

## **Reconstructing Islamic Religious Education Methodology through Instructional Technology to Strengthen Digital Ethics among Generation Z**

**Ahmad Shidiqui\***

Institut Agama Islam Kyai Haji Ahmad Syairazi Al-Arsyadi, Hulu Sungai Selatan, Indonesia

[ahmadshidiqui90@gmail.com](mailto:ahmadshidiqui90@gmail.com)

\*Correspondence

DOI: [10.38073/pelita.v4i1.5650](https://doi.org/10.38073/pelita.v4i1.5650)

Received: 26 May 2026

Revised: 14 July 2026

Accepted: 17 July 2026

Published: 18 July 2026

### **Abstract**

The digital transformation of the Society 5.0 era has reshaped Generation Z's learning characteristics while simultaneously creating new challenges related to digital ethics in education. The rapid advancement of technology, particularly Artificial Intelligence (AI), social media, and digital platforms, requires Islamic Religious Education (PAI) not only to adapt to technological innovations but also to strengthen students' religious character and digital ethics. This study aims to analyze the transformation of Generation Z's learning characteristics, identify digital ethical issues in the Society 5.0 era, and reconstruct the instructional methodology of Islamic Religious Education through the development of the Netizen-Centered Learning conceptual model. This study employed a qualitative approach using the Narrative Literature Review (NLR) method by identifying, analyzing, evaluating, and synthesizing relevant scholarly literature on digital transformation in education, Artificial Intelligence, digital literacy, digital ethics, and Islamic Religious Education. The findings indicate that the transformation of Generation Z's learning characteristics requires a more interactive, collaborative, and student-centered learning approach. At the same time, technological advancement has generated various digital ethical issues, including cyberbullying, misinformation, hate speech, misuse of AI, academic plagiarism, and technology addiction. This study proposes the Netizen-Centered Learning conceptual model, which integrates digital technology development, Generation Z's learning characteristics, Islamic digital literacy, Qur'anic Communication, and digital religious character into a comprehensive Islamic Religious Education learning ecosystem. This model offers a conceptual contribution to the development of a more adaptive Islamic Religious Education methodology while maintaining Islamic values in the digital era.

**Keywords:** *Artificial Intelligence, Digital Ethics, Generation Z, Islamic Digital Literacy, Netizen-Centered Learning.*

### **Abstrak**

Transformasi digital pada era Society 5.0 telah mengubah karakteristik belajar Generasi Z sekaligus menghadirkan berbagai tantangan etika digital dalam dunia pendidikan. Perkembangan teknologi, khususnya *Artificial Intelligence* (AI), media sosial, dan berbagai platform digital, menuntut Pendidikan Agama Islam (PAI) untuk tidak hanya beradaptasi terhadap inovasi teknologi, tetapi juga mampu memperkuat karakter religius dan etika digital peserta didik. Penelitian ini bertujuan untuk menganalisis transformasi karakteristik belajar Generasi Z, mengidentifikasi problematika etika digital pada era Society 5.0, serta merekonstruksi metodologi PAI berbasis teknologi instruksional melalui pengembangan model konseptual *Netizen-Centered Learning*. Penelitian menggunakan pendekatan kualitatif dengan metode *Narrative Literature Review* (NLR)

melalui proses identifikasi, analisis, evaluasi, dan sintesis berbagai artikel ilmiah yang relevan mengenai transformasi digital pendidikan, Artificial Intelligence, literasi digital, etika digital, dan Pendidikan Agama Islam. Hasil kajian menunjukkan bahwa perubahan karakteristik belajar Generasi Z menuntut pembelajaran yang lebih interaktif, kolaboratif, dan berpusat pada peserta didik. Di sisi lain, perkembangan teknologi memunculkan berbagai persoalan etika digital, seperti cyberbullying, penyebaran hoaks, ujaran kebencian, penyalahgunaan AI, plagiarisme akademik, dan kecanduan teknologi. Penelitian ini menghasilkan model konseptual Netizen-Centered Learning yang mengintegrasikan perkembangan teknologi digital, karakteristik Generasi Z, literasi digital Islami, *Qur'anic Communication*, dan pembentukan karakter religius digital dalam satu ekosistem pembelajaran PAI. Model tersebut menjadi kontribusi konseptual yang dapat digunakan sebagai acuan dalam mengembangkan metodologi pembelajaran PAI yang adaptif terhadap perkembangan teknologi tanpa mengabaikan nilai-nilai Islam.

**Kata Kunci:** *Artificial Intelligence, Etika Digital, Generasi Z, Literasi Digital Islami, Netizen-Centered Learning.*

## INTRODUCTION

The Fourth Industrial Revolution, characterized by the integration of artificial intelligence (AI), the Internet of Things, big data, cloud computing, and other digital technologies, has transformed various aspects of life, including education. This transformation has developed further into Society 5.0, which positions human beings at the center of innovation and utilizes technology to improve quality of life sustainably. In education, these developments have encouraged a transition from conventional instruction toward adaptive, collaborative, flexible, and technology-supported learning. Technology is no longer merely an instructional medium but an integral component of the educational ecosystem that influences learning processes, teacher–student interaction, and the development of twenty-first-century competencies.<sup>1</sup>

The increasing penetration of the internet and the widespread use of digital technology have reinforced this transformation. In Indonesia, internet penetration has reached approximately 79.5%, representing more than 221 million users. Government initiatives to strengthen national digital infrastructure and UNESCO's emphasis on educational digitalization demonstrate that technology-supported learning has become essential for expanding access and improving educational quality. These developments particularly affect Generation Z, whose members have grown up with the internet, social media, and digital devices. As digital natives, they tend to prefer visual, interactive, collaborative, and technology-supported learning experiences.<sup>2</sup> Consequently, teacher-centered instruction, especially one that relies heavily on lectures, is increasingly insufficient for addressing their learning characteristics.

The development of AI has further accelerated changes in educational practices. AI can facilitate personalized learning, automated assessment, learning analytics, and the

---

<sup>1</sup> Ali Alruthaya et al., "The Application of Digital Technology and the Learning Characteristics of Generation Z in Higher Education," arXiv:2111.05991, preprint, arXiv, November 10, 2021, <https://doi.org/10.48550/arXiv.2111.05991>; Mohammad Firmansyah et al., "Transformasi Pendidikan Agama Islam Di Era Digital: Tantangan Dan Peluang Untuk Generasi Z," *Pendas : Jurnal Ilmiah Pendidikan Dasar* 10, no. 01 (2025): 231–40, <https://doi.org/10.23969/jp.v10i01.23404>.

<sup>2</sup> Alruthaya et al., "The Application of Digital Technology and the Learning Characteristics of Generation Z in Higher Education."

creation of interactive instructional materials. However, its educational benefits depend on learners' digital literacy, academic honesty, and ethical responsibility. Mustari et al. (2026)<sup>3</sup> argue that AI can improve learning effectiveness when accompanied by digital literacy and integrity. Similarly, Qolbi et al. (2026)<sup>4</sup> emphasize that AI literacy in Islamic Religious Education should be developed through ethical, transparent, and value-based learning. Technology should therefore contribute not only to instructional effectiveness but also to the formation of students' moral character.

Despite these opportunities, digital technology has generated serious challenges for Islamic Religious Education. Easy access to information, increasing reliance on AI, and intensive use of digital media are not always accompanied by critical, responsible, and ethical behavior. Dunggio and Salahudin (2026)<sup>5</sup> argue that the development of AI must be balanced by the reinforcement of Islamic educational values so that technology is directed toward human benefit. However, Islamic Religious Education in many institutions remains dominated by conventional approaches and has not fully incorporated instructional technology into its pedagogical strategies. Firmansyah et al. (2025)<sup>6</sup> and Indriani et al. (2026)<sup>7</sup> therefore call for a reconstruction of Islamic Religious Education methodology that integrates digital technology, AI, and ethical formation in response to the learning characteristics of students in Society 5.0.

