



Islamic Education in the Age of Artificial Intelligence Policy Responses to Digital Transformation and Teacher Competency Challenges

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ABSTRACT

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This study examines Islamic education in the age of Artificial Intelligence (AI) by focusing on policy responses to digital transformation and teacher competency challenges. The research aims to explore how Islamic educational institutions formulate and implement digital transformation policies, identify the challenges faced by Islamic Education teachers in developing professional, pedagogical, and digital competencies, and analyze the influence of these factors on the quality and sustainability of Islamic education. This study employed a qualitative case study approach conducted at an Islamic educational institution. Data were collected through interviews, observations, and documentation and analyzed using data condensation, data reduction, data display, and conclusion drawing. The trustworthiness of the findings was ensured through source triangulation, technique triangulation, and member checking. The findings reveal that Islamic educational institutions have implemented digital transformation policies through curriculum adaptation, technology integration, teacher training programs, and the utilization of AI-supported educational tools. However, teachers face challenges related to digital literacy, pedagogical adaptation, professional development, and the ethical use of AI. The study also found that digital transformation policies and teacher competency development significantly contribute to improving educational quality, student engagement, institutional effectiveness, and the long-term sustainability of Islamic education. The study concludes that successful adaptation to the AI era requires the integration of strategic policy frameworks, continuous teacher competency development, technological innovation, and value-based educational governance.

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INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) technology has become one of the most transformative developments of the twenty-first century, influencing nearly every aspect of human life, including education. The increasing integration of AI into educational systems is driven by the growing demand for efficiency, personalization, and innovation in learning processes.

Educational institutions are increasingly adopting digital platforms, intelligent learning systems, automated assessments, and AI-powered instructional tools to enhance educational outcomes. Evidence from global educational trends indicates that AI has significantly altered how knowledge is produced, accessed, and disseminated, creating new opportunities for both educators and learners. However, alongside these opportunities, AI also raises concerns regarding educational equity, ethical considerations, digital literacy, and the preparedness of teachers to adapt to technological changes. These challenges are particularly significant in Islamic educational institutions, where the integration of technological innovation must remain aligned with religious values and educational objectives. Therefore, understanding how Islamic education responds to digital transformation and AI-driven educational changes has become an increasingly important issue for policymakers, educators, and researchers seeking to ensure the sustainability and relevance of Islamic education in the digital age.

One of the major challenges in improving educational quality today is the widening gap between technological advancement and the readiness of educational institutions to adapt to digital transformation. Although educational technologies continue to develop rapidly, many institutions still struggle to integrate these innovations effectively into curriculum design, teaching strategies, and institutional management. This challenge is particularly evident in Islamic educational institutions, where traditional pedagogical approaches often coexist with demands for digital innovation. In many cases, educational reforms emphasize technological infrastructure while paying insufficient attention to teacher preparedness and professional development. As a result, the potential benefits of digital transformation are not fully realized. Furthermore, the emergence of AI technologies has introduced new expectations regarding teachers' digital competencies, critical thinking skills, and ability to facilitate technology-enhanced learning environments. Without adequate policy support and competency development programs, educators may encounter difficulties in adapting to these changes. Consequently, the improvement of educational quality requires not only technological investment but also comprehensive policies that strengthen teachers' capacities to respond effectively to the opportunities and challenges presented by AI-driven educational transformation.

Empirical observations in many madrasahs indicate that digital transformation is progressing unevenly across Islamic educational institutions. Some madrasahs have successfully adopted digital learning platforms, learning management systems, and AI-assisted educational applications to support teaching and learning activities. However, others continue to face significant limitations related to technological infrastructure, digital resources, and teacher competencies. In several institutions, teachers demonstrate enthusiasm toward technological innovation but often lack the necessary skills to integrate digital tools effectively into classroom instruction. Moreover, the rapid proliferation of

AI-based applications has created uncertainty regarding their pedagogical use and ethical implications within Islamic educational contexts. Teachers frequently encounter difficulties in balancing technological innovation with the preservation of Islamic values and educational objectives. Additionally, disparities in access to digital resources among students further complicate the implementation of technology-based learning initiatives. These empirical realities suggest that digital transformation in Islamic education is not merely a technological issue but also a matter of educational policy, teacher professional development, and institutional readiness. Consequently, examining policy responses and teacher competency challenges has become essential for understanding the future trajectory of Islamic education in the age of AI.

