

Digital Transformation of Islamic Religious Education: Enhancing Student Engagement through Technology-Based Learning in the United Arab Emirates

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Abstract The rapid advancement of digital technology has significantly transformed educational systems worldwide, including the field of Islamic Religious Education (IRE). In the United Arab Emirates (UAE), the integration of technology-based learning has become an important strategy for improving educational quality, promoting innovation, and increasing student engagement in classroom activities. This study examines the role of digital transformation in enhancing student engagement through technology-based learning in Islamic Religious Education in the UAE. Using a qualitative literature review approach, this study analyzes scholarly articles, educational reports, and policy documents related to digital learning, student engagement, and Islamic education. The findings indicate that technology-based learning positively contributes to students' cognitive, emotional, and behavioral engagement by creating interactive, flexible, and student-centered learning environments. Digital platforms, multimedia resources, online discussions, educational applications, and virtual collaboration tools encourage active participation and improve students' understanding of Islamic values and teachings. Furthermore, digital transformation supports the development of critical thinking, digital literacy, and collaborative learning skills necessary for twenty-first-century education. However, several challenges remain, including unequal technological access, teachers' digital competency limitations, and concerns regarding maintaining spiritual and moral dimensions in online learning environments. The study concludes that successful digital transformation in Islamic Religious Education requires balanced integration between technological innovation and Islamic educational values. Institutional support, teacher professional development, and inclusive digital infrastructure are essential for maximizing the effectiveness of technology-based learning in the UAE educational context.

Keywords Digital Transformation, Islamic Religious Education, Student Engagement, Technology-Based Learning, United Arab Emirates, Digital Learning, Educational Technology, Islamic Education



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1. INTRODUCTION

The development of digital technology has transformed educational systems across the world, influencing how knowledge is delivered, accessed, and experienced in both formal

and informal educational environments. Educational institutions increasingly integrate digital technologies into teaching and learning processes to improve educational quality, accessibility, and student engagement. One of the most significant educational innovations emerging from this transformation is technology-based learning, which refers to the use of digital tools, online platforms, multimedia resources, and interactive technologies to support instructional activities. In recent years, technology-based learning has become an essential component of educational reform and modernization, particularly in countries seeking to strengthen their global competitiveness and knowledge economies.

The United Arab Emirates has emerged as one of the leading countries in the Middle East in promoting digital transformation within education. The UAE government has invested substantially in technological infrastructure, smart learning initiatives, and digital innovation programs to modernize educational systems and prepare students for future global challenges. Educational reform policies in the UAE emphasize creativity, innovation, digital literacy, and student-centered learning approaches. Within this context, Islamic Religious Education (IRE) also experiences increasing pressure to adapt to digital transformation while preserving Islamic values, ethical principles, and spiritual objectives.

Islamic Religious Education occupies a central role in the educational system of the UAE because it contributes not only to students' religious understanding but also to moral development, character formation, and cultural identity preservation. Islamic education seeks to develop holistic individuals who possess spiritual awareness, ethical responsibility, intellectual competence, and social sensitivity. Traditionally, Islamic Religious Education has relied heavily on face-to-face instruction, memorization techniques, teacher-centered pedagogy, and direct interpersonal interaction between teachers and students. However, the rise of digital technology and changing student learning preferences require Islamic educational institutions to reconsider conventional instructional approaches and adopt more innovative teaching methods.

The concept of digital transformation in education extends beyond merely introducing technological devices into classrooms. According to Michael Fullan, digital transformation involves comprehensive changes in educational culture, pedagogy, curriculum design, and institutional management through the integration of technology. Digital transformation encourages educators to create more interactive, collaborative, and student-centered learning

environments that support active participation and lifelong learning. In Islamic Religious Education, digital transformation provides opportunities to make religious learning more engaging, accessible, and relevant for contemporary students who are highly familiar with digital technologies and online communication.

Student engagement represents one of the most important indicators of educational effectiveness. Engagement refers to students' emotional, cognitive, and behavioral involvement in learning activities. According to Fredricks Jennifer A., student engagement includes students' participation, motivation, emotional connection, and intellectual investment in learning processes. Highly engaged students are more likely to achieve academic success, develop positive learning attitudes, and demonstrate stronger commitment to educational goals. In Islamic Religious Education, student engagement is particularly important because religious learning requires not only cognitive understanding but also emotional connection, moral reflection, and spiritual internalization.