The urgency of methodological reconstruction is also evident in the ethical problems experienced by Generation Z in digital environments. Cyberbullying, misinformation, hate speech, AI misuse, plagiarism, deepfakes, and social media addiction demonstrate that technological competence does not automatically produce moral responsibility. Saefuddin et al. (2026)<sup>8</sup> explain that digital transformation has generated new moral challenges, while low ethical awareness contributes to the spread of false information, hate speech, and other forms of digital misconduct. Such behavior affects not only interpersonal relationships but also psychological well-being, social cohesion, academic integrity, productivity, and learners' capacity for critical reflection. Khofifah et al. (2025)<sup>9</sup> therefore stress the importance of integrating technological development with moral values to promote responsible digital participation.

<sup>3</sup> Mohammad Mustari et al., "AI-Era Digital Literacy: Cultivating Honesty in Islamic Education," *International Journal of Nusantara Islam* 14, no. 1 (2026): 261–72, <https://doi.org/10.15575/ijni.v14i1.51521>.

<sup>4</sup> Satria Kharimul Qolbi et al., "Transformasi Literasi Ai Dalam Pendidikan Agama Islam Menuju Model Pembelajaran Etis Dan Terbuka Di Era Digital," *An-Nahdlah: Jurnal Pendidikan Islam* 5, no. 3 (2026): 1011–22, <https://doi.org/10.51806/an-nahdlah.v5i3.860>.

<sup>5</sup> Rahmat Dunggio and Salahudin, "The Dialectics of Islamic Religious Education Values in the Artificial Intelligence (AI) Ecosystem: An Analysis of Learning Transformation among Generation Z (A Study of University Students in Pohuwato Regency)," *DAAR EL-MAKRIFAH: Journal of Islamic Religious Education* 2, no. 01 (2026): 246–55, <https://doi.org/10.66931/jpai.v2i01.354>.

<sup>6</sup> Firmansyah et al., "Transformasi Pendidikan Agama Islam Di Era Digital."

<sup>7</sup> Fera Indriani et al., "Integration Of Digital Ethics And Artificial Intelligence In Islamic Religious Education: Contextual Curriculum Development For The Society 5.0 Era," *Mimbar Pendidikan* 11, no. 1 (2026): 43–57, <https://doi.org/10.17509/mimbardik.v11i1.97808>.

<sup>8</sup> Muhammad Saefuddin et al., "Islam and Digital Ethics: The Moral Challenges of Generation Z in the Era of Digital Transformation," *Lentera Peradaban: Journal on Islamic Studies* 2, no. 2 (2026): 197–214, <https://doi.org/10.61166/lpi.v2i2.142>.

<sup>9</sup> Intan Umi Khofifah et al., "An Interdisciplinary Epistemology Of Digital Ethics For Shaping Generation Z Morality In Islamic Education," *Edukasi Islami: Jurnal Pendidikan Islam* 14, no. 001 (2025): 461–78, <https://doi.org/10.30868/ei.v14i001.9440>.

Addressing these challenges requires digital literacy that extends beyond technical proficiency. Digital literacy includes the ability to assess information, think critically, communicate ethically, exercise self-control, and use technology responsibly. Mustari et al. (2026)<sup>10</sup> emphasize the importance of honesty and academic integrity in AI-supported education, while Qolbi et al. (2026)<sup>11</sup> advocate an ethical and transparent model of AI literacy in Islamic Religious Education. Studies by Laili et al. (2026)<sup>12</sup> and Safitri and Desriyeni (2026)<sup>13</sup> further indicate that digital literacy and self-control contribute positively to the ethical behavior and communication of Generation Z on social media.

As a subject oriented toward moral and spiritual formation, Islamic Religious Education has a strategic role in preparing learners to use technology wisely. Its function should extend beyond transmitting religious knowledge to internalizing values such as honesty (*ṣidq*), trustworthiness (*amānah*), responsibility, mutual respect, and *tabayyun* when receiving and disseminating information. Alyana et al. (2026)<sup>14</sup> identify religious character as an important moral safeguard against the ethical challenges faced by Generation Z. Faizah (2026)<sup>15</sup> shows that the internalization of Islamic educational values contributes to more respectful and responsible social media behavior, while Rahmadani et al. (2026)<sup>16</sup> demonstrate that integrating Qur'anic and prophetic values can strengthen learners' awareness that digital conduct entails responsibility toward both other human beings and God.

Existing research has examined digital transformation, instructional technology, religious character, digital literacy, and the use of AI in education. Nevertheless, these studies generally remain fragmented. One group emphasizes technological change, learner characteristics, and teacher competence.<sup>17</sup> Another focuses on religious character and digital ethics through Islamic Religious Education.<sup>18</sup> A third examines digital

---

<sup>10</sup> Mustari et al., "AI-Era Digital Literacy."

<sup>11</sup> Qolbi et al., "Transformasi Literasi Ai Dalam Pendidikan Agama Islam Menuju Model Pembelajaran Etis Dan Terbuka Di Era Digital."

<sup>12</sup> Lilik Noer Laili et al., "Digital Literacy and Self-Control as Predictors of Ethical Online Behavior among Generation Z," *Jurnal Penelitian Dan Evaluasi Pendidikan* 13, no. 1 (2026): 364–74, <https://doi.org/10.64540/rg4jsy02>.

<sup>13</sup> Dellia Safitri and Desriyeni Desriyeni, "The Relationship between Digital Literacy and Communication Ethics among Generation Z on Social Media," *Journal of Multidisciplinary Science: MIKAILALSYS* 4, no. 2 (2026): 698–706, <https://doi.org/10.58578/mikailalsys.v4i2.9938>.

<sup>14</sup> Friska Alyana et al., "Penguatan Karakter Religius Dalam Pembelajaran Pai : Menjawab Tantangan Etika Digital Generasi Z," *SECONDARY: Jurnal Inovasi Pendidikan Menengah* 6, no. 3 (2026): 1508–20, <https://doi.org/10.51878/secondary.v6i3.11260>.

<sup>15</sup> Umami Faizah, "Internalisasi nilai-nilai pendidikan Agama Islam untuk membentuk etika bermedia sosial kalangan generasi Z," *Jurnal Pendidikan Agama Islam* 3, no. 1 (2026): 541–48, <https://doi.org/10.64677/ppai.v3i1.520>.

<sup>16</sup> Novia Rahmadani et al., "Integrasi Dalil Al-Qur'an Dan Hadis Dalam Pendidikan Etika Digital: Telaah Akhlak Islam Untuk Generasi Z," *Jurnal Penelitian Pendidikan Indonesia (JPPI)* 3, no. 2 (2026): 855–57, <https://doi.org/10.62017/jppi.v3i2.7057>.

<sup>17</sup> Alruthaya et al., "The Application of Digital Technology and the Learning Characteristics of Generation Z in Higher Education"; Diyah Mintasih et al., "Integration of Digital Technology in Islamic Religious Education Learning: A Qualitative Study on Teachers' Competence and Implementation Models in Secondary Schools," *Jurnal Pendidikan Islam* 13, no. 1 (2024): 85–96, <https://doi.org/10.14421/jpi.2024.131.85-96>; Firmansyah et al., "TRANSFORMASI PENDIDIKAN AGAMA ISLAM DI ERA DIGITAL."

