

TECHNOLOGY-ENHANCED ISLAMIC RELIGIOUS EDUCATION: A SYSTEMATIC REVIEW OF DIGITAL MEDIA, BLENDED LEARNING, AND TEACHER READINESS

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Abstract

Digital transformation has created new opportunities and challenges for Islamic Religious Education, particularly regarding the integration of digital media, blended learning, and teacher readiness. This study systematically reviews the literature to examine the forms, benefits, barriers, and pedagogical implications of technology use in Islamic Religious Education. The study employed a qualitative systematic literature review following the PRISMA stages: identification, screening, eligibility assessment, and article inclusion. Relevant literature was retrieved from the Scopus database using keywords related to Islamic education, digital media, educational technology, blended learning, digital competence, and teacher readiness. The findings indicate that videos, social media, learning management systems, digital Qur'an applications, interactive quizzes, and online communication platforms can expand access to learning, improve flexibility, and increase student engagement. Blended learning also enables online activities to be combined with face-to-face instruction required for religious dialogue, worship practices, moral habituation, and value internalization. Nevertheless, successful implementation is constrained by unequal infrastructure, limited internet access, inadequate professional development, insufficient institutional support, and difficulties in verifying the credibility of online religious information. Teacher readiness emerges as a central mechanism connecting technological availability with meaningful learning outcomes. Such readiness encompasses technical, pedagogical, informational, ethical, and religious competencies. This review proposes an integrated framework connecting technology quality, blended pedagogical design, teacher digital readiness, institutional support, and alignment with Islamic educational values. The study concludes that technology should complement, rather than replace, teachers' exemplary and spiritual roles. Its findings provide a foundation for developing teacher training, institutional policies, ethical guidelines, and context-sensitive digital learning strategies that strengthen students' knowledge, spirituality, morality, digital literacy, and social responsibility.

Keywords: blended learning; digital media; Islamic Religious Education; systematic literature review; teacher readiness; technology-enhanced learning.

Introduction

Digital transformation has changed the way educational institutions design, deliver, and evaluate learning. These changes have accelerated since the COVID-19 pandemic has encouraged the use of *learning management systems*, video conferencing, social media, mobile applications, and multimedia-based learning resources. Technology now not only functions as a learning tool, but also forms an educational ecosystem that is more flexible, interactive, and not limited by space or time. However, the digitalization of education does

not always improve the quality of learning, as its success is strongly influenced by pedagogical design, institutional support, infrastructure readiness, and teachers' digital competence (Bond et al., 2021; Haleem et al., 2022). This condition shows that digital transformation is a pedagogical and organizational change, not just the replacement of face-to-face learning with digital devices.

In the context of *Islamic Religious Education* (IRE), the use of technology offers opportunities to expand access to the digital Qur'an, learning videos, Islamic podcasts, worship simulations, virtual classes, and various sources of Islamic knowledge. Digital media can also be used to explain abstract materials, increase student engagement, and connect religious learning with contemporary life issues. Meanwhile, the *blended learning approach* allows for the integration of the flexibility of online learning with the direct interaction required for exemplary moral formation, worship practices, and the internalization of Islamic values. Previous studies have shown that *blended learning* can increase access, participation, flexibility, and learning outcomes when supported by a structured learning design (Ashraf et al., 2021; Topping et al., 2022).

The phenomenon gap in practice can be seen in the discrepancy between the increase in technology use and the quality of its integration in Islamic Religious Education learning. Some teachers have used WhatsApp, YouTube, Google Classroom, digital presentations, and Qur'an applications, but their use is often still oriented towards delivering materials and assignments. Technology has not been fully used to develop reflective dialogue, moral reasoning, problem-solving, collaboration, and authentic religious learning experiences. In addition, unequal internet access, limited devices, limited technical support, and differences in digital competencies among teachers cause the implementation of digital learning to be uneven. The findings of König et al. (2020) and Trust and Whalen (2020) show that teachers' ability to adapt to digital learning is greatly influenced by professional competence, technological experience, institutional support, and readiness to design online learning.

