



## Integrating Artificial Intelligence in Islamic Education: Designing a Human-Centered Learning Model in the Society 5.0 Era

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### ABSTRACT:

The development of Society 5.0 demands the reconstruction of an integrative and adaptive education system to advances in digital technology, including in Islamic Religious Education. This transformation is not limited to the use of digital devices as learning media, but includes the reformulation of pedagogical paradigms, instructional strategies, and curriculum orientations that align with Islamic values and the needs of a technology-based society. This study aims to analyze the construction of PAI learning transformation based on digital technology in the context of Society 5.0. This study uses a qualitative approach through a literature study method with thematic analysis of relevant academic literature. The results of the study indicate that the transformation of PAI learning operates in three main dimensions. First, the reformulation of pedagogical practices through the integration of a digital ecosystem including learning platforms, educational applications, and interactive media that enable learning that is more flexible, collaborative, and responsive to the individual needs of students. Second, the redefinition of pedagogical relations towards a participatory and constructivist learning model that positions students as active subjects in the process of constructing knowledge based on digital experiences. Third, the emergence of multidimensional challenges, both at the structural and cultural levels, such as unequal access to technology, limited teacher capacity in digital pedagogy, and the urgency of strengthening digital literacy and ethics integrated with Islamic values.

**Keywords:** Islamic Education, Society 5.0, Pedagogical Transformation, Digital Technology, Islamic Digital Literacy, Participatory Learning.

### ABSTRAK:

Perkembangan Society 5.0 menuntut rekonstruksi sistem pendidikan yang integratif dan adaptif terhadap kemajuan teknologi digital, termasuk dalam Pendidikan Agama Islam. Transformasi tersebut tidak terbatas pada pemanfaatan perangkat digital sebagai media pembelajaran, tetapi mencakup reformulasi paradigma pedagogis, strategi instruksional, dan orientasi kurikulum yang selaras dengan nilai-nilai keislaman serta kebutuhan masyarakat berbasis teknologi. Penelitian ini bertujuan untuk

menganalisis konstruksi transformasi pembelajaran PAI berbasis teknologi digital dalam konteks Society 5.0. Penelitian ini menggunakan pendekatan kualitatif melalui metode studi kepustakaan dengan analisis tematik terhadap literatur akademik yang relevan. Hasil kajian menunjukkan bahwa transformasi pembelajaran PAI beroperasi dalam tiga dimensi utama. Pertama, reformulasi praktik pedagogis melalui integrasi ekosistem digital meliputi platform pembelajaran, aplikasi edukatif, dan media interaktif yang memungkinkan pembelajaran lebih fleksibel, kolaboratif, dan responsif terhadap kebutuhan individual peserta didik. Kedua, terjadinya redefinisi relasi pedagogis menuju model pembelajaran partisipatif dan konstruktivistik yang menempatkan peserta didik sebagai subjek aktif dalam proses konstruksi pengetahuan berbasis pengalaman digital. Ketiga, munculnya tantangan multidimensional, baik pada level struktural maupun kultural, seperti ketimpangan akses teknologi, keterbatasan kapasitas guru dalam pedagogi digital, serta urgensi penguatan literasi dan etika digital yang terintegrasi dengan nilai-nilai Islam.

**Kata Kunci:** Pendidikan Islam, Society 5.0, Transformasi Pedagogis, Teknologi Digital, Literasi digital Islam, Pembelajaran Partisipatif.

## INTRODUCTION

The digital transformation that has been taking place intensively over the last two decades has brought significant changes to the structure of people's lives, including in aspects of learning, communication, and professional practice (Syarifudin et al., 2025). The development of information and communication technology has not only increased speed and efficiency but also reshaped patterns of social relations and human productivity. In this context, the Japanese government introduced the concept of Society 5.0 as a development paradigm oriented toward integrating intelligent technology with humanitarian values (Nashrullah et al., 2025). This concept presents itself as both a critique and an improvement on the Industrial Revolution 4.0, which tends to emphasize automation and optimization of production systems. Society 5.0 emphasizes that technological innovation should be directed toward improving the quality of human life by placing humans as the primary subject in social, economic, and cultural dynamics (Nugroho & Tambunan, 2025).

