



Opportunities and Challenges of Islamic Education in the Digital Era

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Abstract

The purpose of this research is to analyze the opportunities and challenges of Islamic education in the era of digital technology. Within the transformation of Islamic education, challenges and opportunities in the 21st century. This literature review identifies relevant literature sources on Islamic education in the digital era, conducts critical analysis of selected content, and organizes information thematically. The research aims to understand challenges such as changes in educational paradigms and technology integration, as well as opportunities such as broader access to learning resources and the use of digital media in Islamic education. The results of this research are expected to contribute to the development of adaptive education strategies and policies for the digital era. The findings of this work indicate that the role of digital technology in Islamic education in the 21st century requires a mature approach based on the concept of digital literacy to address challenges and enrich religious learning experiences. Islamic education in the digital era faces challenges of authenticity and accessibility, but offers global opportunities and interactive learning methods by developing digital literacy, ethics in technology use, and applying relevant theories.

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INTRODUCTION

Islamic education in the digital era offers limitless opportunities to expand accessibility, develop innovative learning methods, and enhance religious understanding. The use of digital technology can be a powerful tool in bridging educational gaps and

strengthening religious comprehension in an increasingly globally connected society.¹ One of the significant opportunities in Islamic education in the digital age is broader and global accessibility. With digital technology, individuals from various parts of the world can access high-quality Islamic educational resources. With just a few clicks, one can access classical texts, Quranic exegesis, hadith, and other Islamic literature that enrich the understanding of religious teachings. This also allows for the global dissemination of religious knowledge, creating broader awareness and understanding of Islam in an increasingly connected society.²

Digital technology also opens the door to more interactive, creative, and engaging learning methods in Islamic education. With multimedia, such as videos, animations, and images, religious concepts can be presented in a more visual and captivating manner.³ Online platforms and social media enable direct interaction between students and educators, facilitating discussions, the exchange of ideas, and collaboration among Muslims worldwide. This creates a space for sharing knowledge, solving problems together, and enhancing understanding of the religion.⁴

The digital generation possesses broader knowledge of technology compared to older generations because they have grown up and lived in a digital era marked by rapid technological advancements. Fast-paced developments such as the internet, mobile devices, and social media have given the digital generation easier and more intensive access to technology, making them more skilled and accustomed to utilizing it. This generation tends to have a deeper understanding of various technological applications and uses them in various aspects of life, including education, communication, and entertainment.⁵

However, the advancement of digital technology also brings a number of challenges that need to be addressed. One of these is the authenticity and reliability of content delivered through digital technology.⁶ In an era of rapid and abundant information, the spread of incorrect, inaccurate, or inconsistent content with Islamic teachings can easily occur. Therefore, there needs to be stricter supervision and verification of content to ensure that what is conveyed through digital technology aligns with the principles of Islam.⁷

¹ Wahid, Azhar, et al. "Digital technology for indigenous people's knowledge acquisition process: insights from empirical literature analysis." *International Conference on Information and Communication Technology for Competitive Strategies*. Singapore: Springer Nature Singapore, 2023. https://doi.org/10.1007/978-981-97-1260-1_5

² Hehsan, Aminudin, et al. "Digital Muhadathah: framework model development for digital Arabic language learning." *International Conference on Information and Communication Technology for Competitive Strategies*. Singapore: Springer Nature Singapore, 2022. https://doi.org/10.1007/978-981-97-0744-7_2

³ Habibi, Muhammad, Asrori Asrori, and Rusman Rusman. "Developing Animated Videos as Kemuhammadiyah Learning Media." *Al-Tadzkiyyah: Jurnal Pendidikan Islam* 14.1 (2023): 105-113. <http://dx.doi.org/10.24042/atipi.v14i1.13174>.