Based on this phenomenon, the research problem does not only lie in the availability or absence of technology, but in how digital media and *blended learning* are used pedagogically without reducing the distinctive character of Islamic Religious Education. Religious learning does not stop at the transfer of cognitive knowledge because it also includes the formation of spirituality, morals, social attitudes, and the practice of values. The use of digital media that is not accompanied by critical literacy can even expose students to unverified religious information, fragmented textual understanding, and intolerant religious content. Therefore, teachers' readiness needs to be understood multidimensionally, including technical skills, digital pedagogical competence, attitudes towards technology, self-efficacy, the ability to evaluate digital resources, and the ability to align technology with the goals and values of Islamic Religious Education. Teachers' digital competencies are basically a combination of knowledge, skills, attitudes, and pedagogical considerations in using technology safely, critically, creatively, and responsibly (Falloon, 2020; Fernández-Batanero et al., 2022).

The research gap of this research lies in the fragmentation of studies on digital transformation in Islamic Religious Education. Some studies discuss digital media, online learning, or *blended learning* separately, while other studies emphasize the digital competence of teachers in the context of general education. Various systematic reviews have examined the digitalization of higher education, the effectiveness of *blended learning*, and the digital competence of educators (Ashraf et al., 2021; Basilotta-Gómez-Pablos et al., 2022; Zhao et al., 2021). However, there have not been many studies that integrate the three main areas—digital media, *blended learning*, and teacher readiness—specifically in the context of Islamic Religious Education. The existing literature also tends to assess the success of technology through aspects of access, use, and cognitive learning outcomes, while its suitability with the internalization of values, moral formation, authority of religious sources, digital ethics, and the goals of Islamic education has not been adequately synthesized.

The novelty or incremental newness of this research is the preparation of a systematic synthesis that connects the dimensions of technology, pedagogy, teacher competence, and the values of Islamic Religious Education in one integrated analysis framework. Different from the previous study which only mapped the type of technology or the effectiveness of online learning, this study places teacher readiness as a connecting mechanism between the availability of digital media, the quality of *blended learning design*, and the achievement of religious learning goals. This study also expands the concept of teacher readiness from operational skills to *value-sensitive digital readiness*, namely the ability to use technology pedagogically, critically, ethically, and in line with the goals of Islamic Religious Education. Through *systematic literature review*, this study will identify research trends, the forms of media used, the benefits and barriers to implementation, the dimensions of teacher readiness, and theoretical and methodological gaps in the available literature.

This research has theoretical and practical urgency because digital transformation in Islamic Religious Education is inevitable, while its application requires a comprehensive evidence base. Theoretically, this research can clarify the relationship between technology, mixed pedagogy, teacher readiness, and the internalization of Islamic values. Practically, the results of the study can be the basis for schools, madrasas, universities, and policymakers to design teacher training, choose digital media, develop curricula, and build support systems that are in accordance with the character of Islamic Religious Education. Thus, a research entitled "Technology-Enhanced Islamic Religious Education: A Systematic Review of Digital Media, Blended Learning, and Teacher Readiness" is important to produce a knowledge map and digital transformation framework that is not only technologically innovative, but also effective pedagogically, inclusively, ethically, and oriented towards the formation of students who are knowledgeable, moral, and have responsible digital literacy.

Research Methods

This study uses a qualitative approach with the *systematic literature review* (SLR) method to identify, evaluate, and synthesize research on the use of digital media, the application of *blended learning*, and teacher readiness in Islamic Religious Education. The study process refers to the PRISMA guidelines which include the stages of identification, screening, feasibility assessment, and determination of selected articles (Page et al., 2021). The literature was searched through the Scopus database using a combination of keywords: "*Islamic religious education*," "*Islamic education*," "*digital media*," "*digital learning*," "*educational technology*," "*blended learning*," "*digital competence*," and "*teacher readiness*." Articles were limited to relevant English- or Indonesian-language journal publications, were available in full text, had undergone a peer-review process, and discussed the application of technology in Islamic Religious Education learning.