<sup>18</sup> Khofifah et al., "An Interdisciplinary Epistemology Of Digital Ethics For Shaping Generation Z Morality In Islamic Education"; Alyana et al., "Penguatan Karakter Religius Dalam Pembelajaran Pai"; Rahmadani

literacy, AI, and self-control as determinants of responsible digital behavior.<sup>19</sup> Although these studies offer valuable insights, they have not yet integrated instructional technology, Generation Z's learning characteristics, Islamic digital literacy, and digital ethics into a unified methodological framework for Islamic Religious Education.

To address this gap, the present study proposes a conceptual reconstruction of Islamic Religious Education methodology based on instructional technology. Its novelty lies in integrating Generation Z's learning characteristics, Islamic digital literacy, Qur'anic communication, and digital ethics within a Netizen-Centered Learning approach. Technology is positioned not merely as a learning medium but as part of an instructional ecosystem designed to support the internalization of Islamic values in digital life. Accordingly, this study aims to analyze the digital ethical challenges faced by Generation Z, examine the reconstruction of Islamic Religious Education methodology through instructional technology, and formulate a conceptual learning model capable of strengthening students' digital ethics in Society 5.0.

## METHOD

This study employed a Narrative Literature Review (NLR) using an interpretive qualitative approach. This method was selected because the study sought to identify, examine, analyze, and synthesize previous research on educational digital transformation, artificial intelligence (AI), digital literacy, digital ethics, Generation Z learning characteristics, and the reconstruction of Islamic Religious Education methodology in Society 5.0. Narrative literature review enables a broad, critical, and interpretive examination of prior studies, allowing researchers not only to summarize findings but also to identify conceptual relationships, research gaps, and new theoretical frameworks.<sup>20</sup>

The data consisted of peer-reviewed journal articles retrieved from Google Scholar, Garuda, Crossref, and Scopus. The literature search used combinations of Indonesian and English keywords, including *Pendidikan Agama Islam*, *Islamic Religious Education*, *digital literacy*, *digital ethics*, *artificial intelligence in education*, *Generation Z*, *instructional technology*, *Society 5.0*, and *digital transformation*. These keywords were selected to capture studies addressing the relationship between digital technology, instructional innovation in Islamic Religious Education, and the strengthening of

---

et al., "Integrasi Dalil Al-Qur'an Dan Hadis Dalam Pendidikan Etika Digital"; Deni Lesmana et al., "Reconceptualizing Holistic Islamic Education: Integrating PAI And Arabic Instruction For Digital Ethics Formation Among Generation Z," *TADIB: Jurnal Pendidikan Agama Islam* 4, no. 1 (2026): 124–46, <https://doi.org/10.69768/jt.v4i1.109>; Faizah, "Internalisasi nilai-nilai pendidikan Agama Islam untuk membentuk etika bermedia sosial kalangan generasi Z."

<sup>19</sup> Mustari et al., "AI-Era Digital Literacy"; Qolbi et al., "Transformasi Literasi Ai Dalam Pendidikan Agama Islam Menuju Model Pembelajaran Etis Dan Terbuka Di Era Digital"; Laili et al., "Digital Literacy and Self-Control as Predictors of Ethical Online Behavior among Generation Z"; Safitri and Desriyeni, "The Relationship between Digital Literacy and Communication Ethics among Generation Z on Social Media."

<sup>20</sup> Javeed Sukhera, "Narrative Reviews: Flexible, Rigorous, and Practical," *Journal of Graduate Medical Education* 14, no. 4 (2022): 414–17, <https://doi.org/10.4300/JGME-D-22-00480.1>; Chiappinotto et al., "La revisione narrativa della letteratura: aspetti metodologici," *Fnopi L'infermiere*, 2023, <https://www.infermiereonline.org/2023/10/05/la-revisione-narrativa-della-letteratura-aspetti-metodologici/>.

learners' religious character in digital environments.

The literature was selected using several inclusion criteria. First, the articles were published between 2021 and 2026 to represent recent developments in educational digital transformation and changing learning paradigms. Second, they were published in peer-reviewed academic journals. Third, they addressed at least one of the study's main themes: instructional technology, AI in education, digital literacy, digital ethics, Generation Z, or Islamic Religious Education. Fourth, they offered relevant conceptual or empirical contributions. Popular nonacademic publications, studies with limited relevance, and articles without full-text access were excluded.

The selected studies included research on Generation Z's digital literacy,<sup>21</sup> Islamic Religious Education teachers' strategies for developing digital character in Society 5.0,<sup>22</sup> and the opportunities, risks, and ethical dimensions of AI use in Islamic Religious Education.<sup>23</sup> These studies were used to synthesize the relationship among technological development, Islamic Religious Education learning, and the need to strengthen students' digital ethics.

The analysis involved six stages: literature identification, literature selection, thematic organization, narrative analysis, conceptual synthesis, and model formulation. The selected studies were classified into five themes: (1) changes in Generation Z learning characteristics; (2) instructional technology and AI in learning; (3) digital ethical challenges; (4) the role of Islamic Religious Education in religious character formation; and (5) the integration of Islamic values into technology-supported learning.

Narrative analysis was conducted by comparing findings across studies to identify recurring patterns, similarities, differences, and limitations. The conceptual synthesis connected instructional technology, Islamic digital literacy, digital ethics, and Islamic Religious Education values. This synthesis formed the basis for the Netizen-Centered Learning model, which positions learners as active participants in digital environments by integrating technological competence, Islamic digital literacy, Qur'anic communication, and religious character formation.<sup>24</sup>

The credibility of the review was strengthened through cross-source comparison among studies from different journals. Each source was critically assessed in terms of context, scientific contribution, and limitations. Through this process, the study aimed not only to describe the digital transformation of Islamic Religious Education but also to produce a conceptual learning model relevant to Society 5.0.

---

<sup>21</sup> Mukhlisa Mukhlisa et al., "Digital Literacy of Generation Z: Challenges for Teachers in the Era of Demographic Bonus," *Journal of Education and Teaching (JET)* 6, no. 2 (2025): 500–517, <https://doi.org/10.51454/jet.v6i2.517>.

<sup>22</sup> Siti Halimah et al., "Guru PAI sebagai Digital Role Model: Strategi Pembentukan Karakter Islami Siswa di Era Society 5.0," *Al'Adalah* 28, no. 1 (2025): 107–24, <https://doi.org/10.35719/aladalah.v28i1.627>.

<sup>23</sup> Rusdiana Rusdiana and Ani Cahyadi, "The Role of Artificial Intelligence (AI) in Islamic Religious Education: An Analysis of Opportunities, Risks, and Ethical Regulations," *AL GHAZALI: Jurnal Pendidikan Dan Pemikiran Islam* 6, no. 3 (2026): 960–81, <https://doi.org/10.69900/ag.v6i3.608>.

<sup>24</sup> Kamal Agung Wijaya, "Humanistic Supervision and Collaborative Governance Model of Madrasah Principals in Handling Dual Indiscipline in Pesantren," *Pelita: Jurnal Studi Islam Mahasiswa UII Dalwa* 3, no. 2 (2026): 219–30, <https://doi.org/10.38073/pelita.v3i2.5123>; Alfiane Suci Setyasri et al., "Peer Counseling as a Strategy for Developing Critical Thinking Skills Among Adolescents in Islamic Educational Settings," *Pelita: Jurnal Studi Islam Mahasiswa UII Dalwa* 3, no. 2 (2026): 183–95, <https://doi.org/10.38073/pelita.v3i2.4875>.

