



Transformation of Islamic Religious Education Learning Through Information Technology Innovation in the Era Society 5.0

Edi Sulaiman^{1*}, Sunarto²

¹Institut Teknologi dan Sains Nahdlatul Ulama Lampung, Indonesia

²Universitas Islam Negeri Raden Intan Lampung, Indonesia

Corresponding Author: sulaimaned14@gmail.com

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Abstract:

This study aims to analyze the forms of PAI learning transformation through information technology innovation in the Society 5.0 era, as well as to identify opportunities, challenges, and human-centered learning orientations. The research employs a qualitative descriptive method with a literature study approach, strengthened by theoretical triangulation to enhance data validity. Data sources are obtained from books, scientific journals, and previous studies relevant to the digitalization of Islamic education. The results show that the transformation of PAI learning has shifted from a teacher-centered paradigm toward a student-centered one, supported by the integration of technologies such as Learning Management Systems (LMS), Artificial Intelligence (AI), digital Qur'an applications, Virtual/Augmented Reality (VR/AR), and social media. Other findings indicate that the main challenges in PAI digitalization include teachers' digital pedagogical readiness (85%), students' digital ethics (75%), infrastructure gaps (65%), and moral supervision (70%). This study concludes that the transformation of PAI learning in the Society 5.0 era can only be optimized if technology is balanced with the strengthening of spiritual, social, and digital literacy, thereby creating an Islamic learning environment that is humanistic, adaptive, and firmly grounded in religious values.

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INTRODUCTION

The paradigm of global digital transformation in education has changed comprehensively, including within the context of learning in the field of Islamic Religious Education. The Society 5.0 era has fundamentally transformed the way humans interact with technology by integrating artificial intelligence, the Internet of Things, and cloud-based computing into all aspects of life.(Amelia, 2023) In the field of education, these changes offer great potential for improving the accessibility, quality, and relevance of learning, including in the context of religious values.(Ningsih & Zalsiman, 2024)

The advancement of information technology has brought major changes to various aspects of life, including the field of education. The presence of technology has encouraged the emergence of learning methods that are more interactive, flexible, and easily accessible to students. However, in the context of Islamic Religious Education, the application of information technology has not been utilized effectively. Many educators still rely on traditional teaching methods such as lectures and memorization, without

making use of technological capabilities that can enhance students' learning experiences. This issue has become a problem amid the growing need for digitalization, which is closely linked to social media and various learning applications.(Svari & Arlinayanti, 2024)

Islamic Religious Education is a very important component of general education globally, and it is no exception to the positive influence of digital transformation. The implementation of technology in the learning process provides easier access to authentic and in-depth religious information sources, expanding the reach of learning beyond the walls of traditional classrooms. Consequently, teachers can utilize online platforms to present religious material with approaches that are more effective and responsive to students' needs.(Ramadhan, 2024)

The integration of technology into Islamic Religious Education offers a significant advantage in its ability to facilitate more personalized and globally connected learning experiences through mobile applications, learning platforms, and social media such as TikTok, YouTube, and others. In this way, students can engage in deeper discussions related to spiritual values and religious practices, both physically and spiritually. This not only enriches students' learning experiences but also prepares them to live in an increasingly complex global society.(Rizqiyah, Jauhari, Fawaid, & Maudy, 2025)

These changes present significant challenges, particularly regarding the availability of adequate technological infrastructure and training for teachers, especially those in Islamic Religious Education. Although technology holds great potential for improving learning, there are risks of decreased access and understanding that must be addressed through appropriate policies and investment in human capacity. Specifically, teachers need to be prepared to apply technology effectively within the Islamic Religious Education curriculum to ensure that spiritual and moral values remain the primary focus in digital learning.

In this regard, this study explains the importance of continuous adaptation to technological developments in religious education. It examines the opportunities and challenges associated with the Transformation of Islamic Religious Education Learning through Information Technology Innovation in the Society 5.0 Era. By understanding these issues, it is expected that the potential of technology can be optimized to strengthen the foundation of religious values in the field of education, thereby responding to the demands of an increasingly connected and dynamic era.