Previous studies have extensively explored the impact of digital transformation on educational systems and teacher professionalism. Research on educational technology consistently demonstrates that digital tools can improve learning effectiveness, student engagement, and educational accessibility when implemented appropriately. Similarly, studies on AI in education highlight its potential to support personalized learning, automate administrative tasks, and facilitate data-driven decision-making. Within the field of Islamic education, scholars have increasingly examined the role of digital technologies in enhancing learning quality and expanding access to educational resources. These studies contribute significantly to understanding the opportunities associated with technological innovation in educational contexts. Furthermore, several researchers emphasize the importance of teacher digital competence as a key factor influencing successful technology integration. The findings collectively suggest that educational transformation requires a combination of technological infrastructure, institutional support, and human resource development. However, most existing studies focus primarily on technological adoption and learning outcomes, providing limited attention to policy responses and teacher competency challenges within Islamic educational institutions specifically.

Recent research has also examined educational governance, digital leadership, and professional development strategies in response to technological change. Some studies argue that effective educational policies are essential for facilitating digital transformation and ensuring that technological innovations contribute positively to educational quality. Others focus on teacher readiness and digital literacy as critical determinants of successful educational reform. Although these studies provide valuable insights, significant research gaps remain. First, relatively few studies investigate how Islamic educational institutions formulate and implement policy responses to AI-driven educational transformation. Second, existing research often treats digital transformation and teacher competency as separate issues rather than interconnected dimensions of educational change. Third, limited attention has been given to the ways Islamic educational institutions negotiate the relationship between technological innovation, educational quality, and Islamic values. Therefore, a comprehensive examination of policy responses and teacher competency challenges within

Islamic education is necessary to address these gaps and provide a more holistic understanding of digital transformation in contemporary educational settings.

The novelty of this study lies in its integrated analysis of digital transformation policies, Artificial Intelligence adoption, and teacher competency development within Islamic educational institutions. Unlike previous studies that primarily focus on technological implementation or teacher readiness independently, this research investigates the dynamic relationship between educational policy, technological innovation, and human resource development. The study also emphasizes how Islamic educational institutions respond strategically to AI-related opportunities and challenges while maintaining their religious and educational identity. By examining these interconnected dimensions through a qualitative case study approach, the research offers a comprehensive perspective on the governance of digital transformation in Islamic education. This approach contributes to the development of educational management theory by highlighting the role of policy frameworks in shaping institutional adaptation to technological change. Moreover, the study is important because it addresses a rapidly emerging issue that is expected to influence the future of education globally, particularly in contexts where educational modernization must coexist with religious and cultural values.

Based on the issues discussed above, this study focuses on three primary research questions: how Islamic educational institutions formulate and implement policy responses to digital transformation and Artificial Intelligence, what challenges Islamic Education teachers face in developing professional and digital competencies, and how these policy responses and competency development initiatives influence educational quality and sustainability. This study is based on the argument that successful digital transformation in Islamic education depends not only on technological infrastructure but also on effective policy frameworks and continuous teacher professional development. It is assumed that institutions with clear digital transformation policies, supportive leadership, and systematic competency development programs are better positioned to adapt to AI-driven educational changes. Furthermore, the study argues that teacher competency serves as a critical mediating factor linking technological innovation with educational quality. Through a qualitative case study approach, this research seeks to generate a deeper understanding of how Islamic educational institutions navigate digital transformation and respond to teacher competency challenges. The findings are expected to contribute both theoretically and practically to the development of sustainable, innovative, and value-based Islamic education in the age of Artificial Intelligence.

METHOD

This study employed a qualitative approach with a case study design to explore policy responses to digital transformation and teacher competency challenges in the age of Artificial Intelligence within Islamic educational institutions. The qualitative case study approach was selected because it enables

an in-depth understanding of complex educational phenomena within their real-life context. The research was conducted at Madrasah Aliyah Negeri (MAN) 1 Probolinggo, East Java, Indonesia, which was purposively selected due to its active implementation of digital learning initiatives and its efforts to integrate educational technology into teaching and administrative practices. The institution was considered an appropriate research site because it represents an Islamic educational environment undergoing digital transformation while simultaneously addressing challenges related to teacher professional development and technological adaptation. Research participants consisted of the principal, vice principal, curriculum coordinator, Islamic Education teachers, information technology staff, and selected students. Data were collected through semi-structured interviews, participant observations, and documentation studies. Interviews were conducted to obtain information regarding institutional policies, teacher experiences, and digital transformation strategies. Observations focused on classroom practices, technology utilization, and teacher-student interactions, while documentation analysis included institutional policies, curriculum documents, digital learning guidelines, training reports, and other relevant records.