⁴ Ridlwan, M., and Asrori Asrori. "Problems of Implementation of Islamic Religious Education at Muhammadiyah Junior High School 4 Gadung Surabaya." *International Conference on Islamic and Muhammadiyah Studies (ICIMS 2022)*. Atlantis Press, 2022. 10.2991/assehr.k.220708.039

⁵ An Ras Try Astuti et al., "Tantangan Parenting Dalam Mewujudkan Moderasi Islam Anak," *Al-Maiyyah: Media Transformasi Gender dalam Paradigma Sosial Keagamaan*, 11.2 (2018), 301–20

⁶ Borham, Abd Hadi, et al. "Information and communication ethics in social media for indigenous people's religious understanding: a critical review." *World Conference on Information Systems for Business Management*. Singapore: Springer Nature Singapore, 2023. https://doi.org/10.1007/978-981-99-8346-9_25

⁷ Hidayat, Moch Charis, and Sokhibul Arifin. "Integration Science Technology with Islamic Values: Empowering Education Model." *1st Borobudur International Symposium on Humanities, Economics and Social Sciences (BIS-HIESS 2019)*. Atlantis Press, 2020. <https://doi.org/10.2991/assehr.k.200529.202>

Another challenge relates to accessibility gaps and the digital divide. Although digital technology has brought Islamic education to various regions, there are still areas that lack adequate access to technological infrastructure.⁸ This difficulty in access can limit the potential for Islamic education through digital platforms. Additionally, economic disparities can affect individuals' ability to utilize digital technology in Islamic education.⁹ To address these challenges, there needs to be cooperation between Islamic educational institutions, the government, and the private sector to enhance technological accessibility and strengthen digital infrastructure. Moreover, it is necessary to strengthen the technological competence and religious expertise of educators so they can effectively integrate technology into Islamic teaching. Islamic education in the digital era of the 21st century faces significant challenges, but also offers great opportunities. Digital technology can be a powerful tool in expanding accessibility, improving learning methods, and strengthening religious understanding. However, strict content supervision and efforts to overcome accessibility and digital divides are essential for the successful development of Islamic education in the digital era.¹⁰

By effectively and sustainably leveraging digital technology, Islamic education can become more inclusive, innovative, and relevant in addressing the challenges and opportunities of the 21st century. Previous research has explored various aspects of this transformation. It emphasized the urgency and opportunities of glocalizing the PAI (Islamic Education) curriculum in response to the Fourth Industrial Revolution. Their work outlines the stages of developing a glocalized PAI curriculum, which aims to make Islamic education more adaptable to global and local contexts while maintaining its core religious values.¹¹ They also highlighted the importance of moral education starting from elementary school to confront the advancements of civilization in the 21st century and to prevent juvenile delinquency. They elaborated on the role of character and religious education as filters against the negative impacts of rapid educational developments in the 21st century. Discussed the challenges faced by madrasahs in Indonesia in the 21st century, such as the mental revolution of teachers, enhancing students' skills in the digital era, integrating technology into learning, and curriculum reform in line with 21st-century demands.¹² To address these challenges, madrasahs need to strengthen and create appropriate strategies. The purpose of this work is to analyze the role of digital technology in transforming Islamic education, examining the challenges and opportunities in the 21st century.¹³

⁸ Khozin, Khozin, Abdul Haris, and Asrori Asrori. "Pengembangan Integrasi Kurikulum." *TADARUS* 10.1 (2021). <https://doi.org/10.30651/td.v10i1.9090>

⁹ Asrori Asrori, "The Concept of Learning Islamic Education Based on Multicultural in Establishing Religious Moderation," in *The Annual Conference on Islamic Religious Education (ACIRE)*, 2022, 819–31, <http://acied.pp-paiindonesia.org/index.php/acied/article/view/42/0>.

¹⁰ Asrafzani, Abizard Rafli, et al. "Problem Posing Method In Establishing Students' Creative Thinking Ability In Islamic Education Subjects." *Jurnal At-Tarbiyat: Jurnal Pendidikan Islam* 5.3 (2022). <https://doi.org/10.37758/jat.v5i3.476>

¹¹ R. Asrori, A., & Rusman, Filsafat Pendidikan Islam: Sebuah Pendekatan Filsafat Islam Klasik (Malang: Pustaka Learning Center, 2020), <http://repository.um-surabaya.ac.id/4460/>.