RESEARCH METHOD

In this study, the researcher employed a descriptive research method with a qualitative approach. According to Sugiyono, the descriptive method is a method used to explain or describe the object being studied based on the data obtained, without conducting analysis or drawing conclusions. Meanwhile, the qualitative approach refers to data presented in narrative form, which is obtained through various data collection techniques.(Ramdhani, 2021)

In the data collection process, the researcher worked in natural conditions using both primary and secondary data sources, based on the results of observations, interviews, and documentation. In this study, data collection was carried out using the library research method. According to Sugiyono, library research is a theoretical study that involves references and other scientific literature related to the culture, values, and norms that develop within society.(Adlini, Dinda, Yulinda, Chotimah, & Merliyana, 2022)

The preliminary stage carried out in the research process aims to produce written data related to the research object, obtained through literacy activities such as books and journals that are relevant to the study. To ensure data validity, this study employed a theory triangulation technique, namely by comparing and integrating various perspectives from different scientific sources to obtain a more comprehensive and objective understanding. This approach helps to avoid interpretive bias and strengthens the reliability of the research findings. Thus, this study is expected to provide a meaningful contribution to the development of Islamic education studies amid the challenges of digital globalization.

RESULTS AND DISCUSSION

In the Society 5.0 era, learning is no longer centered on the educator but on the students as active creators of knowledge. Islamic Religious Education (PAI) teachers must shift their role from merely conveying information to becoming facilitators who guide both spiritual and technological literacy. This paradigm shift aligns with constructivist learning theory, which emphasizes that knowledge is actively constructed through interaction and digital reflection.(Nurwita, Anggara, & Irnawati, 2025)

In the context of Islamic education, this concept is highly relevant, as Islamic education aligns with the fundamental purpose of human life. Hasab Langgulung explains that Islamic education is a process of spiritual, moral, intellectual, and social formation in which individuals are guided and provided with values and principles that prepare them for life in both this world and the hereafter. Humans are able to carry out their duties in accordance with the guidance of the Qur'an and the Hadith of the Prophet Muhammad when their innate abilities (fitrah) are developed properly.(Iqbal, Panjaitan, Helvianti, Nurhayati, & Ritonga, 2024)

In the midst of competitive and permissive social dynamics, education is one of the key aspects in shaping a better generation for the future. Through education, it is expected that individuals of high quality, responsibility, and the ability to anticipate future challenges can be produced. In its broadest sense, education continuously stimulates and accompanies the changes and development of human society.

The transformation of learning paradigms in Islamic education demonstrates a significant shift from traditional teaching patterns toward more modern and adaptive learning approaches. Technological advancements, the demands of 21st-century competencies, and the needs of learners in the Society 5.0 era have encouraged Islamic education to move away from outdated methods and mindsets toward learning models that are more collaborative, creative, and student-centered.

This transformation occurs not only in learning methods and media but also in the orientation of the competencies to be achieved. Whereas previous learning emphasized memorization and lectures, the paradigm has now shifted toward the mastery of digital literacy, the development of critical thinking skills, and the application of Islamic values in real-life contexts.(Saputra et al., 2023)

Below, the researcher explains a comparison between the Old Paradigm and the New Paradigm across four key aspects of learning transformation, namely student-centered learning, digital-based learning, collaborative learning, and Higher Order Thinking Skills (HOTS). This comparison can be seen in the following figure:

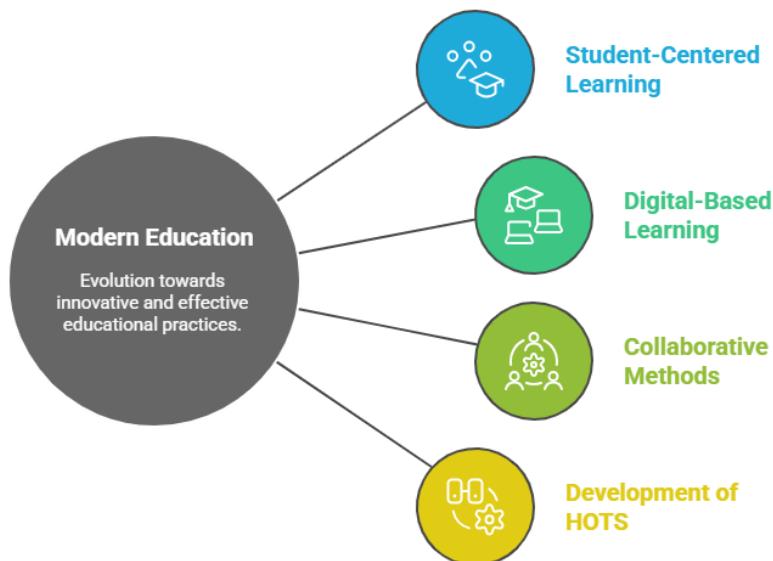


Figure 1. Transformation of Learning Paradigms in Islamic Education

As a justification that the image above represents a comparison between the old and new paradigms in four aspects of learning particularly in Islamic religious education each axis in the diagram illustrates the dynamics of paradigm shifts. The dynamics of these paradigms, based on the results of the literature review, are as follows:

a. From Teacher-Centered to Student-Centered

In the paradigm dynamics illustrated by the researcher, the literature shows that Islamic-based learning, which was previously oriented toward the educator (Teacher-Centered), has now shifted to a Student-Centered approach. This means that teachers are no longer the sole source of knowledge for students. Instead, teachers now serve primarily as facilitators, guides, motivators, and learning partners for learners.

b. From Textbook-Based to Digital-Based

In this discussion, the researcher concludes from the literature that there has been a significant increase in the use of digital technology in school learning processes, such as Kahoot, interactive videos, online platforms, and E-learning systems. This substantial change indicates that Islamic education has adapted to digitalization, allowing access to knowledge that is broader, faster, and more flexible.

c. Collaborative Methods

In the field of education, traditional learning has typically relied heavily on lecture-based methods, with limited use of collaborative approaches. With the rise of digitalization, traditional learning processes have now shifted and been replaced by collaborative approaches between teachers and students, such as group discussions, Project-Based Learning, and Problem-Based Learning. This shift is considered necessary because collaborative methods are viewed as more effective in fostering communication, cooperation, and deeper understanding within students. As a result, the learning process becomes more active rather than passive.

d. Higher Order Thinking (HOTS)

Higher Order Thinking Skills (HOTS) are advanced cognitive abilities that require individuals to think critically, creatively, and analytically about information and data in

order to solve problems. In the context of social studies learning implemented at the senior high school level, students are expected to achieve higher-level thinking processes. Bloom explains that thinking is part of the cognitive domain, which is classified into six cognitive hierarchies: knowledge, comprehension, application, analysis, evaluation, and creation.(Abraham, Tjalla, & Indrajit, 2021)

This definition implies that Higher Order Thinking is more effective than rote memorization, because this transformation enables students not only to recognize textual information but also to understand context, solve problems, and apply Islamic values in their daily lives.

Overall, the literature affirms that Islamic education is shifting toward a more modern, humanistic, technology-based, collaborative, and higher-order-thinking-oriented learning paradigm. This transformation enables Islamic education to remain relevant and adaptive in responding to the challenges of modern society without abandoning its spiritual values.

The Role of Information Technology Innovation

Technological innovations such as Learning Management Systems (LMS), virtual classrooms, AI-based learning analytics, and augmented reality (AR) have been widely implemented in Islamic education. These tools enable contextual learning, allowing students to access religious materials interactively while fostering critical thinking and moral reflection. For example, Qur'an learning applications equipped with AI-based *tajwīd* detection can provide personalized feedback, thereby improving reading accuracy and increasing student engagement in the learning process.(Judijanto, Wiliyanti, Sahusilawane, & Agus, 2025)

Based on the literature review of several studies, it can be concluded that the integration of information technology in Islamic Religious Education has shown a significantly increasing trend in the Society 5.0 era. Islamic educators and institutions have begun to incorporate various digital tools such as Learning Management Systems (LMS), Artificial Intelligence (AI), Virtual Reality (VR), Augmented Reality (AR), digital Qur'an applications, and even social media as part of the learning process and the reinforcement of religious values. To illustrate the level of adoption of these technologies, the synthesized findings from the literature are presented in Figure 1 below:

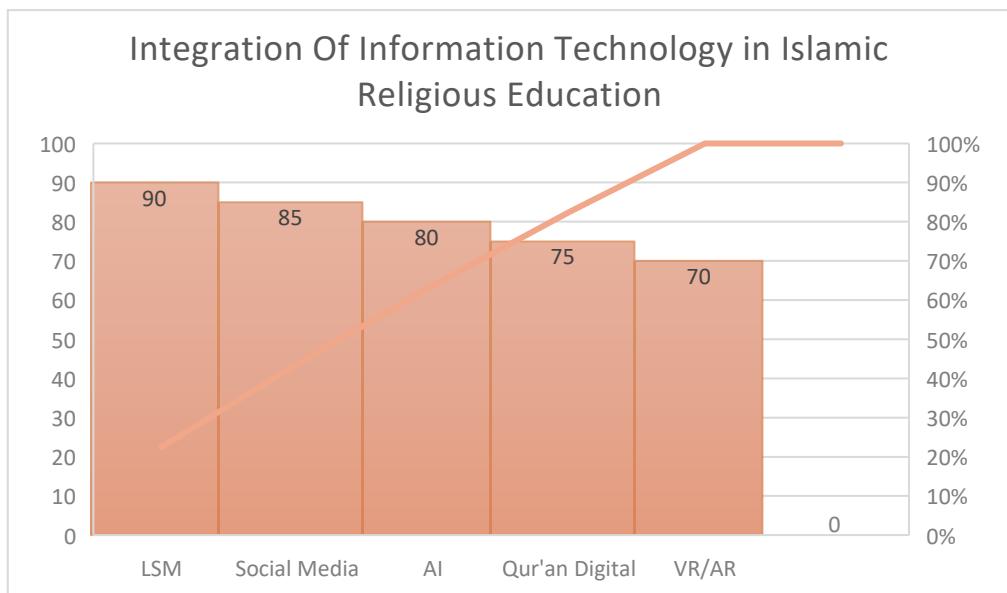


Figure 2. Integration of Information Technology in Islamic Religious Education

Based on the figure above, it is shown that the level of information technology integration in the Islamic Religious Education (PAI) learning process has increased in the digital era. The horizontal axis presents the level of integration (%), while the vertical axis displays the types of digital technologies used in learning activities. The researcher concludes that the results indicate the following:

Learning Management Systems (LMS) have the highest level of integration, reaching approximately 90%. This indicates that online learning management platforms such as Google Classroom and e-learning systems are widely used to manage learning materials, assignments, and communication between teachers and students in Islamic Religious Education (PAI). Next, Artificial Intelligence (AI) occupies the second-highest position at around 80%. This technology has begun to be utilized to provide automated feedback, analyze learning outcomes, and offer personalized learning recommendations for students.

Next, Virtual Reality (VR/AR) shows an integration level of approximately 70%. This technology is increasingly being used to create immersive learning experiences, such as virtual hajj simulations or virtual explorations of Islamic history.

Digital Qur'an applications follow with an integration level of about 75%. These applications are utilized to enhance learners' abilities in reading, tajwīd, and understanding tafsīr through interactive features and audio support.

Furthermore, Social Media has a high integration level of around 85%. Platforms such as YouTube, Instagram, and WhatsApp Groups are widely used as mediums for distributing religious content, facilitating discussions, and supporting digital da'wah.

It can be concluded that Islamic Religious Education (PAI) has undergone a significant transformation toward digitalization. The use of technology is not merely a supporting tool but has become an integral part of modern Islamic learning strategies. The high level of integration reflects the readiness of teachers and Islamic educational institutions to adapt to the Society 5.0 era, in which technology and spiritual values coexist in balance to create learning that is more effective, inclusive, and meaningful.