Data analysis followed the interactive model developed by Miles, Huberman, and Saldaña, consisting of data condensation, data reduction, data display, and conclusion drawing/verification. Data condensation involved selecting, simplifying, and organizing relevant information obtained from interviews, observations, and documentation. Subsequently, the data were reduced through coding and categorization to identify recurring themes related to policy implementation, digital transformation, and teacher competency development. The organized data were then presented through narrative descriptions and thematic displays to facilitate interpretation. Finally, conclusions were drawn and continuously verified through comparison of emerging findings and field evidence throughout the research process. To ensure the trustworthiness of the findings, the study employed source triangulation, technique triangulation, and member checking. Source triangulation was conducted by comparing information from different participants, while technique triangulation involved cross-checking data obtained through interviews, observations, and documentation. In addition, member checking was performed by returning selected findings to participants for confirmation and clarification, thereby enhancing the credibility and accuracy of the research results.

RESULT AND DISCUSSION

Result

Islamic Educational Institutions Formulate and Implement Policy Responses to Digital Transformation and the Integration of Artificial Intelligence (AI) in Educational Practices

In this study, policy responses to digital transformation and the

integration of Artificial Intelligence (AI) refer to institutional strategies, regulations, and educational initiatives designed to facilitate the adoption of digital technologies within Islamic educational environments. These responses include curriculum adaptation, digital learning policies, teacher capacity-building programs, technology infrastructure development, and the utilization of AI-based educational tools to support teaching, learning, and administrative processes. The findings indicate that digital transformation is not merely viewed as a technological change but as a comprehensive educational reform requiring organizational commitment, strategic planning, and stakeholder collaboration. Islamic educational institutions seek to balance technological innovation with Islamic values by ensuring that digital and AI-based applications support educational objectives, ethical principles, and character development. Consequently, policy responses function as institutional mechanisms that guide the integration of AI while maintaining the identity and educational mission of Islamic schools. The principal explained the institution's policy direction regarding digital transformation as follows:

"Digital transformation has become one of our strategic priorities. We have developed policies that encourage teachers to utilize digital learning platforms, participate in technology training programs, and gradually integrate AI-assisted educational applications into classroom activities. However, all technological innovations must remain aligned with Islamic values and educational objectives."

This statement demonstrates that institutional leadership plays a central role in driving digital transformation. The principal's emphasis on policy development and teacher training suggests that technological adoption is approached systematically rather than incidentally. The researcher interprets this finding as evidence that educational leaders recognize the necessity of creating policy frameworks capable of facilitating technological innovation while safeguarding the moral and educational foundations of Islamic education. Such policies provide a strategic direction for managing technological change and reducing institutional resistance to innovation. An Islamic Education teacher provided the following perspective:

"The use of AI-based applications has helped us prepare learning materials, design assessments, and provide more personalized feedback to students. Nevertheless, teachers still need to evaluate AI-generated content carefully to ensure its accuracy and compatibility with Islamic teachings."

The teacher's statement illustrates that AI technologies are increasingly becoming part of educational practice. However, it also highlights the continuing importance of professional judgment and pedagogical responsibility. The researcher interprets this finding as an indication that AI functions as a

supporting tool rather than a substitute for educators. Effective integration of AI requires teachers to possess critical digital competencies that enable them to evaluate, adapt, and contextualize AI-generated content according to educational needs and religious values. Therefore, technological innovation and teacher professionalism must develop simultaneously to ensure meaningful educational outcomes. Field observations revealed that the institution had implemented various digital transformation initiatives. Classrooms were equipped with internet access, digital presentation tools, and learning management systems that facilitated online and blended learning activities. Teachers frequently utilized digital resources and educational applications to enhance classroom engagement. Furthermore, several teachers demonstrated the use of AI-supported tools for lesson planning, content development, and learning evaluation. School administrators also employed digital systems for academic administration and communication. Despite these developments, differences in teachers' levels of technological proficiency were observed. Some educators utilized digital technologies confidently, while others required additional support and training. The researcher interprets these findings as evidence that policy implementation has successfully promoted digital innovation; however, the effectiveness of implementation remains dependent on individual competency levels and institutional support mechanisms.