## RESULTS AND DISCUSSION

### Transformation of Generation Z's Learning Characteristics and Its Implications for Islamic Religious Education in the Digital Era

The literature review indicates that digital technology has significantly transformed learners' characteristics, particularly those of Generation Z, which currently represents the dominant group in educational settings. Generation Z is widely recognized as a generation of digital natives because its members have interacted intensively with the internet, digital devices, social media, and various technology-based platforms from an early age. These conditions have shaped patterns of thinking, ways of obtaining information, and learning preferences that differ from those of previous generations. Alruthaya et al. (2021)<sup>25</sup> explain that Generation Z's primary learning characteristics include a preference for visual, interactive, flexible, collaborative, and technology-supported activities, with digital technology serving as a major source of knowledge.

These findings indicate that Generation Z's characteristics can no longer be adequately addressed through traditional learning paradigms that position students as passive recipients of information. This transformation suggests that the success of Islamic Religious Education depends not only on mastery of religious content but also on educators' ability to establish a learning ecosystem aligned with students' digital culture. Accordingly, the changing learning characteristics of Generation Z require teachers to shift from merely transmitting material to facilitating the critical, creative, and Islamically grounded use of technology.

These changing characteristics also demonstrate a paradigm shift from teacher-centered to student-centered learning. In conventional instruction, teachers function as the primary source of information, while students largely receive knowledge passively. In digital ecosystems, however, students have access to extensive information through the internet, digital learning platforms, and artificial intelligence technologies. The teacher's role therefore changes into that of a facilitator, mentor, and guide who helps students develop critical thinking, identify valid information, and use technology responsibly.

Generation Z's changing learning patterns further indicate that one-way instruction is no longer sufficient. Students require more contextual learning experiences through visual media, digital simulations, project-based learning, collaborative discussions, and various technological platforms. Mukhlisa et al. (2025)<sup>26</sup> explain that digital literacy is an essential competence for Generation Z because the ability to use technology involves not only technical skills but also the capacity to understand, evaluate, and employ digital information wisely. Technological development must therefore be accompanied by digital literacy so that students become not merely technology users but also critical and responsible information managers.

Although technology offers various opportunities to improve learning quality, the literature also shows that digital ecosystems create challenges for Generation Z's learning

<sup>25</sup> Alruthaya et al., "The Application of Digital Technology and the Learning Characteristics of Generation Z in Higher Education."

<sup>26</sup> Mukhlisa et al., "Digital Literacy of Generation Z."

behavior. One of the main challenges is digital distraction caused by the intensive use of technological devices and social media. Easy access to diverse digital content may make it difficult for students to maintain concentration because of the constant impulse to interact with entertainment and communication platforms. The ability to regulate technology use must therefore become an important component of students' digital competence.

In addition to digital distraction, dependence on social media affects Generation Z's learning patterns. Social media can support learning through information exchange, academic discussion, and the development of digital learning communities. However, uncontrolled use may reduce learning productivity, weaken direct social interaction, and undermine self-regulation. Laili et al. (2026)<sup>27</sup> demonstrate that digital literacy accompanied by self-control is associated with more ethical digital behavior. Technological competence must therefore be balanced with self-regulation so that technology positively influences students' academic and character development.

Another challenge in digital learning is the limited ability of some students to evaluate information obtained online.<sup>28</sup> Easy access to information is not always accompanied by the ability to distinguish accurate, false, and misleading information. The spread of hoaxes, information manipulation, and weak source-verification practices demonstrates the importance of information literacy in digital education. Safitri and Desriyeni (2026)<sup>29</sup> emphasize that digital literacy is related to Generation Z's communication ethics on social media. Students therefore need critical-thinking skills to understand the consequences of their digital activities.

Based on this synthesis, the transformation of Generation Z's learning characteristics requires not only changes in teaching methods but also the strengthening of digital competencies and ethical character. Generation Z has considerable potential to develop through technology, but this potential must be directed through educational approaches that integrate digital competence with moral values. In Islamic Religious Education, these changing characteristics provide an important foundation for reconstructing learning methodologies that are both technologically adaptive and capable of cultivating ethical awareness in digital spaces.<sup>30</sup>

Accordingly, the main challenge of education in Society 5.0 is not simply to provide technology in learning but to develop students who can use technology critically, responsibly, and consistently with religious values. This finding underpins the development of the Netizen-Centered Learning model, which positions students as active subjects in digital ecosystems by integrating technological literacy, critical thinking, and religious character formation.

---

<sup>27</sup> Laili et al., "Digital Literacy and Self-Control as Predictors of Ethical Online Behavior among Generation Z."

<sup>28</sup> Muhamad Abdul Muid et al., "Information Evaluation Skills in the Era of ChatGPT: Implications for Academic Writing and Language Education," *Locana: Journal of Linguistics, Literature, and Language Education* 1, no. 1 (2026): 50–67, <https://doi.org/10.67245/locana.v1i1.21>.

<sup>29</sup> Safitri and Desriyeni, "The Relationship between Digital Literacy and Communication Ethics among Generation Z on Social Media."

<sup>30</sup> Fuad Hasyim et al., "Students' Level of Understanding of Fiqh Ubudiyah and Its Implications in Daily Life," *Al-Munawwarah: Journal of Islamic Education* 1, no. 2 (2025): 180–88, <https://doi.org/10.38073/almunawwarah.v1i2.3802>.

### Digital Ethical Problems Faced by Generation Z in the Era of Artificial Intelligence and Society 5.0

The literature shows that digital technology and artificial intelligence in Society 5.0 offer significant opportunities to improve educational quality while simultaneously presenting new ethical and moral challenges. Technological advancement has created increasingly open digital spaces in which individuals can rapidly obtain, produce, and distribute information. Nevertheless, such development has not always been accompanied by users' moral readiness and ethical competence. This situation demonstrates a gap between the acceleration of technological development and human capacity to manage its social and moral consequences.

As the generation most closely connected to technology, Generation Z experiences both the greatest opportunities and the greatest risks within digital ecosystems. Intensive use of the internet, social media, and digital applications gives Generation Z a high level of technological adaptability. However, without an adequate understanding of digital ethics, easy access to technology may produce various forms of misconduct. Saefuddin et al. (2026)<sup>31</sup> explain that digital transformation has created new moral challenges for Generation Z, particularly low awareness of responsible technology use. Rapid technological development is often not accompanied by adequate moral reinforcement, allowing digital spaces to become environments in which negative behavior emerges.

One major digital ethical problem is the increasing prevalence of cyberbullying. Unlike conventional bullying, which is limited by particular spaces and times, cyberbullying can occur continuously across various digital platforms. Insults, negative comments, online harassment, and the circulation of harmful content can seriously affect victims' psychological well-being. This phenomenon demonstrates that technological competence is not always accompanied by awareness of the moral consequences of digital actions.

Another major challenge is the spread of hoaxes and disinformation. Social media allows every user to become both a producer and distributor of information. However, weak source-verification skills can contribute to the dissemination of false information. Digital technology thus has two contradictory dimensions: it accelerates access to knowledge but may also expand the circulation of misleading information. Khofifah et al. (2025)<sup>32</sup> emphasize that Islamic education plays an important role in developing digital ethical awareness through moral reinforcement, enabling students to use technology responsibly.

Digital ethical problems are also reflected in the prevalence of hate speech. Social media, which should facilitate communication and the exchange of ideas, often becomes a site of conflict because of unethical language. A lack of communication ethics can result in hatred, discrimination, and social conflict. This indicates that digital literacy cannot be understood merely as technical competence but must also include respectful

<sup>31</sup> Saefuddin et al., "Islam and Digital Ethics."