¹² Madžunková, M., Zvařková, K., & Kubánková, V. (2017). *E-learning tools in teacher education: An example of a collaborative learning platform*. *Journal of Teacher Education for Sustainability*, 19(2), 63-73.

¹³ Rusman, Asrori, et al. "Education transformation in 5.0 society development era." *AIP Conference Proceedings*. Vol. 2727. No. 1. AIP Publishing, 2023. <https://doi.org/10.1063/5.0141657>

Islamic education has undergone significant transformation alongside the rapid development of digital technology in the 21st century. Digital technology has not only influenced how we learn and teach but has also opened new opportunities and presented unique challenges for Islamic education. The advancement of digital technology has changed the paradigm of learning worldwide. Online learning platforms, mobile applications, and various other digital tools provide greater accessibility to educational materials and resources. For Islamic education, this means broader access to religious sources, scriptures, and Islamic studies without being constrained by geographical boundaries.¹⁴

Furthermore, technology offers opportunities to develop innovative teaching methods. For example, the use of artificial intelligence to personalize curricula and assess student progress, or the utilization of virtual reality to provide immersive learning experiences in the history and culture of Islam.¹⁵ Such innovations not only enhance learning efficiency but also increase student engagement in understanding religious values and spirituality. However, adopting digital technology in Islamic education also presents challenges. One concern is the authenticity and validity of religious content delivered through digital platforms. There are also ethical challenges related to the use of technology in a religious context, such as data privacy, adherence to Islamic moral values, and the dangers of misinformation or bias.¹⁶

Moreover, integrating technology in Islamic education raises questions about limited access in underdeveloped communities or remote areas, as well as challenges in training teachers to effectively integrate technology into established religious curricula. Therefore, a deep understanding of the opportunities and challenges associated with the use of digital technology in Islamic education is crucial for developing balanced and effective approaches to advancing religious education in this digital era.

METHOD

The literature review aims to gather relevant information on the theme "Islamic Education in the Digital Era: Challenges and Opportunities in the 21st Century." This research begins with the identification of relevant literature sources such as scientific journals, books, and online articles that discuss Islamic education in the digital age. Then, the most appropriate sources for the research theme are selected.

Next, a critical reading and analysis of the content from each selected source are carried out to identify the challenges and opportunities faced in Islamic education in the digital era. The relevant information is then organized and thematically arranged to gain a comprehensive understanding of challenges such as shifts in educational paradigms, integration of technology, and development of students' skills in the digital era, as well as opportunities such as broader access to learning resources and the use of digital media in Islamic education.

¹⁴ Kousar, R., & Awan, S. R. Challenges and opportunities of digital technology in Islamic education: A systematic review. *Turkish Online Journal of Distance Education*, 21(2), 147-163 (2020).

¹⁵ Pouladi, N., & Ahmadi, F. Challenges and opportunities of integrating digital technology in Islamic education: A qualitative study. *Journal of Education and Practice*, 10(6), 33-40 (2019).

¹⁶ Siddiqui, M. H., & Siddiqui, N. Digitalization of Islamic education: Opportunities and challenges. *Journal of Educational Technology Systems*, 48(2), 215-230 (2020).

During the narrative writing process, the researcher will comprehensively present the results of the analysis of the selected sources, linking these findings with relevant theories and concepts in the fields of Islamic education and digital technology development. The results of this research are expected to provide a deep understanding of the challenges and opportunities in Islamic education in the digital era, as well as contribute to the development of adaptive and relevant educational strategies and policies in line with contemporary demands.