The findings indicate that Islamic educational institutions respond to digital transformation and AI integration through strategic policies that emphasize technological innovation, teacher development, and alignment with Islamic values. Institutional leaders encourage technology adoption through training programs, infrastructure development, and curriculum adaptation, while teachers increasingly incorporate AI-assisted applications into educational practice. At the same time, educators remain responsible for ensuring that technological innovations support pedagogical goals and ethical considerations. Consequently, digital transformation within Islamic education represents a process of balancing innovation with educational and religious responsibilities. The data reveal a consistent pattern in which policy responses to digital transformation are implemented through interconnected initiatives involving leadership commitment, technology infrastructure, teacher training, and AI utilization. Rather than adopting technology solely for modernization purposes, institutions seek to integrate digital innovations into educational processes in ways that enhance learning quality and preserve Islamic educational values. This integrated approach demonstrates that successful digital transformation requires both technological resources and human capacity development.

Table 1. Policy Responses to Digital Transformation and AI Integration in Islamic Education

Informant Position	Interview Excerpt	Indicator
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Principal	The institution has established policies supporting digital learning and AI integration while maintaining Islamic values.	Strategic digital transformation policy
Vice Principal for Curriculum	Curriculum revisions include digital competencies and technology-enhanced learning approaches.	Curriculum adaptation
Islamic Education Teacher	AI applications assist lesson preparation and assessment activities.	Educational AI utilization
IT Coordinator	The school continuously develops digital infrastructure and technical support systems.	Technology infrastructure development
Student	Digital learning platforms and AI-assisted tools make learning more interactive and accessible.	Student engagement through technology

The data presented in Table 1 demonstrate that digital transformation is being implemented through a comprehensive institutional approach involving multiple stakeholders. School leadership provides strategic direction through policy development, while curriculum administrators ensure that digital competencies are incorporated into educational programs. Teachers operationalize these policies by integrating AI and digital tools into classroom instruction, and technical personnel support implementation through infrastructure development and system maintenance. This multidimensional structure indicates that digital transformation is not an isolated initiative but rather an organizational process requiring coordination across different institutional levels. Furthermore, the table reveals a strong alignment between policy objectives and educational practices. The consistency among leadership decisions, curriculum adjustments, technological support, and student experiences suggests that the institution has established a coherent framework for digital transformation. However, the findings also imply that sustaining this transformation requires continuous professional development and technological adaptation. As AI technologies continue to evolve, educational institutions must ensure that teachers possess the competencies necessary to utilize these tools effectively while maintaining educational quality and ethical integrity.

Challenges Faced by Islamic Education Teachers in Developing Professional, Pedagogical, and Digital Competencies in the Age of Artificial Intelligence

In this study, teacher competency challenges refer to the difficulties experienced by Islamic Education teachers in adapting to the demands of digital transformation and Artificial Intelligence (AI)-driven educational practices. These challenges encompass three interconnected dimensions: professional competence, pedagogical competence, and digital competence. Professional competence involves teachers' ability to continuously update their knowledge and maintain instructional quality in a rapidly changing educational environment. Pedagogical competence relates to the capacity to design, implement, and evaluate learning processes that effectively integrate digital technologies and AI applications. Digital competence refers to teachers' ability to utilize technological tools, evaluate digital information critically, and employ AI-

supported educational resources responsibly. The findings indicate that while teachers generally recognize the importance of AI and digital innovation, they encounter various obstacles related to technological literacy, professional development opportunities, infrastructure limitations, and concerns regarding the ethical use of AI in Islamic educational contexts. An Islamic Education teacher explained:

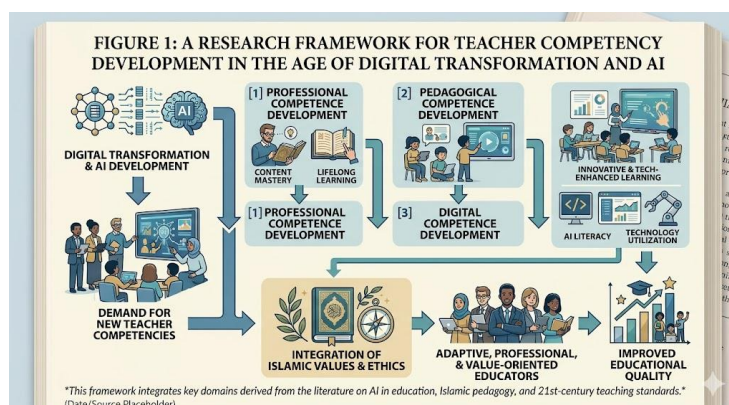
“We understand that Artificial Intelligence can support learning activities, but many teachers still need additional training to use AI tools effectively. Some educators are familiar with digital platforms, while others struggle to adapt to new technologies and integrate them into classroom instruction.”

This statement suggests that the primary challenge is not resistance to innovation but differences in technological readiness among teachers. The researcher interprets this finding as evidence that digital transformation creates unequal adaptation processes within educational institutions. Teachers who possess stronger digital literacy tend to utilize AI more confidently, whereas others require substantial support and training. Consequently, competency development programs become essential to ensure that technological innovation benefits all educators rather than creating new professional disparities. A vice principal responsible for academic affairs stated:

“One of the biggest challenges is balancing technological innovation with educational values. Teachers must learn how to use AI effectively without becoming overly dependent on technology or neglecting the moral and spiritual dimensions of Islamic education.”

This statement highlights the complexity of competency development in Islamic educational institutions. The challenge extends beyond technical proficiency and includes ethical, pedagogical, and value-based considerations. The researcher interprets this finding as an indication that AI integration requires teachers to develop a holistic competency framework that combines technological skills with critical thinking, ethical judgment, and Islamic educational principles. Therefore, teacher competency development must address both technological adaptation and value preservation.

Image 1. Conceptual Flow of Teacher Competency Development in the Age of AI



The conceptual flow illustrates that digital transformation and AI development create new expectations for Islamic Education teachers. These expectations require educators to strengthen their professional, pedagogical, and digital competencies simultaneously. The process begins with continuous learning and adaptation, followed by the development of innovative instructional practices and AI literacy skills. However, competency development does not end with technological proficiency. The integration of Islamic values and ethical considerations remains a crucial component of the process, ensuring that technological innovation supports rather than undermines educational objectives. The model further suggests that educational quality in the AI era depends on the ability of teachers to combine technological competence with moral and spiritual responsibility. Adaptive educators are not merely users of technology but professionals capable of critically evaluating technological innovations and aligning them with the broader mission of Islamic education. Consequently, competency development should be viewed as a continuous and multidimensional process rather than a purely technical undertaking.

Digital Transformation Policies and Teacher Competency Development Influence the Quality and Sustainability of Islamic Education in the Contemporary Era

In this study, the influence of digital transformation policies and teacher competency development refers to the extent to which institutional strategies related to technology integration, Artificial Intelligence (AI) adoption, and professional capacity building contribute to improving educational quality and ensuring the long-term sustainability of Islamic education. Educational quality is reflected in effective learning processes, enhanced student engagement, innovative instructional practices, and improved institutional performance. Meanwhile, educational sustainability refers to the ability of Islamic educational institutions to adapt continuously to technological changes while maintaining their educational mission, Islamic identity, and organizational resilience. The findings indicate that digital transformation policies and teacher competency development are mutually reinforcing elements that shape the capacity of Islamic educational institutions to respond effectively to contemporary educational challenges.

Table 3. The Influence of Digital Transformation Policies and Teacher Competency Development

Interview Excerpt	Indicator	Informant
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“Digital policies have encouraged teachers to adopt innovative learning approaches and utilize technology more effectively.”	Educational innovation	Principal
“Training programs have significantly improved teachers’ confidence in using AI and digital learning platforms.”	Teacher competency development	Vice Principal
“Students are more engaged because digital technologies make learning more interactive and accessible.”	Student engagement	Islamic Education Teacher
“The availability of digital infrastructure has improved communication, administration, and learning efficiency.”	Institutional effectiveness	IT Coordinator
“Technology-based learning helps us access information faster and learn independently.”	Learning accessibility	Student

The data presented in Table 3 demonstrate that digital transformation policies have generated significant improvements in various dimensions of educational quality. The findings indicate that institutional policies encouraging technology integration create an environment that supports innovation and continuous improvement. Leadership commitment appears to be a critical factor because policy frameworks provide direction, resources, and incentives for teachers to adopt new educational practices. Furthermore, competency development programs enable educators to acquire the skills necessary to utilize AI and digital technologies effectively. These findings support the argument that educational quality is not determined solely by technological availability but also by the capacity of educators to integrate technology meaningfully into teaching and learning processes.