<sup>32</sup> Khofifah et al., "An Interdisciplinary Epistemology Of Digital Ethics For Shaping Generation Z Morality In Islamic Education."

communication, appreciation of differences, and awareness of the moral consequences of digital actions.

Artificial intelligence adds further complexity to digital ethics. AI supports learning by generating text, analyzing data, developing instructional content, and providing automated recommendations. However, its unethical use may lead to misinformation, digital content manipulation, deepfakes, plagiarism, and other violations of academic integrity. Rusdiana and Cahyadi (2026)<sup>33</sup> explain that AI use in Islamic Religious Education must be guided by Islamic ethical values so that technological effectiveness is balanced by moral responsibility.

One emerging educational challenge is the use of AI to complete academic tasks without genuine thinking and learning processes. Students may generate instant answers without understanding the concepts being studied. If left unmanaged, this practice may weaken academic culture, reduce critical-thinking skills, and increase academic dishonesty. AI integration therefore requires ethical guidelines that position technology as a support for learning rather than a substitute for human thought.

The increasing use of digital technology may also contribute to technology addiction. Dependence on digital devices and social media can affect lifestyles, learning concentration, and students' social interactions. Excessive use may weaken self-control and disrupt the balance between digital and real-life experiences. Education in Society 5.0 must therefore attend not only to technological competence but also to healthy and responsible digital behavior.

From the perspective of Islamic Religious Education, these ethical problems demonstrate the importance of integrating Islamic values into technology use. The concept of *amānah* provides a fundamental principle that technology is a trust that must be used responsibly for beneficial purposes rather than to harm others. Students need to understand that their capacity to access and use technology entails moral accountability.

The principle of *tabayyun* is similarly important in responding to digital information flows. It teaches the necessity of verifying information before accepting or disseminating it. In digital contexts, *tabayyun* provides an ethical foundation for preventing the spread of hoaxes and disinformation. Students must not only be able to obtain information but also critically assess its validity.

The value of *ṣidq*, or honesty, is also fundamental to digital communication. Digital honesty includes using authentic identities, avoiding information manipulation and plagiarism, and refraining from sharing harmful content. Moral responsibility further emphasizes that every digital activity has social and spiritual consequences. Every post, comment, and piece of content produced through technology is a human action with ethical significance.

The synthesis suggests that Generation Z's digital ethical problems are caused not merely by technological development but also by insufficient moral readiness to manage technology. Technology develops rapidly, while character formation and ethical awareness require sustained educational processes. Islamic Religious Education therefore occupies a strategic position in connecting technological advancement with the

---

<sup>33</sup> Rusdiana and Cahyadi, "The Role of Artificial Intelligence (AI) in Islamic Religious Education."

development of learners' religious character.

Accordingly, the principal challenge for Islamic Religious Education in Society 5.0 is not only how to integrate technology into learning but also how to develop technologically competent individuals with strong moral awareness. The integration of *amānah*, *tabayyun*, *ṣidq*, and moral responsibility constitutes an essential foundation for technology-based Islamic Religious Education capable of addressing Generation Z's digital ethical challenges.

### **Reconstructing Islamic Religious Education Methodology through Instructional Technology**

The literature synthesis indicates that digital transformation in Society 5.0 requires a comprehensive reconstruction of Islamic Religious Education methodology. This reconstruction cannot be limited to providing technological devices or incorporating digital media into instruction. It requires fundamental changes in learning paradigms, strategies, and orientations. Technology can no longer be positioned merely as a tool for delivering material but must be understood as part of a learning ecosystem that influences how students acquire knowledge, construct learning experiences, and develop character.

Islamic Religious Education in many institutions continues to rely on conventional approaches that position teachers as the primary source of knowledge. Such approaches contribute to the transmission of Islamic values but face challenges when applied to Generation Z learners accustomed to digital environments. Contemporary students have extensive access to information through the internet; consequently, Islamic Religious Education can no longer rely predominantly on one-way instruction. Firmansyah et al. (2025)<sup>34</sup> explain that the transformation of Islamic Religious Education in the digital era requires innovation in instructional strategies and methods to accommodate learners' changing characteristics and technological development.

Based on the literature, the reconstruction of Islamic Religious Education methodology in Society 5.0 can be represented through the following paradigm shift:

**Table 1. Paradigm Shift in Islamic Religious Education**

| <b>Conventional Learning Approach</b>        | <b>Reconstructed Islamic Religious Education in Society 5.0</b>            |
|----------------------------------------------|----------------------------------------------------------------------------|
| Teachers as the center of learning           | Students as active subjects in digital ecosystems                          |
| Lectures as the dominant method              | Interactive, collaborative, and experiential learning                      |
| Technology merely as an instructional aid    | Technology as part of the learning ecosystem                               |
| Emphasis on transferring religious knowledge | Development of digital competence, religious character, and digital ethics |

This paradigm shift does not diminish the role of Islamic Religious Education teachers but transforms it. Teachers no longer function solely as transmitters of religious knowledge but as facilitators who guide students in understanding, evaluating, and applying Islamic values in various contexts, including digital spaces. Teachers help students distinguish accurate from inaccurate information, use technology ethically, and employ religious values as guidance for digital activities.

<sup>34</sup> Firmansyah et al., "Transformasi Pendidikan Agama Islam Di Era Digital."

An important dimension of methodological reconstruction is the use of AI as instructional technology. AI can support learning through adaptive resources, personalized content, learning analytics, and interactive instructional media. Nevertheless, its use cannot focus only on technological effectiveness; it must also consider Islamic values and ethics. Mustari et al. (2026)<sup>35</sup> explain that AI use in education should be accompanied by digital literacy, honesty, and academic integrity so that technology does not create dependence or weaken students' critical thinking.

In Islamic Religious Education, AI can support personalized materials, simulations of Islamic concepts, the analysis of religious sources, and adaptive assessment. However, teachers retain a central role in controlling the values and direction of learning. AI cannot replace educators' functions in providing role models, building emotional relationships, and internalizing moral values.

Methodological reconstruction can also involve the development of Islamic digital media, including videos, Islamic podcasts, online learning platforms, digital Qur'an applications, and educational Islamic content. Such media can broaden learners' educational experiences and align instruction with their digital characteristics. Halimah et al. (2025)<sup>36</sup> argue that Islamic Religious Education teachers in Society 5.0 must be technologically adaptive while maintaining an orientation toward Islamic digital character formation.

Technology-supported project-based learning is another relevant strategy. It allows students to move beyond theoretical understanding and apply Islamic values to real-life activities. Students may develop digital campaigns on social media ethics, produce Islamic educational content, analyze digital phenomena from Islamic perspectives, or organize digital literacy projects within their schools. Such learning is more contextual because it connects religious knowledge with the actual problems students encounter.

The reconstruction of Islamic Religious Education also requires the strengthening of Islamic digital literacy. This concept involves not only the capacity to use technology but also the ability to use it in accordance with Islamic values. Students need to critically search for information, verify it through *tabayyun*, communicate respectfully, maintain academic integrity, and understand the moral implications of digital actions. Qolbi et al. (2026)<sup>37</sup> emphasize that AI literacy transformation in Islamic Religious Education should be ethical, transparent, and grounded in Islamic principles.

The reconstruction of Islamic Religious Education methodology in Society 5.0 is therefore not merely a process of digitalizing instruction. It represents a paradigm shift that integrates technology with character formation. Technology broadens learning experiences, while Islamic values provide the moral foundation that directs its use.

