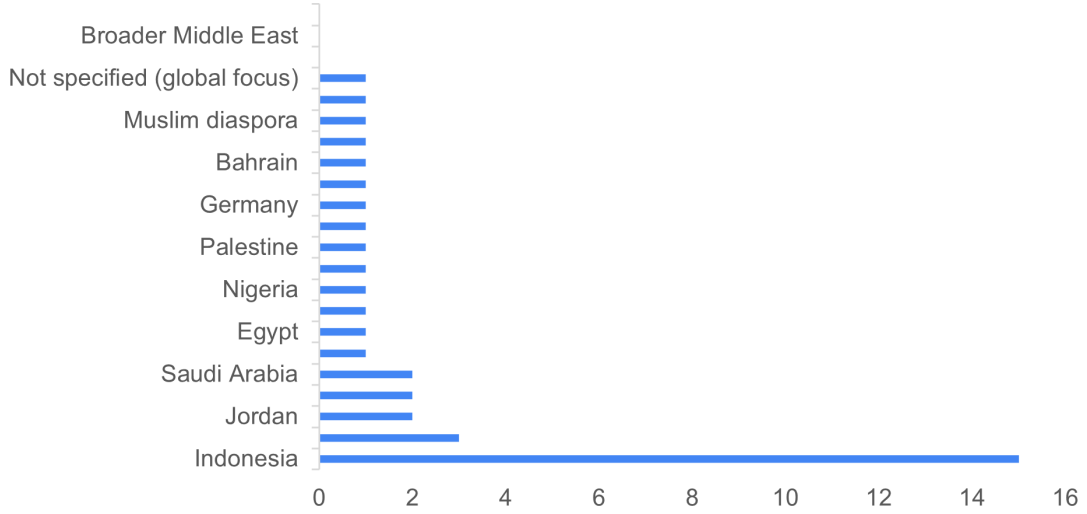

Figure 4. Geographical Distribution of Studies on Emerging Technologies in Islamic Tradition (2020–2025)

Based on Figure 4, Indonesia clearly dominates the geographical landscape, contributing more than half of the reviewed studies. This concentration indicates a strong local academic interest and institutional engagement with Islamic education and digital innovation in Southeast Asia. Other countries with modest contributions include Jordan, Saudi Arabia, Egypt, and Germany, while a number of studies adopt a global or diaspora Muslim community focus. The imbalance also highlights a research gap in regions such as sub-Saharan Africa, Central Asia, and Western Europe, suggesting a need for broader geographic diversification in future studies. This geographical concentration of research in Southeast Asia should be seen in light of the broader distribution of the Muslim world, which spans diverse regions including the Arab League countries, Iran, Turkey, and Muslim communities across Africa and Europe. Each of these regions possesses distinct geographical, cultural, and demographic characteristics that influence both the adoption and adaptation of emerging technologies in the preservation of Islamic traditions. For example, the Gulf countries' economic strength, the cultural depth of the Maghrib and Mashriq regions, and the transcontinental position of the Middle East each offer unique environments for digital innovation in Islamic contexts. In addition to geographical and temporal trends, it is essential to examine which specific types of emerging technologies are most commonly applied within Islamic contexts.

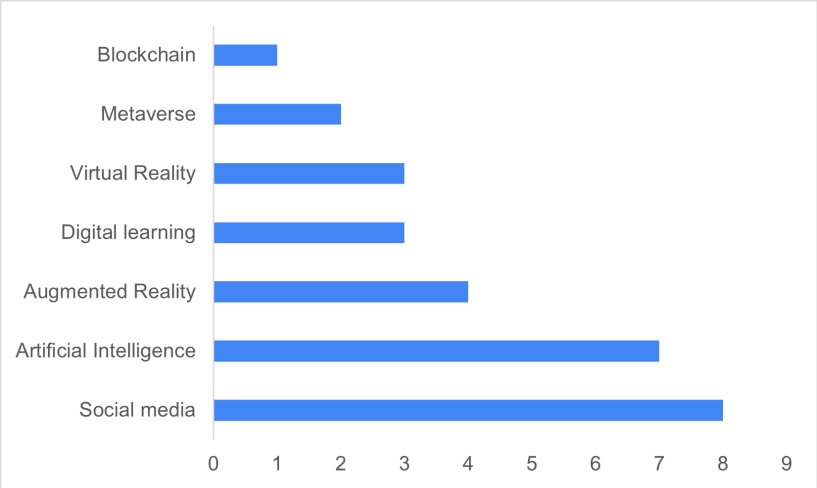

Figure 5. Frequency of Emerging Technologies Used in the Preservation and Dissemination of Islamic Traditions