Within the framework of a technology-based society, the use of digital innovation is positioned as a strategic instrument to respond to increasingly complex social problems (Dwi, Noor, et al., 2024). The implementation of artificial intelligence, large-scale data analytics, and an integrated device system based on the Internet of Things (IoT) is aimed at producing systematic, data-driven solutions. This technological integration is expected to improve governance effectiveness across various sectors, including education, by strengthening learning systems that are more adaptive, measurable, and responsive to student needs (Safrudin, 2024).

The characteristics of contemporary learners who are born and grow up in a digital ecosystem require fundamental adjustments in educational practices (Effendi & Wahidy, 2019). The generation often referred to as digital natives has mindsets, learning styles, and interaction preferences shaped by intense technology use from an early age, significantly different from previous generations. This situation requires the education system to undergo substantive and targeted reforms (Ngongo, 2019).

In this context, Society 5.0 presents an educational paradigm that not only emphasizes the integration of technological devices in learning, but also demands strengthening of ethical, moral and humanitarian dimensions (Amelia, 2023). Learning transformation must therefore be designed

comprehensively, by combining digital innovation and character building, so that it is relevant to the needs of today's generation while remaining rooted in normative values.

The characteristics of the contemporary generation that grew up in a digital environment are reflected in learning preferences that emphasize visual aspects, the ability to manage various activities simultaneously, and the tendency to obtain information independently through various online sources (Riyadi, 2025). Furthermore, monotonous and conventional learning patterns are relatively incapable of sustaining students' attention for long periods. This dynamic indicates that learning models oriented toward the dominant role of educators are no longer relevant to the needs of today's students. Therefore, a more participatory, interactive, and adaptive pedagogical approach is needed to develop the learning character of the digital generation (Abror & Sassi, 2025).

As a discipline that is oriented towards the formation of the spiritual, ethical and social dimensions of students, Islamic Religious Education bears a normative responsibility that is not light in facing the changing times (Ibda, 2020) basic Islamic education institutions did not adequately apply old literacy (reading, writing, arithmetic. However, in practice, Islamic Religious Education (PAI) learning processes are often dominated by expository methods that are teacher-centered, tend to be textual, and have not fully accommodated pedagogical innovations that are contextual to technological developments. This situation presents a unique challenge in maintaining the relevance of PAI amidst the dynamics of a digital society (Manan, 2023).

Nevertheless, Islamic teachings, based on the Qur'an and Sunnah, possess a universal and transhistorical character, allowing the internalization of their values to remain relevant in various contexts, including the modern technological landscape. Therefore, the primary issue lies not in the substance of the teachings, but rather in the pedagogical approaches and strategies used to convey them to students (Tian Wahyudi, 2025). Transforming Islamic Religious Education learning is crucial so that Islamic teachings are not only understood normatively but also internalized in the practices of modern life. This research shows that digital technology-based Islamic Religious Education learning can increase student engagement and motivation due to its interactive, adaptive, and flexible nature, making it more suited to the needs of today's generation.

The use of digital media allows students to access a variety of learning resources, including Islamic preaching videos, animated stories of the Prophet, Islamic podcasts, and applications to support Quran memorization. Pedagogically, teachers can design project-based and reflection-based learning through Learning Management System (LMS) platforms such as Google Classroom, Moodle, or Madrasah E-Learning, so that Islamic values can be systematically integrated with modern learning practices (Adnan, 2024).

The constructivist approach plays a crucial role in guiding the transformation of learning methods in the Society 5.0 era. This theory, introduced by Jean Piaget and Lev Vygotsky, emphasizes that learners acquire knowledge through active activities and interactions with the environment and available technology (Hafizi, 2023). In the context of Islamic Religious Education, this requires teachers to act as facilitators, guiding students to explore credible digital sources, develop critical thinking skills, and internalize Islamic values reflectively in everyday life (Abinnashih & Nurfuadi, 2023).