The findings also suggest that the sustainability of Islamic education depends on the institution’s ability to develop adaptive capacities among educators and organizational stakeholders. Digital transformation is not a one-time initiative but a continuous process requiring ongoing learning and institutional flexibility. The data indicate that teacher competency development contributes to sustainability by enabling educators to respond to emerging technological trends and changing student learning needs. Moreover, increased student engagement and improved access to educational resources strengthen the institution’s ability to remain relevant in contemporary educational environments. These findings imply that sustainable Islamic education requires a balanced combination of technological innovation, human resource development, and value-based educational governance.

Field observations support these findings by demonstrating that digital transformation policies have positively influenced educational practices across the institution. Classrooms utilizing digital platforms and AI-assisted applications showed higher levels of student participation, collaborative learning, and instructional efficiency. Teachers who had participated in professional development programs appeared more confident in integrating technology into their lessons and demonstrated greater flexibility in adapting instructional strategies. Observations also revealed that digital systems improved administrative efficiency and facilitated communication among teachers, students, and school administrators. However, differences in

technological proficiency among educators remained visible, highlighting the importance of continuous competency development. These observations reinforce the conclusion that sustainable educational improvement depends on the simultaneous advancement of institutional policies and teacher competencies.

The findings indicate that digital transformation policies and teacher competency development significantly influence both the quality and sustainability of Islamic education. Strategic policies encourage educational innovation, while competency development equips teachers with the skills necessary to utilize digital technologies and AI effectively. Together, these factors enhance learning quality, improve student engagement, strengthen institutional effectiveness, and support long-term educational adaptation. Therefore, educational sustainability in the contemporary era depends on the successful integration of technological innovation and human resource development.

The data reveal a consistent pattern showing that educational quality improves when digital transformation policies are accompanied by systematic teacher competency development initiatives. Institutions that invest in technological infrastructure, professional learning opportunities, and innovation-oriented leadership demonstrate greater adaptability and resilience. These findings suggest that sustainable Islamic education is achieved through the alignment of policy frameworks, technological resources, and professional capacity-building strategies.

Discussion

The findings of this study demonstrate that Islamic educational institutions have responded to digital transformation and the emergence of Artificial Intelligence (AI) through various policy initiatives aimed at strengthening educational quality and institutional competitiveness. These findings are consistent with the theory of educational digital transformation, which argues that technological change in education requires strategic leadership, organizational adaptation, and supportive policy frameworks. Previous studies have emphasized that successful technology integration depends on institutional commitment and governance structures that facilitate innovation. The present study confirms these arguments by revealing that digital transformation policies in Islamic educational institutions are implemented through curriculum adaptation, technology infrastructure development, teacher training, and the integration of AI-assisted educational applications. However, unlike many previous studies that focus primarily on technology adoption, this research highlights the importance of aligning digital innovation with Islamic educational values. This finding suggests that digital transformation in Islamic education is not merely a technical process but also a value-oriented educational reform that seeks to balance modernization with religious and ethical commitments.

The study also found that the integration of AI into educational practices

has created new opportunities while simultaneously generating significant challenges for Islamic Education teachers. This finding supports the Technology Acceptance Model (TAM), which suggests that users' perceptions of usefulness and ease of use influence technology adoption. Teachers generally recognized the benefits of AI for lesson planning, assessment, and learning resource development. Nevertheless, they also reported difficulties related to technological literacy, pedagogical adaptation, and the ethical use of AI-generated content. Similar findings have been reported in previous research examining AI implementation in education, where teacher readiness and competency emerged as critical determinants of successful adoption. However, this study extends existing literature by demonstrating that Islamic Education teachers face an additional challenge: ensuring that AI-supported learning remains consistent with Islamic teachings and educational objectives. Consequently, AI competency in Islamic education must encompass not only technical skills but also ethical and religious considerations that guide responsible technology use.