Based on Figure 5, social media platforms represent the most frequently utilized technology in the reviewed studies, followed closely by artificial intelligence (AI) and augmented reality (AR). These technologies are predominantly used in contexts such as Islamic education, digital da'wah, and cultural engagement. Other tools like digital learning environments, virtual reality (VR), and the metaverse also appear with moderate frequency, indicating growing interest in immersive learning. In contrast, blockchain remains underrepresented, despite its promising potential for archival and verification purposes in Islamic manuscript preservation. This distribution illustrates the current preference for communicative and pedagogical technologies, while also highlighting areas for future

exploration. Finally, it is important to analyze the types of impact most commonly reported in the reviewed studies, particularly in relation to the preservation of values and religious continuity.

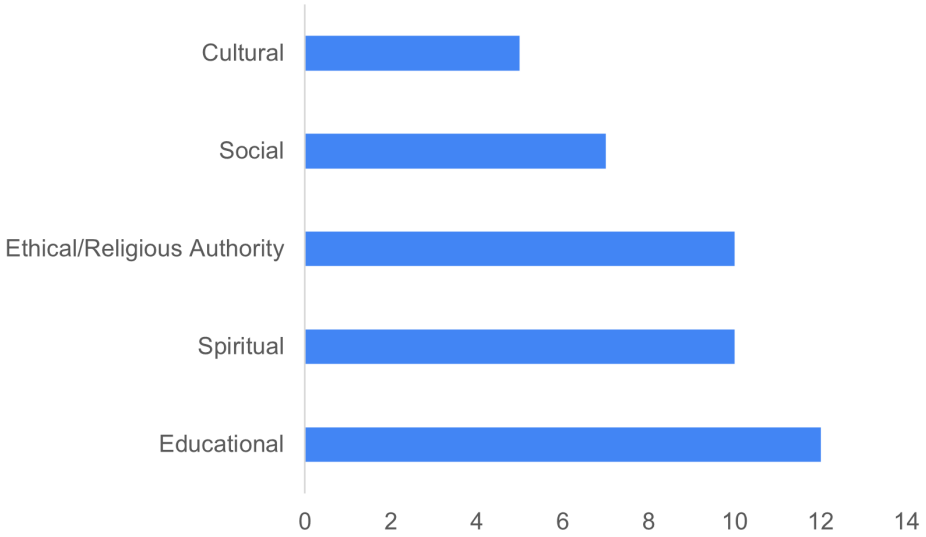

Figure 6. Distribution of Impact Categories in Reviewed Studies

Based on Figure 6, educational impact appears as the most dominant outcome in the reviewed studies, followed closely by spiritual and ethical/religious authority dimensions. This reflects the core emphasis on Islamic pedagogy and value transmission in digital environments. Social impacts—including engagement, accessibility, and inclusion—are also strongly present, while cultural impacts such as heritage preservation or identity reconstruction are less represented. This trend suggests that while technological adoption is enabling new modes of religious learning and spiritual interaction, more attention could be directed toward sustaining Islamic cultural heritage in the face of digital transformation.

Applications of Emerging Technologies for the Preservation and Dissemination of Islamic Traditions

The integration of emerging technologies into Islamic contexts has transformed the ways Islamic traditions are preserved and disseminated, reflecting a dynamic intersection between faith and digital innovation. Across diverse geographies and pedagogical domains, digital tools have been deployed to enhance religious education, simulate rituals, safeguard cultural heritage, and enable more inclusive da'wah practices. Notably, educational technology occupies a prominent role. For instance, the use of digital platforms and multimedia resources has significantly enhanced Arabic language and literature instruction in Islamic education, enabling students to engage with religious texts through interactive virtual libraries and grammar-focused applications (Ibrahim et al., 2024). Similar strategies are evident in blended digital Islamic Religious Education (IRE), where multimedia content, quizzes, and e-forums foster student engagement while preserving Qur'anic pedagogy (Mashudi & Hilman, 2024).

Augmented Reality (AR) is another impactful medium in religious instruction. AR-based applications have been effectively deployed to teach tajweed and Arabic vocabulary, offering immersive and interactive visualizations of complex pronunciation rules (Andriyandi et al., 2020; Sahrim et al., 2023). These tools address linguistic barriers and offer novel pathways for spiritual learning. Similarly, Virtual Reality (VR) and AI technologies are utilized in veterinary education to simulate culturally sensitive content such as pig husbandry without compromising Islamic sensibilities (Roslan et al., 2023). The same VR modality has been expanded to virtual hajj experiences, allowing individuals restricted by geopolitical, demographic, or health barriers to partake in spiritually meaningful yet symbolic ritual simulations (Niu, 2023).