The transformation of Islamic Religious Education learning faces various complex obstacles. Limited digital literacy among Islamic Religious Education teachers, particularly at the elementary and

secondary school levels, is a major challenge. Furthermore, the uneven distribution of technological infrastructure, particularly in the 3T (frontier, outermost, and disadvantaged) regions, also limits the implementation of digital learning. Another challenge arises from students' low awareness of digital ethics, which impacts their ability to evaluate and filter Islamic information distributed online (Ghufron, 2023).

Successful transformation of Islamic Religious Education learning requires thorough strategic planning, strengthening relevant policies, and continuous teacher capacity development. This research focuses on analyzing the implementation of digital technology-based Islamic Religious Education learning in the Society 5.0 era, with the goal of understanding the mechanisms of technology integration within the context of modern Islamic education. The study's findings are expected to provide not only conceptual contributions to the development of Islamic education studies but also practical guidance for teachers, policymakers, and educational institutions in creating adaptive, contextual, and future-oriented learning models.

## **RESEARCH METHODS**

This study uses a qualitative approach with a literature study method to explore the transformation of Islamic Education learning based on digital technology in the Society 5.0 era in depth (Zuchri, 2021). Data collection was conducted through credible secondary literature, including academic books, national and international journal articles, education policy documents, and online sources relevant to the topic. The analysis process used systematic content analysis, starting with literature selection to ensure relevance, followed by thematic coding to identify patterns, concepts, and important issues, then interpreting the meaning and relationships between themes, and concluding with the preparation of a synthesis that integrates theory, previous research findings, and relevant concepts (Mahendra, 2021) the actual number of HF hospitalizations remains >1 million annually. More than 80% of patients who are hospitalized are initially seen in the emergency department (ED). Data validity is strengthened through source triangulation, namely comparing information from various references to ensure the validity and consistency of the findings (Moeleong, 2006). With this approach, the research not only aims to provide theoretical contributions in the development of modern Islamic education studies, but also provides practical guidance for teachers, policy makers, and Islamic educational institutions in designing PAI learning models that are innovative, adaptive, contextual, and oriented to the needs of future students.

## **RESULTS AND DISCUSSION**

In the era of Society 5.0, Islamic Religious Education learning utilizing digital technology has undergone significant evolution, both in methods, media, and learning strategies. This transformation has resulted in three main, interrelated achievements that collectively strengthen the modernization process of Islamic Religious Education learning while also providing a more adaptive, contextual, and responsive approach to the needs of learners in the digital age.

## Utilization of Digital Technology in the Development of Islamic Education Media and Learning Platforms

Changes in Islamic education in the Society 5.0 era are marked by the increasingly comprehensive application of digital technology, encompassing media, platforms, and learning content. Today, the learning process is no longer limited to conventional classrooms or traditional lecture methods, but is expanded through the use of Learning Management Systems (LMS), educational applications, pedagogically-enabled social media, and other digital tools that support interactive and contextual delivery (Syarifuddin et al., 2019). This technology integration allows students to access information flexibly, deepen their understanding through digital visualizations and simulations, and actively participate in learning activities (Hidayah, 2023). In addition, the use of digital platforms encourages teachers to design innovative, adaptive learning strategies that are able to adapt to the characteristics of the digital native generation, so that Islamic values can be conveyed effectively in a modern context.