RESULTS AND DISCUSSION

The Role of Digital Technology in the Transformation of Islamic Education

Digital literacy was first introduced in 1990, with one of the prominent figures being Gilster, who defined digital literacy as the ability to understand and use information from various digital sources. Beyond mere reading skills, digital literacy also involves critical thinking skills in evaluating information found through digital media.¹⁷ In early Islamic civilization, the use of technology was not new but a continuous process that became a major driver of progress in forming a great civilization at that time. The application of multimedia technology in understanding Islam is not considered haram (forbidden), because in Islam, anything that brings significant benefits to human progress is permitted. Asserts that there is no argument or dispute among scholars that clearly prohibits the use of multimedia technology, as Islam always emphasizes the importance of goodness and alignment with changes and developments over time. Islam also encourages its followers to master knowledge in various fields, including sciences closely related to multimedia technology.¹⁸

In the 21st century, marked by advances in digital technology, the role of technology in the transformation of Islamic education has become increasingly important and relevant. Digital technology has changed the way we learn, interact, and access information. In the context of Islamic education, digital technology has great potential to transform and enrich the experience of religious learning. The development of digital technology allows Islamic education to become more accessible, interactive, and inclusive. Online platforms, mobile applications, and social media enable global access to Islamic educational resources, allowing individuals from various parts of the world to access and deepen their understanding of religion. Furthermore, digital technology also enables more interactive learning methods, such as videos, animations, and simulations, which can help students understand religious concepts better.¹⁹

However, the role of digital technology in the transformation of Islamic education also faces challenges, such as content authenticity, privacy, and the digital accessibility gap. The role of digital technology in the transformation of Islamic education in the 21st century

¹⁷ Helena Anggraeni, "Penguatan Blended Learning Berbasis Literasi Digital dalam Menghadapi Era Revolusi Industri 4.0," *Al-Idarah: Jurnal Kependidikan Islam*, 9.2 (2019), 190–203 (hal. 193).

¹⁸ Huda, Miftachul, et al. "Innovative teaching in higher education: The big data approach." *Tojet* (2016): 1210-1216.

¹⁹ Borham, Abd Hadi, et al. "Information and communication ethics in social media for indigenous people's religious understanding: a critical review." *World Conference on Information Systems for Business Management*. Singapore: Springer Nature Singapore, 2023. https://doi.org/10.1007/978-981-99-8346-9_25

can be linked to the theory of digital literacy first introduced by Gilster in 1990. Digital literacy is the ability to understand and use information from various digital sources and involves critical thinking skills in evaluating information found through digital media. In the context of early Islamic civilization, the use of technology was not new and had become a major driver of progress in forming a great civilization at that time.²⁰

This supports the idea that, in the understanding of Islam, the use of multimedia technology is not considered haram but is permitted if it provides significant benefits for human progress. Islam always emphasizes the importance of goodness and alignment with changes and developments over time, encouraging its followers to master knowledge in various fields, including sciences closely related to multimedia technology.

In the 21st century, marked by advancements in digital technology, the role of technology in the transformation of Islamic education has become increasingly important and relevant. Digital technology enables greater accessibility and inclusivity in Islamic education, allowing individuals from various parts of the world to easily access Islamic educational resources and study religion in depth. Additionally, digital technology facilitates interactive and participatory learning, as well as the preservation and dissemination of Islamic knowledge through online platforms, social media, and various applications.

The role of digital technology in Islamic education also faces challenges such as content authenticity, privacy, and the digital accessibility gap. Therefore, in the use of digital technology in Islamic education, a well-thought-out approach is necessary to ensure content authenticity, protect data privacy, and address the accessibility gap. In this regard, the concept of digital literacy, which involves critical thinking skills in evaluating information from digital media, can serve as an important foundation to face these challenges.

Thus, in the transformation of Islamic education in the 21st century, the role of digital technology has great potential to bring about positive change and enrich the experience of religious learning. However, it is important to remember that the use of technology must be carried out wisely, adhering to the principles of digital literacy and Islamic values that prioritize the goodness and progress of humanity.