Artificial Intelligence (AI) also plays a growing role in the personalization and support systems of Islamic education. AI-powered language models such as ChatGPT have been integrated informally in higher education for religious studies in Indonesia and Thailand, aiding in research and Qur'anic learning despite concerns regarding ethical boundaries (Syukur et al., 2024). Furthermore, AI and machine learning have been harnessed to detect hate speech targeting Islam on Arabic social networks, contributing to the safeguarding of religious dignity and cultural identity (Aljarah et al., 2021).

Digital da'wah represents a major frontier for emerging technologies. Social media platforms such as YouTube, Instagram, and TikTok have enabled new forms of religious outreach, particularly among younger audiences. Influencers like Salama Mohamed and Ahmad Al-Shugairi reframe Islamic values through civic storytelling and lifestyle-based da'wah (El-Ebiary et al., 2024). Similarly, hijrah communities in Indonesia utilize social media to promote faith-based identity reconstruction and community solidarity (Fansuri, 2023). Digital feminist da'wah by the *Cadar Garis Lucu* movement exemplifies how Instagram is leveraged for interfaith dialogue and progressive religious reinterpretation among veiled Muslim women (Dwifatma & Beta, 2024).

On the cultural front, immersive tools such as geospatial platforms and 4D architectural reconstructions have been employed to preserve the legacy of early Muslim settlers in Australia. These technologies support national inclusivity efforts while digitizing heritage sites like mosques and cemeteries (Rashid & Antlej, 2020). Meanwhile, blockchain and NFT frameworks have been proposed for the authentication and global sharing of Islamic calligraphy and artifacts, providing transparency and immutable ownership within digital environments like the metaverse (Mokhamed et al., 2024).

Moreover, Quranic content has been adapted for automated dissemination through Twitter bots and sentiment-based translation analysis using AI, highlighting both devotional and linguistic engagement across digital media (Abokhodair et al., 2020; Gaanoun & Alsuhaibani, 2025). While such technologies promote continuous engagement with sacred texts, they also provoke debate on theological accuracy and emotional authenticity.

In essence, emerging technologies have diversified the landscape of Islamic tradition preservation—from AI-driven waqf models in education (Agaileh, 2024) to hybrid online-offline fatwa platforms (Solahudin & Fakhruroji, 2020). The broad spectrum of applications underscores the adaptability of Islamic values to digital transformation while retaining spiritual

depth and cultural continuity (Nurhaeni et al., 2021). These advancements not only respond to the educational and communicative needs of Muslim societies but also reflect evolving paradigms in the transmission of Islamic knowledge in the digital era (Khamis, 2024; Marlina & Ulya, 2024).

Social, Cultural, and Spiritual Impacts of Technology Use in Islamic Traditions

The integration of emerging technologies within Islamic contexts has produced multifaceted social, cultural, and spiritual impacts, ranging from democratizing religious authority to reconfiguring pious identity and intergenerational value transmission. Across various settings, digital tools have created opportunities to foster inclusivity, spiritual resilience, cultural preservation, and moral reflection while simultaneously posing new ethical and theological challenges.

One significant social impact is the redistribution of religious authority. Social media influencers, particularly in the Gulf region, have redefined Islamic discourse by framing religious messages through relatable civic and lifestyle narratives, shifting legitimacy from traditional clerics to charismatic digital figures (Zaid, Fedtke, Shin, Kadoussi, et al., 2022). This mediatized authority has empowered youth to actively engage in spiritual expression beyond the confines of classical scholarship (Khamis, 2024). Similarly, the *Cadar Garis Lucu* movement exemplifies how Muslim women in Indonesia have appropriated Instagram as a platform for progressive da'wah and political subjectivity, challenging patriarchal interpretations while maintaining pious expression (Dwifatma & Beta, 2024).

From a spiritual perspective, digital dhikr apps and online Islamic therapy platforms have enhanced psychological resilience and access to spiritual care, particularly during periods of crisis (Erwahyudin, 2024). Online Qur'anic recitation and e-learning platforms enabled continuity of worship and reflection during the COVID-19 pandemic, supporting students' moral and spiritual development in digitally adapted pesantren environments (Mahsusi et al., 2024). Likewise, virtual hajj simulations offer spiritually meaningful experiences for those unable to perform the pilgrimage physically, reinforcing emotional connection and theological understanding (Niu, 2023). However, these digitized rituals also raise concerns about symbolic substitution and spiritual commodification.

