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ORIGINAL ARTICLE

Requirements for Using Artificial Intelligence in Teaching and Interpreting the Quran

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A B S T R A C T

This study examines the key dimensions, driving components and essential requirements for integrating modern artificial intelligence technologies into the teaching and interpretation of the Holy Quran. Employing a qualitative phenomenological approach, data were analyzed through Colaizzi's (1978) model and content analysis. The study population consisted of university professors of Quran and Hadith and Quran instructors in Kermanshah Province, from whom ten participants were selected through purposive, criterion-based sampling until theoretical saturation. Findings reveal that effective use of artificial intelligence in Quranic education and interpretation is structured around three main categories comprising eight subcategories, forty-five sub-concepts, and sixty general concepts. The first category, "preliminaries and infrastructures," includes essential prerequisites, creativity and innovation, and future-oriented vision. The second category, "principal and basic requirements," encompasses knowledge- and insight-based factors along with prudent, value-aligned actions. The third category, "technical and executive requirements," involves adherence to methodological principles, appropriate support and supervision, and constructive cooperation. Overall, these elements form a coherent framework that ensures AI-based systems remain technically efficient while maintaining the authenticity and scholarly rigor required in Quranic sciences. The study concludes that sustained attention to these foundational requirements strengthens the reliability and educational value of AI-assisted methods for teaching and interpreting the Holy Quran.

K E Y W O R D S

Quranic Teaching and Interpretation, Requirements, Artificial Intelligence, New Technologies.

Introduction

Artificial intelligence (AI) has emerged as a transformative force in contemporary education, enabling adaptive instruction, personalised learning trajectories, multimodal content delivery, and large-scale data processing (Gross, 2012; Clifton et al., 2020). In fields that demand exactness, textual precision, and epistemic sensitivity—such as Qur'an education and exegesis—the integration of AI must be handled with heightened methodological and ethical vigilance. While research in general education increasingly emphasises data-driven innovation (Cugurullo, 2020; Bidel et al., 2025), studies explicitly concerned with Qur'anic pedagogy highlight persistent gaps in instructional models, technological adaptation, and verification mechanisms for preserving textual authenticity (Faghihi et al., 2021; Masoomifard & Nouri, 2024). Likewise, emerging AI-based systems for Qur'an recitation and memorisation—such as E-Hafiz (Muhammad et al., 2012)—demonstrate significant potential yet reveal the absence of an integrated framework tailored to the epistemological and pedagogical requirements of Qur'anic sciences.

Despite growing enthusiasm for AI-assisted applications, research has not yet articulated a rigorous, comprehensive set of requirements that ensure reliable, ethically sound, and pedagogically grounded use of AI in Qur'an teaching and tafsīr. Existing literature remains fragmented, technology-centric, or confined to specific aspects of instruction without addressing the full spectrum of epistemic, infrastructural, operational, and supervisory considerations necessary for safeguarding Qur'anic authenticity (Elahi, 2024). This creates a critical need for knowledge-based frameworks rooted in Islamic pedagogy, scholarly consensus, and culturally situated educational expectations.

This extended abstract presents findings from a qualitative study employing Colaizzi's seven-step method and Guba and Lincoln's trustworthiness criteria to extract a validated thematic structure from in-depth semi-structured interviews with scholars of Qur'anic sciences, hadith experts, and experienced Qur'an instructors. The study's contribution lies in identifying a cohesive, practice-grounded model consisting of foundational, epistemic, infrastructural, and technical requirements essential for appropriate AI deployment in Qur'anic education. By synthesising insights from experts with established research in education, technology, and Islamic pedagogy, this work offers a theoretically sound and practically actionable framework capable of guiding researchers, developers, and policymakers in designing AI-supported Qur'anic educational systems.

Method

This study adopts a qualitative research design supported by thematic analysis in accordance with Colaizzi's seven-step analytical framework. Ten specialists—professors of Qur'anic sciences, hadith scholars, and professional Qur'an instructors—were selected through purposive sampling based on expertise, years of teaching experience, and familiarity with current pedagogical challenges in Qur'an education. Interviews were conducted with full adherence to ethical protocols, including informed consent, confidentiality, privacy protection, and voluntary participation (Hariri, 2011). Data credibility, dependability, confirmability, and transferability were ensured via Guba and Lincoln's criteria.

The thematic analysis yielded three major themes, eight subthemes, and forty-five conceptual components, all contributing to the core category titled *"Requirements of Artificial Intelligence in Qur'an Teaching and Exegesis."*

Results

This domain consists of creativity and innovation in instructional planning, clear vision and goal definition, anticipation of future educational needs, technological preparedness, and alignment with cultural and social norms. It resonates with broader discussions on the contextual prerequisites for AI adoption in education (Bidel et al., 2025; Cugurullo, 2020). Participants stressed that without robust infrastructural readiness—technological, organisational, and cultural—AI systems risk producing distortion, inconsistency, or reduced pedagogical effectiveness.

This theme reflects epistemic, attitudinal, behavioural, and prudential dimensions rooted in Islamic pedagogy. Participants highlighted the necessity of designing AI systems that enhance Qur'anic knowledge, cultivate insight, support accurate recitation and tajwīd, and reinforce reflective comprehension of verses. These concerns mirror broader debates in the literature on safeguarding authenticity and maintaining scholarly integrity in religious education (Elahi, 2024; Faghihi et al., 2021). The emphasis on epistemic grounding demonstrates that AI must operate as an assistant—not a substitute—within the authoritative structure of Qur'anic sciences.

This domain includes financial planning, organisational oversight, supervision and monitoring mechanisms, institutional cooperation, and interdisciplinary collaboration between AI developers and experts in Qur'anic sciences. Participants stressed that AI-generated Qur'anic content must remain accurate, authentic, scalable, and subject to continuous review. This theme aligns with research emphasising the need for cross-domain expertise in developing reliable AI-driven educational systems (Muhammad et al., 2012; Masoomifard & Nouri, 2024).

Collectively, these three themes reveal that successful AI-assisted Qur'an education depends not merely on technological capability but on a balanced interplay of infrastructure, scholarly principles, and operational oversight. The study highlights that technological adoption detached from pedagogical and epistemic foundations poses risks to content integrity, interpretive coherence, and learners' spiritual development.

Discussion and conclusion

The analysis demonstrates that integrating AI meaningfully into Qur'an education and exegesis requires fulfilling three interconnected domains:

Infrastructural readiness that ensures cultural alignment, technological feasibility, and future-oriented planning;

Epistemic and pedagogical grounding consistent with Qur'anic principles, Islamic scholarship, and evidence-based practices in teaching and learning; and

Technical and supervisory mechanisms that guarantee accuracy, authenticity, accountability, and interdisciplinary cooperation.

When these domains are coherently integrated, AI holds the potential to enhance recitation proficiency, deepen interpretive engagement, facilitate personalised instruction, and support innovative models of Qur'an learning across diverse educational settings. Conversely, insufficient attention to any of these dimensions may lead to conceptual distortion, reduced reliability, or compromised pedagogical outcomes. The thematic model developed in this study offers a validated, comprehensive, and contextually relevant framework that can guide future policymaking, system design, and scholarly research in AI-supported Qur'anic education.

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