Another important finding concerns the multidimensional nature of teacher competency development in the age of AI. The results indicate that professional, pedagogical, digital, and ethical competencies are closely interconnected and collectively influence teachers' ability to adapt to educational transformation. These findings align with contemporary competency theories that emphasize lifelong learning and continuous professional development as essential requirements for educators in knowledge-based societies. Previous studies have highlighted the importance of digital literacy and pedagogical innovation; however, the present research reveals that competency development in Islamic educational institutions also involves the preservation of moral and spiritual dimensions. From a conceptual perspective, this finding contributes to the growing discourse on Islamic educational management by proposing a more holistic understanding of teacher competency. Rather than viewing technology skills as isolated competencies, the study suggests that effective educators in the AI era must integrate technological expertise with pedagogical effectiveness, professional adaptability, and ethical responsibility.

The findings further demonstrate that digital transformation policies and teacher competency development significantly influence the quality and sustainability of Islamic education. This conclusion is consistent with educational sustainability theories, which argue that institutional resilience depends on the ability to adapt to environmental changes while maintaining core organizational values and objectives. The study reveals that institutions with strong policy support, continuous professional development programs, and adequate technological infrastructure are better positioned to enhance learning quality and sustain educational innovation. While previous research has often treated educational quality and digital transformation as separate issues, this study shows that they are deeply interconnected. Educational quality improves when technology is effectively integrated into instructional practices, and sustainability

is strengthened when institutions invest in long-term competency development. Therefore, digital transformation should be understood not as an isolated technological initiative but as a comprehensive strategy for organizational and educational renewal.

The theoretical implications of this study lie in its contribution to the development of an integrated framework linking digital transformation policy, AI adoption, teacher competency development, and educational sustainability within Islamic educational institutions. The findings enrich existing literature by demonstrating that technological innovation becomes effective only when supported by adaptive governance, professional learning systems, and value-based educational leadership. Practically, the study suggests that policymakers and educational leaders should prioritize comprehensive teacher development programs, strengthen digital infrastructure, and establish clear guidelines for the ethical use of AI in educational settings. Islamic educational institutions should also encourage continuous innovation while ensuring that technological advancements remain aligned with Islamic values and educational goals. By doing so, institutions will be better equipped to respond to future technological developments and maintain their relevance in an increasingly digital and AI-driven educational landscape.

CONCLUSION

This study concludes that Islamic educational institutions have responded to the challenges of the Artificial Intelligence (AI) era through various digital transformation policies aimed at improving educational quality and institutional adaptability. These policies are implemented through curriculum innovation, technology integration, infrastructure development, and teacher capacity-building programs. The findings indicate that digital transformation is not merely a technological initiative but a strategic educational process that requires alignment between technological innovation and the values of Islamic education. Institutional leadership plays a significant role in ensuring that digital policies support both educational effectiveness and the preservation of religious and ethical principles. The study further reveals that Islamic Education teachers face multiple challenges in developing professional, pedagogical, and digital competencies in the age of AI. These challenges include varying levels of digital literacy, limited opportunities for professional development, difficulties in integrating AI into instructional practices, and concerns regarding the ethical use of AI-generated content. The findings demonstrate that effective teacher competency development requires a holistic approach that combines technological proficiency, pedagogical innovation, professional adaptability, and Islamic ethical values. Consequently, teacher readiness emerges as a critical factor influencing the success of digital transformation initiatives within Islamic educational institutions. Moreover, the findings confirm that digital transformation policies and teacher competency development significantly influence the quality and sustainability of Islamic education in the contemporary

era. Institutions that provide clear policy direction, adequate technological infrastructure, and continuous professional development opportunities are better positioned to enhance learning quality, strengthen student engagement, and maintain organizational sustainability. Therefore, the study concludes that the future success of Islamic education in the age of Artificial Intelligence depends on the synergy between adaptive educational policies, continuous teacher competency development, technological innovation, and value-based educational governance. Such integration will enable Islamic educational institutions to remain relevant, competitive, and responsive to the evolving demands of the digital age while preserving their distinctive educational identity and mission.

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