Ethical and Pedagogical Challenges

Despite its many benefits, the digital transformation of Islamic Religious Education (PAI) also presents several ethical and pedagogical challenges. Educators must be equipped with strong pedagogical competencies suitable for the digital era, while students need proper guidance to practice digital ethics aligned with Islamic moral principles. The phenomena of information overload and exposure to non-Islamic content highlight the need for developing Digital Fiqh and Adab al-Ijtima' al-Raqmī (digital social ethics) as integral components of the Islamic Religious Education (PAI) curriculum.(Kesuma et al., 2025)

The digital transformation of Islamic Religious Education presents several challenges that require serious attention from educators, educational institutions, and policymakers. Although digitalization opens significant opportunities for innovation in teaching methods and expands access to sources of knowledge, it also gives rise to various fundamental issues. Based on the analysis, there are four major challenges encountered in the implementation of digital transformation in Islamic religious education. These challenges include digital pedagogy, digital ethics, infrastructure gaps, and moral supervision.(Yemmardotillah, Indria, & Indriani, 2024) Based on the points above, the figure illustrates the level of significance of each of these challenges within the context of Islamic religious education in the digital era. This is presented by the researcher in Figure 3 below:

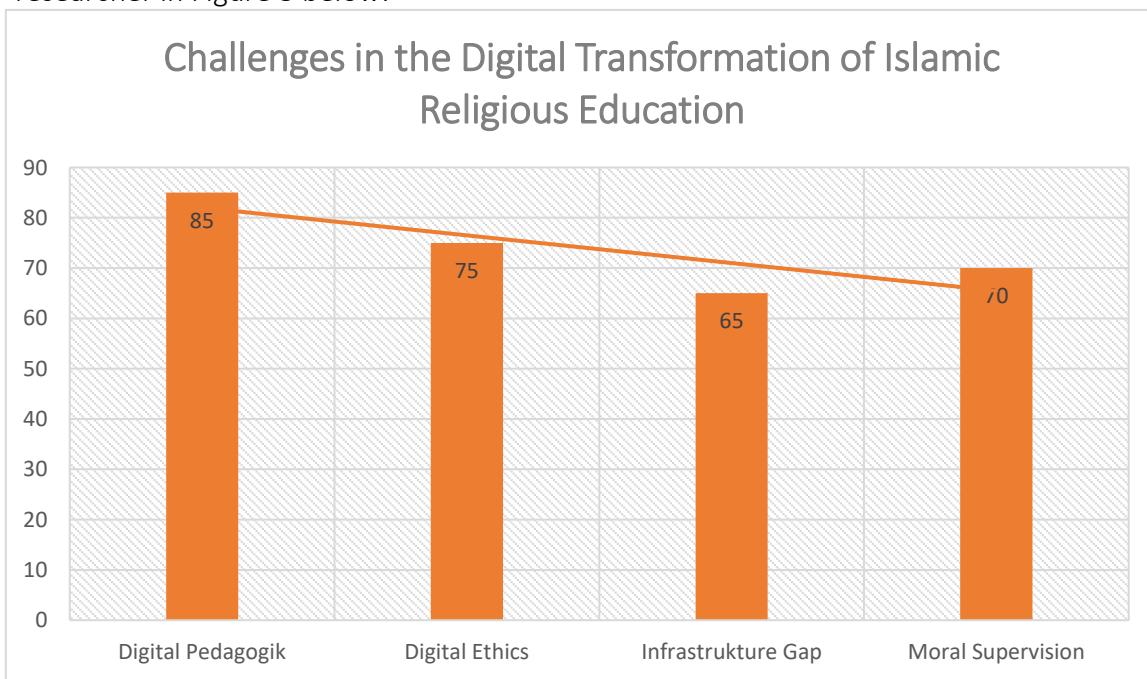


Figure 3. Challenges in the Digital Transformation of Islamic Religious Education

Based on the figure above, it is explained that the main challenges in the digital transformation of Islamic Religious Education are illustrated through two axes: the vertical axis represents the level of significance, while the horizontal axis presents four key aspects that constitute the primary issues in the implementation of digital technology in Islamic education. From the analysis, the researcher concludes the following:

Digital Pedagogy reaches 85%, making it the most significant challenge. Many Islamic Religious Education (PAI) teachers still experience difficulties in designing and implementing technology-based learning due to limited training and insufficient

experience in using digital platforms. Digital Ethics stands at 75%. This challenge arises because students' awareness of applying Islamic moral values in digital interactions remains low, including maintaining proper etiquette, avoiding plagiarism, and using social media responsibly.