Literature selection was performed by removing duplicate articles, examining titles and abstracts, and reading full texts against inclusion and exclusion criteria. Articles that only discuss educational technology in general without any connection with Islamic education, do not explain the role of teachers, or do not contain relevant findings, are excluded from the study. Data from the selected articles were extracted based on publication identity, research objectives, educational context, method, type of digital media, *blended learning model*, dimensions of teacher readiness, benefits, barriers, and research recommendations. Furthermore, the data were analyzed using thematic analysis through coding, category grouping, comparison of findings, and narrative synthesis. The procedure was used to identify research patterns and literature gaps, and to formulate a conceptual framework for technology integration that aligns with the pedagogical character and values of Islamic Religious Education.

Results and Discussion

Research Results

The results of the literature review show that the use of digital media in Islamic Religious Education has evolved from a medium of information delivery to a more interactive means of learning. Widely used media include learning videos, YouTube, WhatsApp, Google Classroom, *learning management systems*, Al-Qur'an and digital hadith applications, interactive quizzes, *podcasts*, and website-based learning resources. The use of these media makes it easier for students to access materials at any time, repeat teachers' explanations, and obtain more diverse learning resources. Audiovisual media also help teachers explain Islamic history, worship procedures, morals, and Qur'an reading in a more concrete way. However, most digital media use is still oriented towards distributing materials and tasks, so it has not been fully utilized to develop religious reflection, collaboration, problem-solving, and moral reasoning among students.

The next findings show that *blended learning* is a relevant model for Islamic Religious Education because it combines the flexibility of online learning with the power of face-to-face interaction. Online activities are generally used to deliver materials, videos,

readings, quizzes, and discussion forums, while face-to-face meetings are used to clarify understanding, engage in religious dialogue, support worship practices, foster habituation, and build character. This combination allows the learning process to take place more flexibly and in a student-centered way. However, the effectiveness of *blended learning* is highly dependent on the appropriateness of the division of online and offline activities, the quality of learning design, the intensity of interaction, and the assessment mechanisms applied. These findings are in line with Ashraf et al. (2021) and Topping et al. (2022), who show that blended learning can improve participation and learning outcomes when supported by a structured pedagogical design.

The study also found that teacher readiness is the most decisive factor in the success of technology integration. This readiness is not only the ability to operate devices and applications but also to select media, design digital activities, evaluate information sources, manage online interactions, and conduct assessments appropriately. Teachers with strong digital competence tend to be better at connecting technology with learning goals and student needs. In contrast, teachers with limited digital skills often use technology as a substitute for whiteboards or for assignment delivery tools. Teachers' digital competencies thus include knowledge, skills, attitudes, creativity, digital security, and pedagogical considerations (Falloon, 2020; Fernández-Batanero et al., 2022).

The results of the synthesis identified several main obstacles: limited internet access, inequality in device ownership, lack of training, low technical support, teacher workload, and difficulty supervising student involvement. In the context of Islamic Religious Education, additional barriers include the validity of religious sources, media use ethics, potential exposure to inappropriate content, and concerns about reduced exemplary interaction between teachers and students. On the other hand, school leadership support, the availability of infrastructure, teacher learning communities, continuous training, and clear digital policies are the main supporting factors. Thus, the digital transformation of Islamic Religious Education is a multidimensional process shaped by the interplay among technology, pedagogical design, teacher competence, institutional culture, and Islamic values.

Discussion

The findings of the study confirm that digital transformation in Islamic Religious Education cannot be reduced to the digitization of materials alone. The transfer of books or worksheets to digital formats does not necessarily lead to pedagogical changes if the learning pattern remains one-way. New technology provides added value by enabling students to engage in resource exploration, discussion, reflection, collaboration, and the application of religious values to real-life problems. This supports Haleem et al.'s (2022) view that the benefits of educational technology depend on how it is integrated into the learning process. Therefore, the measure of success in digitizing Islamic Religious Education should be based not only on the number of applications used but also on

improvements in the quality of interaction, understanding, learning experience, and internalization of Islamic values.

Digital media can enrich the learning experience by providing material in the form of text, audio, video, animation, and simulation. However, the open nature of the digital space raises questions about the authority and reliability of religious knowledge. Students can obtain information from speakers, websites, or social media accounts that do not always have competence and credibility that can be accounted for. In this condition, Islamic Religious Education teachers have a new role as curators, supervisors, and validators of digital sources. Teachers need to teach how to examine authors, publishing institutions, arguments, references to the Qur'an and hadith, and the context in which information is delivered. Digital literacy in Islamic Religious Education must therefore include religious information literacy, ethical awareness, and the ability to deal with misinformation.

