Jurnal Pendidikan Islam 16 (1) (2026) 79-90
DOI: 10.38073/jpi.3771
https://ejournal.uiidalwa.ac.id/index.php/jpi

p-ISSN: 2581-0065
e-ISSN: 2654-265X

The Integration of Technology and Humanism Rooted in Islamic Values: A Strategy for Strengthening Deep Learning in the Era of Smart Society 5.0

Alif Nur Hanifah[1*], Dini Widiyastutik[2], Dzatan Nitoqoin[3], Husniyatus Salamah Zainiyati[4], Hanun Asrohah[5]
[1,2,3,4] Universitas Islam Negeri Sunan Ampel, Surabaya, Indonesia
Email: alifhani18@gmail.com[1], dwidiyastutik2905@gmail.com[2], oikedzatannitoqoin23@gmail.com[3], husniyatussalamah@uinsa.ac.id[4], hanunasrohah@uinsa.ac.id[5]
*Corresponding Author

Article Information:
Received: 6 December 2025
Revised: 24 March 2026
Accepted: 30 March 2026
Published: 31 March 2026

Keywords:
Deep Learning, Techno-Humanistic Integration, Islamic education, Teacher Role, Smart Society 5.0.

Abstract

Global issues regarding the threat of technology potentially replacing the role of teachers and concerns about the loss of humanism and the degradation of student manners due to the dominance of digital interactions have triggered deep anxiety among educators and parents. The shift in the global education paradigm towards Deep Learning requires learning experiences that go beyond the transfer of knowledge. This includes the dimensions of mindfulness, meaningfulness, and joyfulness. However, in the era of Smart Society 5.0, we are often confronted with the contradictory reality that easy access to information actually degrades critical thinking and morality. This study aims to formulate a strategy for integrating Techno-Humanism within the framework of Islamic Education to strengthen the quality of deep learning while addressing concerns about the disruption of the teacher's role. Using the library research method with synthesis analysis of primary pedagogical literature and reputable journal articles from the last five years (2020–2025), this study deconstructs the dichotomy between humans and machines. The findings of this study offer integration strategies through three main mechanisms: (1) Integration of the cognitive domain by transforming AI into a verified logical partner through the concept of *Tabayyun*, (2) Integration of the contextual domain through the use of IoT to strengthen the role of *Khalifah fil Ardh* (social-environmental awareness social-environmental concern), and (3) Integration of the affective domain by making technology a canvas for expression that is emotionally validated by teachers as *Murabbi*.

How to Cite this Article: Hanifah, A. N., Widiyastutik, D., Nitoqoin, D., Zainiyati, H. S., & Asrohah, H. (2026). The Integration of Technology and Humanism Rooted in Islamic Values: A Strategy for Strengthening Deep Learning in the Era of Smart Society 5.0. *Jurnal Pendidikan Islam*, *16*(1), 79–90. https://doi.org/10.38073/jpi.3771

INTRODUCTION

The education system in the Smart Society 5.0 era is facing unprecedented major challenges. The rapid advancement of Artificial Intelligence (AI) and automation has triggered a wave of tech-anxiety among parents and educators. There is a fundamental concern that the teacher's role as an educator will be replaced by algorithms capable of presenting information far more quickly, accurately, and personally. There is a deep-seated unrest regarding the erosion of humanistic values, causing students to grow into individuals who are digitally savvy but socially and emotionally blunt due to interactions dominated by screens (Turkle, 2021). This is exacerbated by field findings showing that excessive gadget

© 2026 The Author(s). Published by Research Department, Universitas Islam Internasional Darullughah Wadda'wah, Pasuruan, Indonesia. This is an open access article under the CC BY-SA license (https://creativecommons.org/licenses/by-sa/4.0).

use without educator control can significantly reduce the quality of a child's social interaction and communication (Fuaody et al., 2024). This phenomenon poses a serious challenge for Islamic Education, which essentially aims to form the whole human being (*Insan Kamil*), who is not only intellectually brilliant (*Fatonah*) but also noble in character (*Akhlak*). In fact, 21st-century education is no longer merely understood as a transfer of knowledge, but must be directed toward Deep Learning. Deep Learning is defined as a process where learners are actively involved in transforming information into new knowledge to solve complex problems, in order to form future competencies (6C): Character, Citizenship, Collaboration, Communication, Creativity, and Critical Thinking (Fullan et al., 2018). In an Islamic perspective, this aligns with the commands of *Tadabbur* and *Tafakkur*, which are processes of deep thinking to understand the signs of Allah's greatness in the universe.