Consequently, future Islamic Religious Education should move from the paradigm of "using technology in learning" toward "building an Islamic value-based technological learning ecosystem." This reconstruction provides the foundation for

---

<sup>35</sup> Mustari et al., "AI-Era Digital Literacy."

<sup>36</sup> Halimah et al., "Guru PAI sebagai Digital Role Model."

<sup>37</sup> Qolbi et al., "Transformasi Literasi Ai Dalam Pendidikan Agama Islam Menuju Model Pembelajaran Etis Dan Terbuka Di Era Digital."

Netizen-Centered Learning, an approach that positions students as active participants in digital spaces by integrating technological competence, Islamic digital literacy, Qur'anic communication, and religious character formation.

### **Integrating Islamic Digital Literacy into Students' Digital Ethics Formation**

The literature indicates that strengthening students' digital ethics in Society 5.0 cannot be achieved solely by improving their technical ability to operate technology. Digital literacy must encompass cognitive, social, and spiritual dimensions. In Islamic Religious Education, digital literacy is understood not only as technological proficiency but also as the ability to use technology according to Islamic values. This approach may be termed Islamic digital literacy: students' capacity to employ technology intelligently, critically, ethically, and responsibly in accordance with Islamic teachings.

Digital development has made students members of a digital society who interact daily through various technological platforms. Digital competence has therefore become a fundamental capability. However, it must be directed so that students become not only technologically skilled but also morally aware in digital environments. Alyana et al. (2026) explain that strengthening religious character through Islamic Religious Education is an important strategy for addressing ethical challenges arising from technological development.

Based on the literature synthesis, Islamic digital literacy can be constructed through four main dimensions: technological competence, critical thinking, digital communication ethics, and spiritual awareness.

#### **a. Technological Competence as the Foundation of Digital Capability**

The first dimension is students' ability to use technology effectively. It includes accessing information, using digital learning platforms and applications, and understanding how digital devices support learning. Technological competence provides the foundation for students to adapt to educational transformation in Society 5.0. From an Islamic perspective, however, technological competence is not merely a technical skill but an *amānah* that should be directed toward beneficial purposes. Technology is neutral; its positive or negative value depends on human use. Students should therefore understand that technology must be employed to acquire knowledge, strengthen social relationships, and contribute positively to life. In Islamic Religious Education, technological skills may be developed through credible Islamic digital resources, including Qur'an-learning applications, digital da'wah media, online learning platforms, and trustworthy religious sources. Technology thereby becomes not only a channel for information but also a medium for religious value development.

#### **b. Critical Thinking in Selecting Digital Information**

The second dimension is critical thinking in receiving and processing digital information. The internet gives students access to enormous amounts of information, not all of which is valid or reliable. Hoaxes, disinformation, and manipulated content constitute significant challenges in digital environments. From an Islamic perspective, evaluating information is closely connected to the principle of *tabayyun*, as stated in Qur'an 49:6: "*O believers! If an evildoer brings you any news, verify it...*" This verse establishes the principle that information should be verified before it is accepted or disseminated. In digital contexts, *tabayyun* guides students not to share unverified

information. They should evaluate sources, compare references, and understand context before drawing conclusions. Rahmadani et al. (2026)<sup>38</sup> explain that integrating Qur'anic and prophetic values into digital ethics education strengthens students' awareness that digital activities have moral consequences. Critical thinking therefore constitutes not only an intellectual skill but also a religious responsibility.

c. Digital Communication Ethics from the Perspective of Islamic Morality

The third dimension is ethical communication in digital spaces. Social media has expanded human interaction, but digital freedom is frequently not accompanied by communication ethics. Defamation, hate speech, humiliation, exposure of private matters, and negative comments show that many technology users lack awareness of moral responsibility. In Islamic Religious Education, digital communication should be grounded in values such as *ṣidq*, respect for others' dignity, avoidance of suspicion, and the use of appropriate language. These values align with the central goal of Islamic education: developing individuals who possess not only knowledge but also moral character in every area of life. Faizah (2026)<sup>39</sup> explains that the internalization of Islamic Religious Education values contributes to students' ethical behavior on social media. Digital communication is therefore not a value-free space but remains governed by moral principles. Students should understand that every comment, post, or item of digital content constitutes an action with social consequences. The Islamic principle of guarding one's speech can be extended into guarding digital communication by using technology to spread goodness and avoiding actions that harm others.

d. Spiritual Awareness as the Moral Foundation of Technology Use

The final dimension distinguishing Islamic digital literacy from general digital literacy is spirituality. Spiritual awareness positions digital activities as part of human responsibility before God. Students consider not only whether digital behavior is socially acceptable but also whether it is morally and spiritually accountable. This awareness is related to *amānah*: human abilities, including technological abilities, are trusts that must be used appropriately. Spiritual awareness can strengthen self-control, discourage harmful behavior, and encourage students to use digital spaces for beneficial activities. Alyana et al. (2026)<sup>40</sup> emphasize that religious character provides an important foundation for addressing Generation Z's digital ethical challenges. Religious character creates internal control rooted in value awareness rather than dependence solely on external regulations. Digital ethics should therefore be developed not only through rules but also through the formation of learners' moral consciousness. The integration of Islamic digital literacy into Islamic Religious Education connects technological competence, critical thinking, communication ethics, and spiritual awareness within a unified learning process. Digital education should not merely produce students capable of using technology but individuals who exercise moral responsibility in digital spaces.

---

<sup>38</sup> Rahmadani et al., "Integrasi Dalil Al-Qur'an Dan Hadis Dalam Pendidikan Etika Digital."

<sup>39</sup> Faizah, "Internalisasi nilai-nilai pendidikan Agama Islam untuk membentuk etika bermedia sosial kalangan generasi Z."

<sup>40</sup> Alyana et al., "Penguatan Karakter Religius Dalam Pembelajaran PAI."

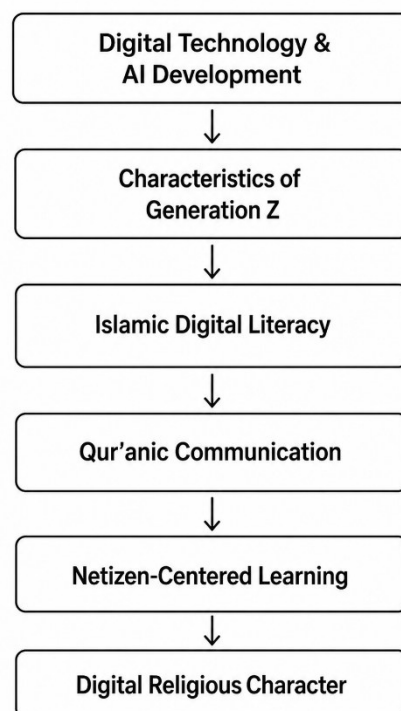
Islamic digital literacy is consequently an essential component of Netizen-Centered Learning. The model positions learners not only as technology users but also as digital citizens who combine technological competence with religious character. Integrating Islamic values into digital literacy helps ensure that technological development in Society 5.0 remains aligned with the central objective of Islamic Religious Education: developing knowledgeable, moral, and responsible human beings.

### **The Conceptual Model of Netizen-Centered Learning in Islamic Religious Education for Society 5.0**

Based on the synthesis of literature on educational digital transformation, Generation Z characteristics, artificial intelligence, digital literacy, and Islamic Religious Education values, this study formulates Netizen-Centered Learning as an alternative approach to Islamic Religious Education in Society 5.0. The model responds to the need for learning that not only utilizes technology but also develops students' ability to use it ethically, critically, and responsibly according to Islamic principles.