Technology-based learning has the potential to improve student engagement by creating interactive and flexible learning experiences. Digital platforms allow students to access learning materials anytime and anywhere, enabling personalized learning opportunities that accommodate different learning styles and abilities. Multimedia resources such as videos, animations, simulations, educational games, and virtual discussions may increase students' attention, curiosity, and participation during learning activities. Research by Charles R. Graham emphasizes that technology-enhanced learning environments can promote active learning, collaboration, and independent inquiry, which contribute positively to students' engagement and academic achievement.

In the context of Islamic Religious Education, technology-based learning offers numerous pedagogical opportunities. Teachers can utilize digital Qur'an applications, Islamic educational videos, online discussion forums, virtual classrooms, and interactive presentations to explain religious concepts more effectively. These technologies allow students to explore Islamic teachings through visual, auditory, and interactive experiences rather than relying solely on textbook-based instruction. Furthermore, digital platforms facilitate collaborative learning activities that encourage students to discuss ethical issues, reflect on Islamic values, and connect religious teachings with real-life situations. Technology-based learning may therefore help students perceive Islamic Religious

Education as more relevant and meaningful within contemporary society.

The UAE educational system strongly supports technological integration within schools and universities. National educational initiatives such as smart learning programs, artificial intelligence integration, and digital innovation strategies reflect the country's commitment to transforming education in line with global technological development. The COVID-19 pandemic further accelerated digital transformation in education as schools rapidly adopted online learning systems to maintain educational continuity. This experience highlighted both the potential benefits and the challenges associated with technology-based learning implementation. Islamic Religious Education teachers were required to adapt quickly to online instructional methods while maintaining students' engagement and preserving the spiritual dimensions of religious education.

Despite the benefits of digital transformation, several challenges remain in implementing technology-based learning in Islamic Religious Education. One major challenge concerns teachers' digital competencies and readiness to integrate technology effectively into pedagogical practices. Some educators may possess strong religious knowledge but limited technological skills, making it difficult to design engaging online learning activities or utilize digital tools efficiently. According to John W. Creswell, educational innovation requires continuous professional development and institutional support to ensure successful implementation. Therefore, teacher training programs are essential for improving educators' technological literacy and pedagogical adaptability.

Another important challenge involves maintaining the moral and spiritual dimensions of Islamic Religious Education within digital environments. Islamic pedagogy traditionally emphasizes direct teacher-student interaction, moral exemplification, and spiritual mentorship. Excessive dependence on technology may reduce opportunities for personal guidance, emotional connection, and ethical modeling that are central to Islamic educational philosophy. Consequently, educators must balance technological innovation with meaningful interpersonal interaction to ensure that digital transformation supports rather than weakens the holistic objectives of Islamic education.

The multicultural and globally connected environment of the UAE further influences the implementation of technology-based learning in Islamic Religious Education. Students in the UAE often come from diverse cultural, linguistic, and educational backgrounds.

Technology-based learning provides opportunities for inclusive educational practices that accommodate diversity while promoting intercultural understanding and global awareness. Through digital platforms, students can access various Islamic educational resources, participate in collaborative learning communities, and engage with broader discussions concerning ethics, citizenship, and social responsibility from Islamic perspectives.

This study aims to examine the role of digital transformation in enhancing student engagement through technology-based learning in Islamic Religious Education in the UAE. Specifically, the study explores how digital technologies influence students' cognitive, emotional, and behavioral engagement in religious learning. The study also investigates the opportunities and challenges associated with implementing technology-based learning within Islamic educational contexts. By analyzing relevant scholarly literature and educational practices, this research seeks to contribute to broader discussions concerning educational innovation, digital pedagogy, and the future of Islamic Religious Education in technologically advanced societies.

The findings of this study are expected to provide valuable insights for educators, policymakers, curriculum developers, and Islamic educational institutions in the UAE and other Muslim-majority countries. The study emphasizes the importance of integrating digital innovation thoughtfully and ethically within Islamic Religious Education to create engaging, effective, and spiritually meaningful learning environments. Ultimately, digital transformation has the potential to strengthen Islamic education by making it more relevant, accessible, and responsive to the educational needs of contemporary students while preserving the core values and objectives of Islamic teachings.

2. METHODS

This study employs a qualitative research approach using a literature review method to analyze the digital transformation of Islamic Religious Education and its role in enhancing student engagement through technology-based learning in the United Arab Emirates (UAE). A qualitative approach is considered appropriate because the study seeks to explore educational phenomena, interpret scholarly findings, and understand the broader implications of digital transformation within Islamic educational contexts. According to John W. Creswell, qualitative research enables researchers to investigate complex educational

issues through detailed interpretation, contextual analysis, and comprehensive understanding of social realities. This approach is particularly relevant for examining how technology-based learning influences students' engagement, participation, and learning experiences in Islamic Religious Education.