In an effort to deliver material, give assignments, and monitor student progress, Islamic Religious Education teachers have begun to systematically optimize the use of digital platforms (Wulandari, 2023). Some of the main platforms used include Learning Management Systems (LMS) such as Google Classroom, Moodle, and E-Learning Madrasah, which allow for structured assignments, evaluations, and progress tracking. Furthermore, social media and communication apps like YouTube, Telegram, and WhatsApp are utilized to disseminate Islamic content in the form of short videos, Islamic posters, podcasts, and interactive infographics (Ma'rifatunnisa, 2022). This integration provides the flexibility to access materials anytime and anywhere, thereby expanding inclusivity, increasing participation, and supporting more interactive learning. Here's a simple table sketch to map the platforms and their functions:

**Table 1. Digital Platforms and Media in Islamic Education Learning**

No	Platform	Main Function	Content Type
1	Google Classroom	Assignment, monitoring, evaluation	Modules, quizzes, reflective assignments
2	Moodle	Course management, digital materials, discussion forums	Learning materials, online discussions
3	Madrasah E-Learning	Digital integration of Islamic Education curriculum	Modules, practice questions, online exams
4	YouTube	Dissemination of learning and preaching videos	Video lecture, animation of the Prophet's story
5	Telegram	Distribution of materials and student communication	PDF files, podcasts, preaching posters
6	WhatsApp	Study group interactions and notifications	Short discussions, multimedia materials

This scheme illustrates how various digital platforms and media complement each other to support the transformation of Islamic Religious Education learning to be more interactive, flexible, and participatory.

The connectivism theory introduced by Siemens explains that learning in the digital age takes place through a vast, interconnected network of knowledge. The learning process no longer relies solely on teacher explanations as the sole source, but develops through interaction with various digital resources that are rapidly and dynamically available. In this situation, students' ability to find, connect, and interpret information becomes a crucial part of the knowledge-building process (Ariyanto, 2022).

In this context, the use of digital technology in Islamic Religious Education learning is relevant to the concept of Society 5.0, a society that integrates technology to address various life challenges, including in education. Technology is no longer understood merely as a tool, but rather as part of a learning ecosystem that supports more personalized, contextual learning experiences and encourages student engagement (Meida, 2022).

The integration of digital technology into learning has led to the emergence of various innovative learning models, one of which is blended learning, which combines online and offline learning. This model transforms the learning process, which previously tended to be linear, into a more flexible, collaborative, and participatory one (Khairani et al., 2025). Interactions not only take place in the classroom, but also through digital spaces that allow students to access materials anytime and anywhere.

One concrete example of this approach is the flipped classroom model. In this model, students first study the material through digital media before conducting face-to-face sessions. Classroom meetings then focus on discussion, in-depth study, and clarification with the teacher. For Islamic Religious Education learning, this model is quite effective because it provides space for students to reflect more deeply on Islamic values and relate them to their experiences and the realities of everyday life before engaging in collective dialogue in class (Khairani et al., 2025).

The transformation of Islamic Religious Education learning in the Society 5.0 era demands more than just the use of digital devices in the classroom. The desired change is fundamental, namely a paradigm shift from rigid, teacher-centered learning patterns to a more adaptive, open, and responsive approach to the characteristics of the digital native generation (Masnawati, 2024). This generation grows up in a highly connected environment, requiring flexible and contextual learning models.

However, these efforts cannot be separated from the readiness of the education ecosystem itself. The availability of technological infrastructure, the quality of the internet network, and the digital skills of educators are crucial factors in successful implementation (Kimmons et al., 2021). Therefore, strategic support from educational institutions and the government is essential, whether through policies to improve teacher competency, the development of digital materials based on Islamic values, or the provision of adequate and sustainable technological facilities. Without these steps, technology integration has the potential to stop at the administrative level and fail to address the substance of learning.

### **Changes in Learning from a Teacher-Centered to a Student-Centered Paradigm**

The development of the Society 5.0 era has consequences for the way Islamic Religious Education is designed and implemented. One significant change is the shift in orientation from a teacher-

centered learning model to an approach that places students at the center of learning activities. This shift is not only related to variations in methods, but also involves fundamental changes in understanding the role of the teacher, the position of students, and the objectives of learning itself (Gafarurrozi, 2023).