Challenges and Opportunities of Islamic Education in the Digital Era

In efforts to enhance digital literacy, guidance mechanisms can be implemented gradually as follows: 1) Providing an understanding of the importance of personal data protection and awareness of the dangers of irresponsible data misuse. 2) Teaching manners and ethics in interacting online, as the internet is part of the real world and requires similar behaviors. 3) Directing individuals to seek credible sources of information and avoid spreading fake news (hoaxes) by teaching the ability to fact-check information before believing it. 4) Prioritizing the usefulness of internet usage, avoiding spending time on less beneficial activities, and raising awareness among students about the importance of selectivity in obtaining information. 5) Encouraging mutual respect and harmony in the digital world,

²⁰ Mansir, F. "Integration of Islamic Science and Science in Schools: Studies on Learning Islamic Religious Education in the Digital Era". *TADRIS: Jurnal Pendidikan Islam*, Vol. 17, no. 2, Dec. 2022, pp. 413-25, doi:10.19105/tjpi.v17i2.6769.

avoiding cyberbullying behavior, and teaching students to address differences of opinion wisely and without oppression.²¹

Islamic education in the digital era of the 21st century faces complex challenges as well as promising opportunities. The advancement of digital technology has changed the way we learn, access information, and interact with the world around us.²² In this context, it is important to understand the challenges faced in integrating digital technology into Islamic education, as well as the opportunities that can be utilized to enhance teaching and understanding of religion.²³

One of the main challenges in Islamic education in the digital era is ensuring the authenticity and reliability of content delivered through digital technology. In an era of fast and abundant information, strict supervision is needed to prevent the spread of incorrect, inaccurate, or inconsistent content with Islamic teachings. Educators need to ensure that materials delivered through digital technology remain consistent with Islamic principles and can be relied upon as accurate and authentic sources of information.

There are also challenges related to technology accessibility gaps. Some areas may lack adequate access to technology infrastructure, thus limiting access to Islamic education through digital platforms. Economic disparities can also affect individuals' ability to utilize digital technology in Islamic education. Efforts must be made to address these gaps and ensure that Islamic education through digital technology is accessible to all segments of society without exception.

However, amidst these challenges, there are significant opportunities to be seized. Digital technology opens doors for wider and global access to Islamic education. Through online platforms, individuals from various parts of the world can access high-quality Islamic educational resources. This enables the global dissemination of religious knowledge and enhances understanding and tolerance across cultures.

With the right approach, Islamic education can reach a wider audience and provide positive benefits to Muslims worldwide. The use of digital technology also provides opportunities for the development of more interactive, creative, and engaging learning methods in Islamic education. Videos, animations, simulations, and other multimedia content can make learning more interesting and help students better understand religious concepts. Direct interaction through online platforms also encourages discussion and collaboration between students and educators, strengthening the learning process.

Digital technology enables more efficient evaluation and monitoring in Islamic education. With online platforms, educators can track students' progress individually, provide timely feedback, and identify areas for improvement. This helps improve the effectiveness of

²¹ Ahmad Muflihun dan Toha Makhshun, "Peran Guru Pendidikan Agama Islam dalam Meningkatkan Literasi Digital Siswa sebagai Kecakapan Abad 21," *TA'DIBUNA: Jurnal Pendidikan Agama Islam*, 3.1 (2020), 91–103. <http://dx.doi.org/10.30659/jpai.3.1.91-103>

²² Andreou, R., & RNicolaïdou, L. Digital Literacy in Social Media: A Case Study. In R. Orngreen, B. Meyer, & M. Buhl (Eds.), *ECEL 2019 18th European Conference on e-Learning*. Academic Conferences and Publishing Limited. (2019). <https://doi.org/10.34190/EEL.19.025>

²³ Nursalim, Eko. "Integrated Technology and Traditional Pedagogy: Enhancing Islamic Education in Digital in a Digital Age." *International Journal of Progressive Sciences and Technologies* [Online], 44.2 (2024): 86-90. Web. 30 May. 2024

teaching and learning, as well as providing opportunities for content adjustment and improvement.