The literature review method was selected because it allows the researcher to collect, evaluate, and synthesize findings from existing academic studies, educational reports, policy documents, and scholarly publications related to digital learning, student engagement, and Islamic education. Lawrence A. Machi and Brenda T. McEvoy explain that literature review research is useful for identifying theoretical frameworks, comparing research findings, and revealing gaps within existing scholarly discussions. Through this method, the study seeks to develop a comprehensive understanding of how digital transformation contributes to student engagement in Islamic Religious Education within the UAE educational context.

The data sources used in this study consist of secondary data obtained from reputable academic databases and educational repositories, including Google Scholar, Scopus, ERIC (Education Resources Information Center), SpringerLink, and ScienceDirect. These databases were selected because they provide high-quality peer-reviewed publications relevant to educational technology, digital transformation, student engagement, and Islamic education. The study focused on literature published between 2015 and 2026 to ensure the relevance and contemporary significance of the reviewed materials. Articles and reports discussing technology integration, online learning, blended learning, student-centered pedagogy, and Islamic Religious Education were prioritized during the selection process.

The data collection process was conducted through several stages. First, the researcher identified relevant literature using specific keywords such as "digital transformation," "Islamic Religious Education," "technology-based learning," "student engagement," "digital pedagogy," "online learning," and "United Arab Emirates." Boolean operators such as AND and OR were used to combine keywords and refine search results. Second, the researcher screened titles and abstracts to identify studies directly related to the research topic. Third, selected articles and publications were reviewed comprehensively to extract information concerning research objectives, methodologies, findings, technological strategies, student engagement outcomes, and implementation challenges.

The data analysis process in this study employed thematic analysis. According to

Virginia Braun and Victoria Clarke, thematic analysis is a qualitative analytical method used to identify, categorize, and interpret recurring themes within research data. In this study, the collected literature was systematically organized into several major themes, including: (1) digital transformation in education, (2) technology-based learning in Islamic Religious Education, (3) student engagement in digital learning environments, (4) challenges of implementing digital learning in Islamic education, and (5) strategies for improving technology integration in the UAE educational context. Through thematic analysis, the researcher was able to synthesize various scholarly perspectives and identify common patterns and differences across previous studies.

To enhance the credibility and trustworthiness of the study, triangulation of sources was applied by comparing findings from multiple academic references, educational reports, and policy documents. Norman K. Denzin explains that triangulation strengthens research validity by ensuring consistency and verification across different data sources and scholarly perspectives. The researcher also prioritized peer-reviewed journals and internationally recognized academic publications to ensure the reliability and academic rigor of the analysis.

Ethical considerations in this research focused primarily on maintaining academic integrity and ensuring proper acknowledgment of all referenced materials. Since the study relied exclusively on secondary data and published scholarly literature, no direct human participants were involved. Therefore, ethical risks associated with participant confidentiality and informed consent were minimal. Nevertheless, the researcher ensured accurate citation practices and avoided plagiarism throughout the writing process.

Overall, the qualitative literature review method adopted in this study provides a systematic and comprehensive approach to understanding the role of digital transformation in enhancing student engagement through technology-based learning in Islamic Religious Education in the UAE. By synthesizing findings from previous studies, the research seeks to contribute evidence-based insights regarding effective digital pedagogy, educational innovation, and the future development of Islamic education in technologically advanced societies.

3. FINDINGS AND DISCUSSION

The findings of this study indicate that digital transformation in Islamic Religious

Education (IRE) in the United Arab Emirates (UAE) has significantly contributed to enhancing student engagement through technology-based learning. The integration of digital technologies into religious education has created more interactive, flexible, and student-centered learning environments that positively influence students' cognitive, emotional, and behavioral engagement. Educational institutions in the UAE have increasingly adopted digital learning tools such as learning management systems, multimedia resources, virtual classrooms, mobile applications, and interactive online assessments to support the delivery of Islamic Religious Education. These innovations align with the UAE government's broader educational transformation agenda, which emphasizes digital innovation, smart education, and knowledge-based learning environments.