In the teacher-centered approach, the teacher tends to be the main source of knowledge as well as the controller of the learning process (Ani et al., 2025). The delivery of material occurs in a one-way manner through lectures, while students spend most of their time listening, taking notes, and memorizing. While this pattern facilitates classroom control, it often limits the space for dialogue, exploration, and the development of students' critical thinking. In the context of Islamic Religious Education, this approach has the potential to result in religious material being understood textually and normatively without deepening its meaning and relevance to the realities of life (Simbolon et al., 2025).

In contrast, a student-centered approach encourages active student involvement in constructing their own understanding. Teachers no longer act as the sole source of information, but rather as facilitators, guides, and dialogue partners. Students are given the opportunity to ask questions, discuss, reflect, and connect the material to their social experiences and the actual challenges they face (Dwi, Putra, et al., 2024). In Islamic Religious Education learning, this is important so that Islamic values are not only understood as normative concepts, but also internalized contextually in everyday life.

Furthermore, the nature of the digital native generation, which grew up in a technological environment, demands a more participatory and flexible learning approach. They are accustomed to accessing various information sources independently and quickly, making overly rigid and one-way learning patterns less effective (Nasyor et al., 2023). It is in this context that digital transformation is present not merely as a tool, but as a factor that challenges conventional approaches and encourages the birth of more interactive, collaborative, and participatory learning models.

Appropriate use of digital technology can strengthen the dialogic and participatory learning process. Through various digital platforms, students have broader access to Islamic learning resources, such as e-books, video lectures, religious podcasts, and online discussion forums. The availability of these resources makes it easier for them to access diverse references and is not limited to a single source (Tatasari et al., 2025).

This open access provides students with the opportunity to be more active in the learning process, including determining how to understand the material, selecting appropriate references, and delving deeper into topics deemed important. Thus, digital technology not only expands learning resources but also encourages student independence and engagement in Islamic Religious Education learning. In today's learning landscape, the role of Islamic Religious Education teachers has expanded in meaning. Teachers are no longer positioned solely as transmitters of material, but as learning facilitators who guide, facilitate, and create dialogue so that students can develop their understanding more independently. Classroom interactions have become more communicative and reflective (Syahfitri & Matang, 2023).

This shift in roles aligns with the constructivist perspective developed by Jean Piaget and Lev Vygotsky. This perspective emphasizes that knowledge is not simply transferred from teacher to student, but rather actively constructed through experience, thought processes, social interactions,

and individual reflection (Habsy, 2020). Thus, learning is understood as a process of constructing meaning that takes place in a social context and involves the active involvement of students.

The student-centered approach to Islamic Religious Education emphasizes not only physical student engagement but also intellectual, emotional, and spiritual involvement in the entire learning process. Students are given the opportunity to identify problems, explore references, process information, and express their thoughts independently. In this context, the teacher serves as a facilitator, guiding the discussion, providing reinforcement, and ensuring that each activity remains aligned with Islamic principles and values.

Methodologically, this approach can be developed through various learning models integrated with digital technology. The use of online platforms, Islamic applications, and collaborative media is a key foundation for supporting broader learning exploration and interaction (Alfi et al., 2025). The following are digital-based implementations in PAI:

### **1. Project-Based Learning-Digital Project Based**

For example, in the theme of Social Media Etiquette in Islam, students are directed to examine Quranic verses and hadith related to communication ethics using a digital Quran application or a credible online interpretation site. After gaining an understanding of these normative foundations, they then relate them to the realities of social media, such as hate speech, the spread of hoaxes, and unethical communication behavior. In this way, learning goes beyond mastering Islamic teachings and also fosters analytical skills and the application of Islamic values in the context of digital life (Nirmayani et al., 2021).