The findings indicate that most previous studies have positioned technology primarily as an instructional support tool. It is commonly used to deliver content, provide learning resources, or conduct assessments. However, such approaches do not fully address the principal challenge of Society 5.0: developing learners who possess not only digital competence but also moral awareness in digital environments.

Netizen-Centered Learning therefore positions students not merely as technology users but as digital citizens with ethical responsibilities. The model integrates technological development, Generation Z's learning characteristics, Islamic digital literacy, Qur'anic communication, and religious character formation within a single conceptual framework for Islamic Religious Education.



**Figure 1. The Conceptual Model of Netizen-Centered Learning in Islamic Religious Education for Society 5.0**

Figure 1 illustrates that digital technology and AI are major factors transforming the learning characteristics of Generation Z as digital natives. These changes require the strengthening of Islamic digital literacy so that students not only master technology but also think critically, practice *tabayyun*, and use technology according to Islamic values. Islamic digital literacy is then expressed through Qur’anic Communication, based on Qur’anic and prophetic principles such as *sidq*, *amānah*, *tabayyun*, and responsibility in communicating information. The integration of these components forms Netizen-Centered Learning, which ultimately seeks to develop digital religious character. To clarify the implementation of each component, the model is presented in Table 2.

**Table 2. Netizen-Centered Learning in Islamic Religious Education for Society 5.0**

| Model Component              | Implementation in Islamic Religious Education                                                                                                                  |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Digital Awareness            | Developing students’ awareness of wise, safe, and responsible technology use                                                                                   |
| Islamic Digital Literacy     | Developing the ability to access, analyze, evaluate, and use digital information according to Islamic values                                                   |
| AI-Assisted Learning         | Using AI to support information searches, content development, and personalized learning while maintaining academic ethics                                     |
| Qur’anic Communication       | Establishing digital communication based on Qur’anic and prophetic values, including <i>sidq</i> , <i>tabayyun</i> , and the prohibition of hatred and slander |
| Religious Character Building | Strengthening students’ religious character so they can integrate digital competence with Islamic morality in everyday life                                    |

The model indicates that Islamic Religious Education in Society 5.0 should move from teacher-centered learning toward netizen-centered learning, in which students become the principal actors in digital ecosystems. Teachers no longer merely transmit knowledge but facilitate students’ responsible selection, evaluation, and use of digital information according to Islamic values.

The model can be implemented through several strategies. First, technology-supported project-based learning can enable students to address real-life problems from Islamic perspectives, for example by creating Islamic digital literacy campaigns, digital da’wah content, or educational projects on social media ethics. Second, AI should be employed as a tool for supporting critical thought rather than replacing students’ thinking processes. Its use should therefore be accompanied by academic integrity, honesty, and responsibility, as emphasized by Mustari et al. (2026)<sup>41</sup> and Qolbi et al. (2026).<sup>42</sup>

The model also positions Islamic digital literacy as a bridge between technological competence and moral formation. Students are expected not only to master technology but also to evaluate information, understand its social effects, and consider moral dimensions in every digital activity. Rahmadani et al. (2026)<sup>43</sup> and Faizah (2026)<sup>44</sup> indicate that internalizing Islamic values strengthens learners’ awareness that digital

<sup>41</sup> Mustari et al., “AI-Era Digital Literacy.”

<sup>42</sup> Qolbi et al., “Transformasi Literasi Ai Dalam Pendidikan Agama Islam Menuju Model Pembelajaran Etis Dan Terbuka Di Era Digital.”

<sup>43</sup> Rahmadani et al., “Integrasi Dalil Al-Qur’an Dan Hadis Dalam Pendidikan Etika Digital.”

<sup>44</sup> Faizah, “Internalisasi nilai-nilai pendidikan Agama Islam untuk membentuk etika bermedia sosial dikalangan generasi Z.”

behavior constitutes spiritual responsibility before God.

Unlike previous studies that tend to examine instructional technology, digital literacy, AI, and religious character separately, Netizen-Centered Learning integrates these elements into a unified conceptual framework. Technology is understood not merely as instructional media but as a learning ecosystem integrated with Islamic digital literacy, Qur'anic communication, and religious character formation.

The novelty of this study lies in developing a model that connects digital technology, Generation Z's characteristics, Islamic digital literacy, Qur'anic Communication, and digital religious character within an integrated learning process. In contrast to previous approaches that treat technology as an instructional instrument, this model positions it as part of an ecosystem integrated with Islamic values to strengthen students' digital ethics and religious character.

The conceptual model demonstrates that Islamic Religious Education in Society 5.0 requires an integrative approach connecting technological development, learner characteristics, Islamic digital literacy, Qur'anic communication ethics, and religious character formation. Netizen-Centered Learning positions learners as active subjects who can use technology while exercising critical thinking, spiritual awareness, and moral responsibility. It therefore offers a new conceptual foundation for developing Islamic Religious Education that is technologically adaptive while remaining oriented toward moral formation.

## CONCLUSION

This study shows that digital transformation in Society 5.0 has reshaped Generation Z's learning characteristics, making them more interactive, collaborative, technologically adaptive, and dependent on digital learning resources. However, these developments have also created ethical challenges, including cyberbullying, misinformation, hate speech, artificial intelligence misuse, academic plagiarism, and technology addiction. Islamic Religious Education must therefore develop students' digital competencies while simultaneously strengthening their religious character and digital ethics.

The literature synthesis indicates that Islamic Religious Education methodology should shift from teacher-centered instruction toward learner-centered learning within digital ecosystems. Instructional technology, artificial intelligence, Islamic digital media, project-based learning, and Islamic digital literacy should be integrated with the values of *amānah*, *tabayyun*, *ṣidq*, and moral responsibility. The study's novelty lies in the Netizen-Centered Learning model, which integrates digital technology, Generation Z's learning characteristics, Islamic digital literacy, Qur'anic Communication, and digital religious character formation within a unified framework for Islamic Religious Education.

This study is limited by its use of a narrative literature review and its reliance on published sources without empirical testing in actual educational settings. Consequently, the proposed model has not yet been evaluated in terms of its practicality and effectiveness. Future research should empirically test Netizen-Centered Learning across different educational levels and institutional contexts, using experimental, mixed-

methods, or design-based research to assess its contribution to Islamic digital literacy, digital ethics, critical thinking, and students' religious character.