Culturally, digital tools have facilitated the preservation of Islamic heritage and linguistic identity. The use of geospatial platforms and VR for the reconstruction of Afghan cameleer mosques in Australia has fostered social cohesion and increased cultural empathy among Muslim and non-Muslim communities (Rashid & Antlej, 2020). Similarly, NFT and blockchain applications have provided traceable ownership for Islamic artifacts and calligraphy, ensuring authenticity and preventing misuse in the global digital market (Mokhamed et al., 2024). The vast and dynamic geography of the Islamic world, especially the Middle East as a historical crossroads of continents, has fostered continuous cultural exchange and migration. This has resulted in a rich tapestry of Islamic artistic, linguistic, and architectural heritage, much of which is now being preserved and disseminated through digital technologies. The mixed races, traditions, and innovations arising from this unique geographical positioning amplify both the opportunities and challenges of digital preservation in diverse Islamic contexts

(Muttaqin, 2025). Digital Arabic education tools in Nigeria have preserved Islamic literary traditions while addressing infrastructure and engagement gaps (Ibrahim et al., 2024).

On a broader ethical level, several studies have drawn attention to the potential for misalignment between technological advancement and Islamic values. Integrating AI in education and da'wah, for instance, raises concerns over plagiarism, intellectual integrity, and algorithmic bias (Kosasih et al., 2024; Marlina & Ulya, 2024). In Thailand and Indonesia, differing responses to AI highlight the cultural divergence between innovation and tradition, with Thai educators expressing stronger apprehensions about its ethical implications on spiritual formation (Syukur et al., 2024). Moreover, sentiment analysis in Qur'an translation has exposed how AI can unintentionally alter the emotional tone of sacred texts, thereby impacting theological interpretation and reader reception (Gaanoun & Alsuhaibani, 2025).

Social cohesion and interfaith understanding have also benefited from technology use. Instagram-based religious storytelling and meme culture among hijrah communities foster inclusivity, youth engagement, and a non-institutionalized form of spirituality (Fansuri, 2023). Da'wah platforms incorporating interfaith collaboration have further blurred sectarian and ideological boundaries, promoting a pluralistic ethos (Solahudin & Fakhruroji, 2020). The open sharing of Qur'anic verses on Twitter has created a form of "perpetual worship," yet it also necessitates theological scrutiny regarding automation and performative piety (Abokhodair et al., 2020).

Ultimately, emerging technologies' social, cultural, and spiritual effects in Islamic traditions are deeply interwoven. These tools have expanded access to religious content and redefined how Islamic values are transmitted, embodied, and contested. Whether through AI-enhanced educational waqf (Agaileh, 2024) AR-based tajweed tools (Andriyandi et al., 2020), or digital Islamic feminist discourse (Dwifatma & Beta, 2024), the convergence of faith and technology underscores a broader transformation in how Muslim communities engage with tradition in a digitized era. This transformation, while promising, requires continuous reflection to ensure that innovation remains anchored in the ethical, spiritual, and communal principles of Islam (Nurhaeni et al., 2021).

CONCLUSION

This systematic literature review explores the role of emerging technologies in preserving and disseminating Islamic traditions, analyzing 26 peer-reviewed studies (2020–2025). The findings reveal that AI, AR/VR, blockchain, and social media enhance Islamic education, da'wah, cultural archiving, and ritual simulation, demonstrating Muslim communities' adaptability to digital tools. However, while these technologies improve accessibility, youth engagement, and religious expression—especially for marginalized groups—they also raise ethical concerns, such as the commodification of sacred practices, algorithmic bias, and shifts in religious authority. The study highlights the need for balanced innovation that aligns with Islamic ethical frameworks.

For future research, scholars should develop context-sensitive digital pedagogies that uphold theological integrity while integrating technology. Additionally, Islamic institutions

should implement critical digital literacy programs to promote ethical tech usage. Further studies should also examine underrepresented regions to ensure a more inclusive understanding of digital Islamic transformation. Lastly, technological integration must be guided by principles that preserve Islamic spiritual and cultural values, acknowledging historical and geographical influences—particularly the Middle East's role as a hub of Islamic heritage. Sustainable digital adaptation requires both innovation and a deep respect for the tradition's historical and communal roots.

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