### **2. Inquiry Learning-Digital Inquiry Based**

For example, on the theme of the Concept of Religious Moderation in Islam, learning can begin with a provocative question such as: How does Islam view tolerance, balance (wasathiyah), and justice in a pluralistic social life? This question then serves as the basis for students to independently search for references through online journals, scientific articles, and lectures by scholars available on trusted digital platforms. After gathering various sources, students analyze and compare existing views, then organize them into a more comprehensive and systematic understanding. The results of this study are presented in the form of interactive slides or discussed through online forums, fostering dialogue and mutual clarification. By utilizing Google Scholar, journal repositories, and e-learning platforms, this process not only enriches Islamic insight but also develops students' digital literacy and analytical thinking skills.

### **3. Problem-Based Learning-Based on Actual Problem Solving**

For example, on the theme of the "Adolescent Moral Crisis Phenomenon," teachers can present actual case studies sourced from online news or social media content, such as those related to cyberbullying or the misuse of digital platforms among adolescents (Espacios & Autores, 2020). These cases serve as starting points to stimulate student analysis of the causal factors, social impacts, and moral implications. Students then work in groups to examine these issues by referring to relevant Quranic and Hadith values, such as the principle of maintaining honor, the prohibition of harming

others, and the importance of ethical interactions. The results of the discussions are formulated in the form of simple policy briefs, digital reflections, or presentations uploaded through the school's LMS. Utilizing online news as a source of cases, the LMS as a publication space, and collaborative platforms such as Padlet and Mentimeter for polls and shared reflections can strengthen participation and enrich the learning dynamics.

Through digital integration across these three models, Islamic Religious Education learning does not stop at textual understanding but develops into a contextual and applicable process. Students are trained to think critically, work collaboratively, and internalize Islamic values in dealing with social realities. Thus, a digital-based, student-centered approach contributes not only to strengthening cognitive aspects but also to the formation of moral awareness and spiritual responsibility in everyday life.

The implementation of student-centered learning in the digital era necessitates the adoption of more adaptive and differentiated learning strategies. Advances in information technology enable learning processes to be designed taking into account the diverse needs, interests, learning styles, and ability levels of each student (Mahmud, 2023). Thus, learning is no longer uniform and oriented solely towards delivering material, but rather is directed towards optimizing individual potential in a proportional and sustainable manner.

The use of digital platforms provides teachers with ample opportunity to develop a variety of learning materials and activities in various formats, such as e-modules, learning videos, interactive quizzes, and online discussion forums. Through a learning management system (LMS), teachers can monitor students' academic progress more systematically and provide personalized and constructive feedback (Andani et al., 2025). In addition, technology allows students to learn at their own pace and rhythm, making the learning process more inclusive and responsive to individual differences.

In the context of Islamic Religious Education, this approach holds profound significance. Students come from diverse social backgrounds and religious understandings, so the process of internalizing Islamic values cannot be achieved through a single, homogenous approach (Muliastri, 2020). Adaptive, individual-needs-based learning allows for a more reflective and contextual understanding of Islamic moral values, spirituality, and normative understanding. Thus, the integration of a student-centered approach and digital technology not only enhances cognitive achievement but also strengthens students' affective and spiritual dimensions in their daily lives (Kemendikbudristek, 2022).

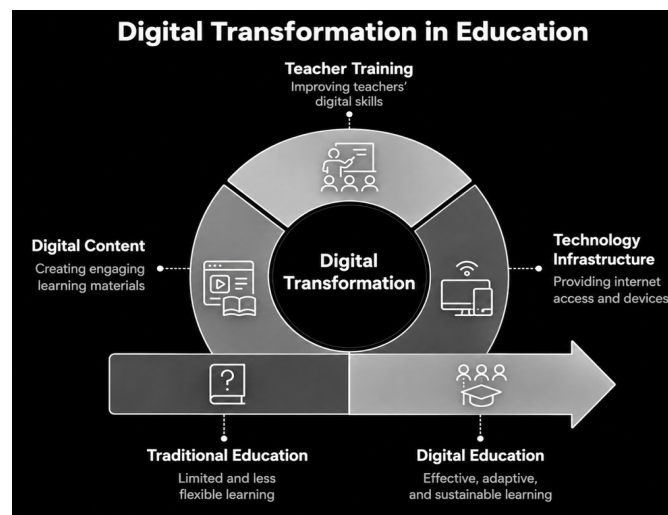
The shift in learning orientation toward an approach that places students at the center of learning activities is part of an adaptation to 21st-century educational developments and advances in digital technology. This approach emphasizes active student involvement in building understanding through meaningful learning experiences.