The analysis of relevant literature demonstrates that technology-based learning positively influences students' cognitive engagement in Islamic Religious Education. Cognitive engagement refers to students' mental investment, concentration, and willingness to participate actively in learning activities. Digital technologies provide opportunities for students to access Islamic educational content in more dynamic and visually appealing formats, thereby increasing their understanding and retention of religious concepts. Students can revisit recorded lessons, explore interactive Qur'anic interpretations, access Islamic historical videos, and complete digital assignments at their own pace. According to Charles R. Graham, technology-enhanced learning environments encourage active participation and deeper understanding by integrating multiple forms of interaction and flexible learning opportunities. This flexibility enables students to personalize their learning experiences, contributing positively to academic comprehension and religious knowledge acquisition.

Furthermore, the findings reveal that technology-based learning strengthens students' emotional engagement in Islamic Religious Education. Emotional engagement refers to students' interest, enjoyment, motivation, and emotional connection with learning activities. Traditional religious education often relies heavily on lecture-based instruction and memorization practices, which may not always attract contemporary learners who are highly exposed to digital media and interactive technologies. Through digital transformation, Islamic Religious Education teachers in the UAE increasingly utilize animations, videos, gamified learning platforms, and multimedia storytelling to make religious content more engaging and meaningful. Research by Fredricks Jennifer A. emphasizes that emotional

engagement plays an important role in sustaining students' motivation and participation in educational activities. Interactive digital learning environments increase students' enthusiasm and reduce boredom by offering diverse instructional methods that accommodate different learning styles.

Behavioral engagement also emerged as a significant outcome of technology-based learning implementation in Islamic Religious Education. Behavioral engagement refers to students' active participation, attendance, effort, and involvement in educational activities. The literature indicates that digital learning platforms encourage students to participate more actively through online discussions, collaborative projects, quizzes, and virtual classroom interactions. Students in the UAE educational context increasingly engage in peer discussions regarding Islamic ethics, social responsibility, and moral dilemmas using online communication tools. Technology-based learning allows students to contribute ideas, ask questions, and express reflections more comfortably than traditional classroom settings, especially for students who may feel hesitant to speak publicly in face-to-face environments. According to Randy Garrison, collaborative digital learning environments improve students' interaction and participation by fostering meaningful dialogue and reflective learning.

The study further found that digital transformation contributes significantly to the development of students' digital literacy and twenty-first-century competencies. As students participate in technology-based Islamic Religious Education, they simultaneously develop essential digital skills such as information searching, online communication, critical evaluation of digital content, and responsible technology usage. These competencies are particularly important in modern educational and professional contexts where digital fluency is increasingly necessary. In the UAE, where digital transformation forms a core component of national educational policy, technology-based learning helps students become more prepared for participation in knowledge-based societies while maintaining strong Islamic values and ethical awareness.

An important finding of this study is that technology-based learning enables educators to contextualize Islamic teachings in relation to contemporary social realities. Teachers increasingly integrate digital resources discussing ethical issues, multicultural coexistence, environmental responsibility, and social justice from Islamic perspectives. Students are encouraged to critically reflect on how Islamic principles apply to real-world situations and

global challenges. This contextual approach contributes to more meaningful learning experiences because students are able to connect religious teachings with their daily lives. In the multicultural environment of the UAE, Islamic Religious Education must balance religious identity formation with intercultural understanding and social integration. Technology-based learning supports this objective by exposing students to diverse educational resources and facilitating broader perspectives on Islamic teachings.

Despite these positive impacts, the findings also identify several challenges associated with digital transformation in Islamic Religious Education. One of the most significant challenges concerns teachers' readiness and technological competence. Successful implementation of technology-based learning depends heavily on educators' ability to integrate digital tools effectively into pedagogical practices. While many Islamic Religious Education teachers in the UAE have embraced educational technologies, some continue to face difficulties in designing engaging digital lessons, managing virtual classrooms, and maintaining students' attention during online learning sessions. According to Michael Fullan, educational transformation requires continuous teacher professional development and institutional support to ensure sustainable implementation of innovation. Without adequate training and mentoring, teachers may struggle to maximize the benefits of digital learning environments.

Another challenge involves maintaining the spiritual and moral dimensions of Islamic Religious Education within digital environments. Islamic education traditionally emphasizes direct interpersonal interaction, teacher role modeling, spiritual mentorship, and moral exemplification. Face-to-face interaction between teachers and students has historically been regarded as an essential aspect of transmitting Islamic values and ethical behavior. Excessive dependence on technology may reduce opportunities for emotional closeness, spiritual reflection, and personalized guidance that characterize traditional Islamic educational practices. Some studies indicate that students may experience reduced emotional connection during virtual learning sessions, which can potentially affect the spiritual effectiveness of religious education. Therefore, educational institutions in the UAE should seek balanced approaches that combine digital innovation with meaningful face-to-face interaction.