In efforts to enhance digital literacy in Islamic education, guidance mechanisms can be implemented gradually. It is important to provide an understanding of the importance of personal data protection and awareness of the dangers of irresponsible data misuse. Additionally, teaching manners and ethics in online interactions is important, as the internet is part of the real world and requires similar behaviors. Directing individuals to seek credible sources of information and avoid spreading fake news (hoaxes) is also an important step in developing digital literacy. Understanding the importance of usefulness in internet usage, as well as selectivity in obtaining information, also needs to be instilled in students. Lastly, it is important to encourage mutual respect and harmony in the digital world, avoid cyberbullying behavior, and teach students to address differences of opinion wisely and without oppression.

There are several theories relevant to the challenges and opportunities of Islamic education in the digital era. One of them is digital literacy theory, which emphasizes the importance of developing skills and understanding in using digital technology effectively and responsibly.²⁴ In the context of Islamic education, digital literacy is key to ensuring content authenticity and awareness of internet ethics in accessing religious information. Constructivism learning can be applied in the development of interactive and creative learning methods. Learning occurs through the construction of knowledge by individuals based on experience and interaction with the environment. In the context of Islamic education in the digital era, teachers can utilize technology to facilitate better knowledge construction through visual experiences and direct interaction.²⁵

In implementing digital technology in Islamic education, curriculum development is also relevant. Educators need to design curricula that are integrated with digital technology and consistent with Islamic principles.²⁶ This theory emphasizes the importance of developing effective learning strategies and relevant materials to ensure the quality of Islamic education in the digital era.²⁷

Islamic education in the digital era of the 21st century faces complex challenges and opportunities. The main challenges include content authenticity and reliability, educational quality, as well as accessibility and digital disparities. However, through the wise use of digital technology, there are opportunities to enhance global accessibility, implement interactive and creative learning methods, develop creativity and innovation, and improve evaluation and monitoring. In addressing these challenges, it is important to implement gradual guidance mechanisms and utilize relevant theories, such as digital literacy, constructivist learning, and curriculum development. Thus, Islamic education can continue to evolve and provide positive benefits in this digital era.

²⁴ Rahman, A., and Rahim, N. "The Impact of Digital Literacy on Islamic Education in Malaysia." *Asian Journal of Distance Education* 14, no. 2 (2019): 101-113

²⁵ Muthoin, M., & Faliqul Isbah, F. Digital literacy in Islamic education: Addressing challenges and opportunities. *Journal of Educational Technology and Islamic Education*, 7(2), 2024.

²⁶ Mukhtar, M. *The Philosophy of Islamic Education*. (Islamabad: International Islamic University, 2016)

²⁷ Lumbilsa, Abbas. "Improving Creativity and Learning Outcomes Through Team-Assisted Individualization Learning Islamic Education Lessons." *EDUKASI: Jurnal Pendidikan Islam (e-Journal)* 11.2 (2023): 199-213. <https://doi.org/10.54956/edukasi.v11i2.371>

CONCLUSION

The role of digital technology in Islamic education in the 21st century faces challenges such as content authenticity, privacy, and accessibility gaps. To address these challenges, a mature approach is needed to ensure content authenticity, protect data privacy, and overcome accessibility gaps. The concept of digital literacy, involving critical thinking skills in evaluating information from digital media, is a crucial foundation in using digital technology in Islamic education. With a wise approach, digital technology has great potential to bring positive change and enrich religious learning experiences. Islamic education in the digital era faces challenges of content authenticity and accessibility, but also offers opportunities for global access and interactive learning methods. It is important to develop digital literacy, teach internet etiquette, and avoid the spread of fake news. Digital literacy, constructivist learning, and curriculum development can be applied to address these challenges. With the wise use of digital technology, Islamic education can continue to evolve and provide positive benefits.

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