For Islamic Religious Education, the application of this paradigm makes the learning process more relevant and aligned with the realities of life. This has implications for the formation of Muslim individuals who possess not only intellectual capacity but also spiritual maturity and balanced social awareness.

## **Problems of Implementing Digital Transformation in Education: Access, Teacher Professionalism, and Digital Morality**

Digital transformation in education is an unavoidable necessity in this era of rapidly advancing technology and information. Integrating technology into the learning process is expected to improve the effectiveness, efficiency, and quality of students' learning experiences. In the context of Islamic Religious Education, digitalization opens up opportunities to expand Islamic reference sources, enrich learning methods, and strengthen academic interactions through various online platforms (Ghufron, 2023).

However, the implementation of digital transformation is not always without obstacles. Despite the opportunities offered, there are a number of issues that require serious attention to ensure optimal learning objectives are achieved. These issues relate not only to the technical aspects of device use but also touch on the dimensions of human resource readiness and ethical values in technology utilization.



**Figure 1. Digital Transformation of Education**

In general, there are three main issues that frequently arise in the digitalization process of education: limited and unequal access to technology, teacher professionalism and competence in managing digital learning, and students' digital morality or ethics. These three aspects are interrelated and determine the success of the overall implementation of digital transformation. Without equitable access, increased teacher capacity, and strengthened ethical awareness in the use of digital media, the learning process risks being ineffective and can even have negative impacts (Priyanto, 2020). Therefore, a comprehensive understanding of these three problems is the first step in formulating a strategy to strengthen sustainable digital transformation.

First, according to data from the Central Statistics Agency (BPS) in its Indonesian Telecommunications Statistics report over the past few years, there remains a significant gap between urban and rural areas in terms of internet access. The percentage of households with internet access in urban areas has exceeded 70%, while in rural areas the figure remains in the 50-60% range. Furthermore, household ownership of computers or similar devices is also relatively lower than that

of mobile phones. This data indicates that access to digital infrastructure is not evenly distributed nationally.

This situation is a fundamental issue in implementing digital transformation in education, particularly in underdeveloped, frontier, and outermost (3T) regions. In several areas, unstable internet connections, limited ICT devices in schools, and minimal technical support continue to hinder the implementation of digital-based learning. This situation demonstrates that infrastructure readiness is not yet fully aligned with the growing demands of digitalization in education (Ady et al., 2026).

The impact is evident in the differences in capacity between educational institutions to integrate technology into the learning process, including in Islamic Religious Education. Schools with adequate facilities and networks tend to have easier access to online learning resources, interactive media, and learning management systems (LMS). Conversely, schools with limited resources still rely on conventional methods due to limited access, preventing optimal implementation of digital learning innovations.

In addition to institutional factors, the socioeconomic conditions of students' families also influence participation in digital learning. Not all students have personal devices or sufficient internet data to consistently participate in learning. If this gap is not addressed through policies that promote equal infrastructure and affirmative action, disparities in education quality between regions have the potential to widen. Therefore, the digital transformation of education must be accompanied by strategies for equal access to ensure its implementation is inclusive and equitable (Taufiqurrahman, 2025).

*Second*, the professional capacity of Islamic Religious Education teachers in utilizing technology pedagogically. Integrating technology into learning requires more than just the use of devices or applications; it also requires teachers to appropriately link it to learning strategies, methods, and objectives. In reality, some educators are still not fully familiar with the use of digital platforms, e-learning systems, or interactive and participatory online learning designs (Sukana, 2024).