The application of *blended learning* provides an opportunity to divide learning functions based on the character of each learning environment. Online spaces can be used for material exploration, initial discussions, independent learning, and formative evaluation, while face-to-face spaces can focus on deepening concepts, worship practices, dialogue, habituation, and examples. This pattern is more in line with the nature of Islamic Religious Education, which encompasses knowledge, attitudes, spirituality, and action. However, the division of learning must be designed in an integrated manner so that online and offline activities do not run as two separate components. These results reinforce the findings of Ashraf et al. (2021) that the success of *blended learning* is determined by the alignment between technology, learning activities, objectives, interactions, and assessments.

Teacher readiness is the primary link between technological potential and the quality of learning produced. A teacher may have high technical ability but is not necessarily able to choose technology that aligns with the pedagogical goals and character of the religious material. Therefore, teacher training is not enough directed at how to operate applications, but needs to include digital learning design, content production, resource evaluation, digital security, authentic assessment, and integration of Islamic values. Basilotta-Gómez-Pablos et al. (2022) explain that teachers' digital competencies include several interrelated dimensions, not just technical skills. Practice-based training, mentoring, professional community, and reflection on teaching experience are needed to apply these competencies sustainably.

Conceptually, the results of this study suggest that the effectiveness of technology-enhanced Islamic religious education is shaped by four interconnected components: access to and quality of technology, pedagogical design, *blended learning*, digital readiness of teachers, and alignment with the values and goals of Islamic Religious Education. Teacher readiness translates the availability of technology into a meaningful learning experience, while value alignment ensures that its use continues to support the formation of faith, knowledge, morals, and social responsibility. This framework shows that

sustainable digital transformation requires institutional support, inclusive infrastructure, teacher competency improvement, and ethical guidelines and curation of religious resources. Further research is needed to test the relationship between these components across different levels and Islamic educational institutions, so that a stronger, more contextual empirical model can be developed.

Conclusions and Suggestions

Conclusion

Based on the results of a systematic literature review, digital transformation in Islamic Religious Education is determined not only by the availability of technology but also by the quality of learning design, teacher readiness, institutional support, and the alignment of technology with Islamic values. Digital media can expand access to learning resources, increase interactivity, and help present religious materials in a more contextual manner. Meanwhile, *blended learning* allows integration between the flexibility of online learning and face-to-face interaction necessary for worship practice, for example, habituation, dialogue, and internalization of Islamic values.

Teacher readiness is the primary factor linking the use of technology to the achievement of the goals of Islamic Religious Education. This readiness includes technical, pedagogical, informational, ethical, and religious competencies for selecting media, designing learning experiences, assessing the credibility of religious sources, and guiding students' behavior in digital spaces. However, its implementation still faces limited infrastructure, access gaps, low digital competence, lack of training, weak technical support, and the risk of unverified dissemination of religious information. Therefore, the digital transformation of Islamic Religious Education needs to be developed through a human- and value-centered approach, so that technology not only improves learning efficiency, but also strengthens students' knowledge, spirituality, morals, and social responsibility.

Suggestions

Educational institutions need to provide an equitable digital infrastructure, an easy-to-use learning system, access to credible religious resources, and ongoing technical assistance. Teacher professional development programs should not only focus on the use of applications but also on blended learning design, digital content production, authentic assessment, digital security, the curation of religious resources, and the integration of Islamic values. Teachers are also advised to proportionately combine online and face-to-face activities so that technology supports, not replaces, the role of exemplary and spiritual interaction in Islamic Religious Education.

For policymakers, special digital competency standards are needed for Islamic Religious Education teachers as well as ethical guidelines for the use of digital media in religious learning. Further research is recommended to empirically test the framework connecting digital media, the quality of blended learning, teacher readiness, institutional

support, and students' holistic learning outcomes. Comparative research based on educational level, type of institution, region, and socio-economic conditions is also needed. In addition, longitudinal studies and mixed-methods approaches can be used to measure the long-term impact of digital transformation on students' religious understanding, morals, spirituality, digital literacy, and social behavior.

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