## REFERENCES

- Alruthaya, Ali, Thanh-Thuy Nguyen, and Sachithra Lokuge. "The Application of Digital Technology and the Learning Characteristics of Generation Z in Higher Education." arXiv:2111.05991. Preprint, arXiv, November 10, 2021. <https://doi.org/10.48550/arXiv.2111.05991>.
- Alyana, Friska, Muhammad Akmansyah, and Zahra Rahmatika. "Penguatan Karakter Religius Dalam Pembelajaran Pai : Menjawab Tantangan Etika Digital Generasi Z." *Secondary: Jurnal Inovasi Pendidikan Menengah* 6, no. 3 (2026): 1508–20. <https://doi.org/10.51878/secondary.v6i3.11260>.
- Chiappinotto, Bassi, and Palese. "La revisione narrativa della letteratura: aspetti metodologici." *Fnopi L'infermiere*, 2023. <https://www.infermiereonline.org/2023/10/05/la-revisione-narrativa-della-letteratura-aspetti-metodologici/>.
- Dunggio, Rahmat, and Salahudin. "The Dialectics of Islamic Religious Education Values in the Artificial Intelligence (AI) Ecosystem: An Analysis of Learning Transformation among Generation Z (A Study of University Students in Pohuwato Regency)." *DAAR EL-MAKRIFAH: Journal of Islamic Religious Education* 2, no. 01 (2026): 246–55. <https://doi.org/10.66931/jpai.v2i01.354>.
- Faizah, Ummi. "Internalisasi nilai-nilai pendidikan Agama Islam untuk membentuk etika bermedia sosial kalangan generasi Z." *Jurnal Pendidikan Agama Islam* 3, no. 1 (2026): 541–48. <https://doi.org/10.64677/ppai.v3i1.520>.
- Firmansyah, Mohammad, Yulsiva Anissatun Nadhiroh, Ilzam Hubby Dzikrillah Alfani, and Zaki Arrazaq. "Transformasi Pendidikan Agama Islam Di Era Digital: Tantangan Dan Peluang Untuk Generasi Z." *Pendas : Jurnal Ilmiah Pendidikan Dasar* 10, no. 01 (2025): 231–40. <https://doi.org/10.23969/jp.v10i01.23404>.
- Halimah, Siti, Nur Fitriah, Naila Marissa, and Alfi Nur Chasifah. "Guru PAI sebagai Digital Role Model: Strategi Pembentukan Karakter Islami Siswa di Era Society 5.0." *Al'Adalah* 28, no. 1 (2025): 107–24. <https://doi.org/10.35719/aladalah.v28i1.627>.
- Hasyim, Fuad, Ari Susetiyo, Farichatul Kholidah, Ainun Naimah, and Romi Hasyim. "Students' Level of Understanding of Fiqh Ubudiyah and Its Implications in Daily Life." *Al-Munawwarah: Journal of Islamic Education* 1, no. 2 (2025): 180–88. <https://doi.org/10.38073/almunawwarah.v1i2.3802>.
- Indriani, Fera, Lutfi Lutfi, and Ai Rukmini. "Integration Of Digital Ethics And Artificial Intelligence In Islamic Religious Education: Contextual Curriculum Development For The Society 5.0 Era." *Mimbar Pendidikan* 11, no. 1 (2026): 43–57. <https://doi.org/10.17509/mimbardik.v11i1.97808>.
- Khofifah, Intan Umi, Rizky Nur Khanifah, and Rohmat Ilham Romadhon. "An Interdisciplinary Epistemology Of Digital Ethics For Shaping Generation Z Morality In Islamic Education." *Edukasi Islami: Jurnal Pendidikan Islam* 14, no. 001 (2025): 461–78. <https://doi.org/10.30868/ei.v14i001.9440>.

- Laili, Lilik Noer, Mada Yudha Sasana, Muhammad Al Haariz, and Muhammad Alfi Syahrin. "Digital Literacy and Self-Control as Predictors of Ethical Online Behavior among Generation Z." *JURNAL PENELITIAN DAN EVALUASI PENDIDIKAN* 13, no. 1 (2026): 364–74. <https://doi.org/10.64540/rg4jsy02>.
- Lesmana, Deni, Erta Mahyudin, and Ahmad Irfan. "Reconceptualizing Holistic Islamic Education: Integrating PAI And Arabic Instruction For Digital Ethics Formation Among Generation Z." *TADIB: Jurnal Pendidikan Agama Islam* 4, no. 1 (2026): 124–46. <https://doi.org/10.69768/jt.v4i1.109>.
- Mintasih, Diyah, Sukiman Sukiman, and Sigit Purnama. "Integration of Digital Technology in Islamic Religious Education Learning: A Qualitative Study on Teachers' Competence and Implementation Models in Secondary Schools." *Jurnal Pendidikan Islam* 13, no. 1 (2024): 85–96. <https://doi.org/10.14421/jpi.2024.131.85-96>.
- Muid, Muhamad Abdul, Adi Sucipto, and Moh Azharul Kholili. "Information Evaluation Skills in the Era of ChatGPT: Implications for Academic Writing and Language Education." *Locana: Journal of Linguistics, Literature, and Language Education* 1, no. 1 (2026): 50–67. <https://doi.org/10.67245/locana.v1i1.21>.
- Mukhlisa, Mukhlisa, Dwi Sulisworo, and Dian Hidayati. "Digital Literacy of Generation Z: Challenges for Teachers in the Era of Demographic Bonus." *Journal of Education and Teaching (JET)* 6, no. 2 (2025): 500–517. <https://doi.org/10.51454/jet.v6i2.517>.
- Mustari, Mohammad, Sri Nurhayati, and Syarifuddin Syarifuddin. "AI-Era Digital Literacy: Cultivating Honesty in Islamic Education." *International Journal of Nusantara Islam* 14, no. 1 (2026): 261–72. <https://doi.org/10.15575/ijni.v14i1.51521>.
- Qolbi, Satria Kharimul, Muhamad Arif Nugraha, Lola Fadilah, and Dinda Amanda Ainun Nuzul. "Transformasi Literasi Ai Dalam Pendidikan Agama Islam Menuju Model Pembelajaran Etis Dan Terbuka Di Era Digital." *An-Nahdlah: Jurnal Pendidikan Islam* 5, no. 3 (2026): 1011–22. <https://doi.org/10.51806/an-nahdlah.v5i3.860>.
- Rahmadani, Novia, Delta Fitriani, Harir Ulil Abshor, and Rahmat Lutfi Guefara. "Integrasi Dalil Al-Qur'an Dan Hadis Dalam Pendidikan Etika Digital: Telaah Akhlak Islam Untuk Generasi Z." *Jurnal Penelitian Pendidikan Indonesia (JPPI)* 3, no. 2 (2026): 855–57. <https://doi.org/10.62017/jppi.v3i2.7057>.
- Rusdiana, Rusdiana, and Ani Cahyadi. "The Role of Artificial Intelligence (AI) in Islamic Religious Education: An Analysis of Opportunities, Risks, and Ethical Regulations." *AL GHAZALI: Jurnal Pendidikan Dan Pemikiran Islam* 6, no. 3 (2026): 960–81. <https://doi.org/10.69900/ag.v6i3.608>.
- Saefuddin, Muhammad, Nufasilul Ayati, Irvan Wahyu Purnomo, and Nafisa Tarish Nur Rohim. "Islam and Digital Ethics: The Moral Challenges of Generation Z in the Era of Digital Transformation." *Lentera Peradaban: Journal on Islamic Studies* 2, no. 2 (2026): 197–214. <https://doi.org/10.61166/lpi.v2i2.142>.
- Safitri, Dellia, and Desriyeni Desriyeni. "The Relationship between Digital Literacy and Communication Ethics among Generation Z on Social Media." *Journal of Multidisciplinary Science: MIKAILALSYS* 4, no. 2 (2026): 698–706.

<https://doi.org/10.58578/mikailalsys.v4i2.9938>.

Setyasri, Alfiane Suci, Tsabita Fathin Daniya, and Galuh Andina Putri. "Peer Counseling as a Strategy for Developing Critical Thinking Skills Among Adolescents in Islamic Educational Settings." *Pelita: Jurnal Studi Islam Mahasiswa UII Dalwa* 3, no. 2 (2026): 183–95. <https://doi.org/10.38073/pelita.v3i2.4875>.

Sukhera, Javeed. "Narrative Reviews: Flexible, Rigorous, and Practical." *Journal of Graduate Medical Education* 14, no. 4 (2022): 414–17. <https://doi.org/10.4300/JGME-D-22-00480.1>.

Wijaya, Kamal Agung. "Humanistic Supervision and Collaborative Governance Model of Madrasah Principals in Handling Dual Indiscipline in Pesantren." *Pelita: Jurnal Studi Islam Mahasiswa UII Dalwa* 3, no. 2 (2026): 219–30. <https://doi.org/10.38073/pelita.v3i2.5123>.