In practice, online learning is often understood as merely a temporary replacement for face-to-face learning, without any fundamental changes in pedagogical approaches. As a result, the learning process tends to be one-way and under-optimizes technology's potential as a means of collaboration, exploration, and reflection. However, digital learning environments have their own characteristics that demand the design of materials, activities, and evaluation instruments that are adaptive, contextual, and interaction-based

In the context of Islamic Religious Education, these skills are increasingly important because the material is not only oriented towards cognitive aspects but also touches on affective dimensions and character building. Teachers need to master digital literacy, technology-based learning design, and authentic online assessment strategies to effectively convey Islamic values. Therefore, improving teacher competency needs to be carried out in a planned and sustainable manner through training, professional mentoring, and the development of teacher learning communities. These efforts not only strengthen technical skills but also deepen pedagogical capacity in delivering meaningful digital learning (Titi Maemunah, 2021).

*Third*, the dimensions of media ethics and religious literacy skills in the digital space. Technological developments have placed students in a generation that interacts intensively online. However, this intense engagement is not always accompanied by the ability to critically and proportionally examine, verify, and understand religious information (Sagala et al., 2024).

The highly open flow of information on social media allows for the circulation of a variety of Islamic content of varying quality and validity. Many of these include provocative, exclusive narratives, and even elements of disinformation. If students lack adequate literacy skills, exposure to such content has the potential to shape a narrow understanding of religion that is out of step with moderate Islamic principles and a focus on the values of rahmatan lil 'alamin (blessing for the universe).

In this context, strengthening digital literacy based on Islamic values is a necessity. This literacy is not limited to technical skills in using digital devices, but also encompasses the ability to assess the credibility of reference sources, understand ethical communication in cyberspace, and recognize the moral responsibility in disseminating religious information (Barokah, 2024). The integration of digital ethics education into Islamic Religious Education learning is a strategic step to shape students who are not only technologically proficient, but also spiritually and socially mature in facing the dynamics of information in the digital era.

These three challenges emphasize that the digitalization of Islamic Religious Education learning cannot be effective with the availability of technology alone. Successful transformation requires a supportive ecosystem, ranging from institutional policies and human resource readiness to the establishment of digital norms and culture within the educational environment. Without this foundation, digital innovation risks becoming a mere formality, failing to impact the quality of learning or students' religious understanding.

The government plays a strategic role in ensuring the availability of infrastructure and regulations that promote equitable access. Schools and Islamic schools, on the other hand, are required to build internal capacity through teacher development programs, providing relevant learning content, and designing learning activities that are responsive to student characteristics. Community and family support is also needed to create a conducive digital learning environment, including guiding students in understanding the ethics of technology use.

Furthermore, developing ethical awareness and digital literacy based on Islamic values is a crucial pillar for students to face the challenges of online information. This literacy encompasses the ability to assess the credibility of religious sources, filter potentially misleading information, and apply Islamic moral principles in everyday digital interactions. With this holistic approach, digital transformation is not simply a modernization of methods, but a means to develop critical, responsible, and spiritually mature students.

## **CONCLUSION**

The digital-based transformation of Islamic Religious Education (ISE) learning in the Society 5.0 era has brought significant innovations, including the use of online platforms, interactive media, and a shift in the learning paradigm from teacher-centric to student-centric. This approach enables students to actively engage in understanding, evaluating, and internalizing Islamic values through

learning experiences relevant to everyday life. However, the digitalization process still faces major challenges, such as unequal access to technology, limited pedagogical and digital competencies among teachers, and the need to strengthen digital literacy and ethics based on Islamic principles.

To ensure the success of this transformation, strategic steps are needed, including strengthening infrastructure, ongoing teacher training, and developing an Islamic literacy curriculum that integrates technical, pedagogical, and ethical aspects. Evaluation and field research are crucial to understanding the impact of digital learning on the development of student competencies and character. Thus, the digital transformation of Islamic Religious Education (ISE) can be developed into an inclusive, contextual, and sustainable learning model capable of shaping intellectually, spiritually, and socially intelligent Muslim individuals.

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