Infrastructure Gap is at 65%. This issue persists due to unequal access to internet connectivity, devices, and technological facilities, especially in Islamic-based schools located in rural areas. Moral Supervision is approximately 70%. In this regard, teachers and parents are required to strengthen character guidance so that the use of technology remains aligned with Islamic values and does not lead to misuse or negative behavior.

The Vision of Human-Centered Education in the Society 5.0 Era

Society 5.0 views technology as a tool that must serve humanity rather than replace it. In this context, Islamic education must be able to harmonize technological intelligence with spiritual intelligence. The integration of artificial intelligence (AI), big data, and the Internet of Things (IoT) in learning should aim to strengthen students' understanding of tawhid, ethics, and social responsibility, rather than merely pursuing efficiency. Therefore, the transformation of Islamic Religious Education (IRE) in the Society 5.0 era should produce learners who are digitally competent, spiritually aware, and socially responsible.(Sabri, 2020) Regarding the center of Islamic education in the Society 5.0 era, the researcher explains it in the following figure:



Figure 4. Human-Centered Islamic Education in the Society 5.0 Era

The figure above illustrates the proportion of human literacies that form the fundamental basis of human-centered Islamic education in the Society 5.0 era. It also shows three essential literacy components that must be developed in correlation with the modern Islamic education system, namely:

At the initial stage, Social Literacy reaches 25%. This represents learners' abilities to interact, collaborate, and contribute positively within the global community. In the digital context, this includes the capacity to use social media for da'wah, collaboration, and building humanitarian solidarity across cultures.

Next, Spiritual Literacy reaches 35%. This reflects an individual's ability to understand and internalize Islamic teachings deeply, both in the dimensions of worship, morality, and awareness of Allah's presence in every activity. This literacy serves as a moral compass to ensure that technological use remains within the boundaries of Islamic values.

The next stage involves the development of Digital Literacy, which reaches 40%. This represents learners' ability to use technology intelligently, productively, and ethically. In the context of Society 5.0, digital literacy becomes a key foundation for

accessing, managing, and creating knowledge through online platforms without losing Islamic moral values.

This chart shows that in Islamic education during the Society 5.0 era, digital literacy becomes the dominant element (40%), but it must not overshadow the importance of spiritual and social literacy. The balance among these three aspects emphasizes that the primary goal of Islamic education is not merely to create a technologically literate generation, but also individuals with strong spiritual and social character.

Thus, human-centered Islamic education must integrate digital intelligence, spiritual intelligence, and social intelligence. This balance becomes the hallmark of Islamic education in the Society 5.0 era an education that not only masters technology but also preserves Islamic and humanitarian values.

CONCLUSION

The transformation of Islamic Religious Education (PAI) learning in the Society 5.0 era shows that information technology is no longer merely a supporting tool, but has become an integral part of the educational process. The integration of digital technologies such as LMS, AI, VR/AR, digital Qur'an applications, and social media provides great opportunities to create more interactive, personalized, and relevant learning for the needs of the modern generation. The previously teacher-centered learning paradigm has shifted to a student-centered approach, supported by collaborative methods and the development of Higher-Order Thinking Skills (HOTS) that are more responsive to contemporary developments.

Nevertheless, the implementation of technology in Islamic education is not free from challenges. Major challenges include the limited digital pedagogy of PAI teachers, low digital ethics among students, infrastructure gaps, and the need for strengthened moral supervision. These conditions indicate that digitalizing learning requires human resource readiness, continuous training, and adequate policy support to ensure that Islamic values remain the primary foundation in the teaching and learning process. In addition, the concept of human-centered education in the Society 5.0 era emphasizes the importance of balancing digital literacy, spiritual literacy, and social literacy. Technology must be utilized to strengthen students' religious understanding and character, not replace them. PAI in this new era must be able to produce a generation that is not only digitally literate but also possesses strong spiritual intelligence and social awareness. The transformation of PAI learning through information technology innovation opens great opportunities for Islamic education to become more adaptive, creative, and meaningful. However, the success of this transformation greatly depends on the ability of teachers, educational institutions, and the social environment to ensure that the use of technology consistently aligns with Islamic values and holistic educational goals.

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