Technological accessibility and digital inequality also remain relevant concerns, although the UAE generally possesses advanced technological infrastructure compared to

many other countries. Differences in students' access to personal devices, internet quality, and home learning environments may still influence participation levels and educational experiences. Educational institutions must therefore ensure equitable access to technological resources to avoid disparities in student engagement and learning outcomes.

Parental involvement also emerged as an important factor influencing the effectiveness of technology-based learning in Islamic Religious Education. Parents in the UAE often play active roles in supporting children's moral and religious development. Students whose parents provided guidance, supervision, and encouragement during online learning activities demonstrated higher levels of participation and motivation. Consequently, collaboration among teachers, parents, and schools becomes increasingly important in ensuring the success of digital transformation initiatives in religious education.

Additionally, the findings suggest that technology-based learning promotes more student-centered pedagogical practices. Traditional Islamic Religious Education has often relied on teacher-centered instruction where students primarily receive information passively. Digital transformation encourages more collaborative and inquiry-based learning approaches in which students actively explore Islamic concepts through independent research, digital projects, and peer interaction. This pedagogical shift aligns with constructivist learning theory, which emphasizes students' active role in knowledge construction. Students become more responsible for their own learning while teachers act as facilitators guiding discussion, reflection, and critical inquiry.

The UAE educational context provides particularly favorable conditions for digital transformation due to strong governmental investment in educational technology and innovation. National initiatives emphasizing artificial intelligence, smart education, and digital learning environments support the broader adoption of technology-based learning across educational sectors, including Islamic Religious Education. However, policymakers and educational leaders must continue addressing pedagogical, ethical, and spiritual concerns to ensure that digital transformation strengthens rather than diminishes the holistic objectives of Islamic education.

Overall, the findings demonstrate that digital transformation has substantial potential to enhance student engagement in Islamic Religious Education in the UAE. Technology-based learning positively influences students' cognitive, emotional, and behavioral

engagement while simultaneously promoting digital literacy, critical thinking, and collaborative learning. However, the effectiveness of digital transformation depends on balanced integration between technological innovation and Islamic educational values. Continuous teacher training, institutional support, equitable technological access, and meaningful teacher-student interaction remain essential for ensuring successful implementation.

4. CONCLUSION

This study concludes that digital transformation plays a significant role in enhancing student engagement through technology-based learning in Islamic Religious Education (IRE) in the United Arab Emirates (UAE). The integration of digital technologies into religious education has created more interactive, flexible, and student-centered learning environments that positively influence students' cognitive, emotional, and behavioral engagement. Through digital learning platforms, multimedia resources, virtual classrooms, and interactive educational applications, students become more actively involved in the learning process and demonstrate stronger motivation to understand Islamic teachings and values.

The findings reveal that technology-based learning improves students' engagement by making Islamic Religious Education more relevant, accessible, and meaningful for contemporary learners. Students benefit from flexible access to educational materials, collaborative online activities, and opportunities for independent inquiry. Moreover, digital transformation contributes to the development of important twenty-first-century skills, including digital literacy, critical thinking, communication, and responsible technology use. In the multicultural educational environment of the UAE, technology-based learning also supports intercultural understanding while strengthening students' religious identity and moral awareness.

Nevertheless, several challenges remain in implementing digital transformation effectively within Islamic Religious Education. Teachers' technological competence, pedagogical readiness, and ability to maintain student engagement in virtual environments continue to require attention. Furthermore, preserving the spiritual and moral dimensions of Islamic education remains an essential concern, as face-to-face interaction, moral exemplification, and teacher mentorship continue to hold important educational value.

Unequal access to digital resources and varying levels of parental support may also influence student participation and learning outcomes.

Therefore, successful digital transformation in Islamic Religious Education requires balanced integration between technological advancement and Islamic educational principles. Educational institutions and policymakers in the UAE should continue investing in teacher professional development, digital infrastructure, and inclusive educational strategies that preserve meaningful interpersonal relationships within religious learning contexts. Ultimately, technology-based learning can serve as an effective educational strategy for strengthening student engagement in Islamic Religious Education while preparing learners to thrive in an increasingly digital and globally connected society without compromising their religious values and ethical foundations.

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