The quality of the process in Deep Learning is largely determined by three core dimensions of the learning experience. First, Mindful (full awareness), a condition where students are aware of their goals and learning process. This is in line with the concepts of *Niyat* (intention) and *Muraqabah* (feeling monitored by Allah). Second, Meaningful, a learning process that demands the relevance of material to real life as a form of Concern. Third, Joyful (pleasant), a learning process in which there is inner satisfaction when solving challenges (McTighe & Silver, 2020). In Islamic Education, this refers to inner happiness (*Sa'adah*) while seeking knowledge. However, unmanaged technological dominance actually degrades these three dimensions. The ease of accessing instant answers from AI encourages mindless learning behavior, an overflow of unfiltered information creates meaningless data, and shallow gamification often replaces the satisfaction of deep thinking with mere entertainment (joyless).

A comprehensive literature review reveals significant research gaps in the discourse on integrating technology and humanism in education. Research conducted by Selwyn (2021) emphasizes a sociological critique of technocentrism's dominance in education, where technology is often positioned as the primary solution without considering the complexity of social and pedagogical contexts. These findings contribute significantly to debunking overly technology-centered assumptions but remain limited to the realm of conceptual critique and have not yet offered operational strategic formulations for classroom learning practices. Meanwhile, the study by Luckin et al. (2022) focuses on the development and effectiveness of Artificial Intelligence in personalizing learning. This research shows that AI algorithms are capable of significantly increasing the adaptability and efficiency of student learning processes. Nevertheless, the approach used tends to be technical-instrumental, thus paying less attention to the dimensions of socio-emotional development and human values in the educational process.

Another gap emerges in the context of implementation, as revealed by Sapdi (2023), who found that various deep learning frameworks adopted from Western contexts are often not fully compatible with the reality of education in Indonesia. Infrastructural barriers, differences in learning cultures, and the characteristics of a religious society are factors that demand contextual adaptation based on local values, including Islamic values as an epistemological foundation and educational application. On the other hand, Biesta (2020), through the perspective of educational humanism, emphasizes the importance of the

dimension of subjectification—the formation of humans as complete and meaningful subjects. However, within that framework, technology is often positioned oppositely as an entity that potentially reduces human values. This approach, while philosophically strong, is not yet fully responsive to the needs of the digital era, which actually demands synergy between technology and humanism.

Furthermore, Wathon (2024) identifies the absence of an integrative model that specifically explains how technology and the teacher's role can be collaboratively operationalized in a single complete learning design, particularly in the form of a Lesson Plan (*RPP*). This finding confirms a void at the application level, especially in formulating the distribution of roles between humans (teachers) and technology in supporting meaningful learning. Based on various previous research findings, it can be concluded that studies on technology, humanism, and education still tend to run separately, whether in the form of conceptual critiques, technological development, philosophical approaches, or practical implementation. There is no comprehensive framework yet capable of integrating these three dimensions simultaneously within the context of deep learning. This condition indicates an urgent need to present an approach that not only bridges the conceptual gap but can also be applied contextually in educational practice. In the perspective of Islamic Education, technology is not seen as a threat, but rather as a *wasilah* (medium) to achieve the welfare of the *ummah*. Therefore, education cannot reject technology, but it also must not allow technology to erode human values; thus, a conceptual and practical bridge is needed to connect the sophistication of algorithms with the wisdom of the human conscience. The novelty of this research lies in the effort to integrate technology and humanism within a collaborative paradigm based on Islamic values, while simultaneously presenting an operational model that can be implemented in learning. Specifically, this research aims to formulate such an integration strategy by identifying the meeting point where technology can strengthen the dimensions of mindful, meaningful, and joyful learning, as well as affirming that the teacher's role is irreplaceable, but rather transformed as a primary element that safeguards the quality of humanity in education in the Society 5.0 era.

RESEARCH METHOD

This research utilizes a library research method with a qualitative-interpretative approach. The primary data sources serving as the conceptual foundation of this study include authoritative books on modern pedagogy, specifically *"Deep Learning: Engage the World Change the World"* by Fullan et al. (2018) to dissect the 6C competency concept, as well as *"Teaching for Deeper Learning"* by McTighe and Silver (2020), alongside Islamic Education literature related to the integration of *adab* and technology, which is used as an analytical lens for the core learning experience dimensions. Additionally, the data is enriched with accredited national scientific journal articles and reputable international journals published within the 2020–2025 timeframe. The use of these recent references is crucial given the rapid development of AI technology in education, which demands continuous renewal of pedagogical strategies (Diantama, 2023).

The data analysis technique in this study is conducted through three systematic stages adapted from the Miles, Huberman, and Saldaña model. The first stage is data reduction,

where the researcher selects literature relevant to the keywords "teacher's role in the AI era" and "deep learning strategies," then focuses on findings discussing human-machine synergy (Snyder, 2019). The second stage is data display, in which the researcher presents data in the form of a comparison matrix between technological functions and the functions of an Islamic teacher (*Mu'addib*) to map integration patterns. The third stage is conclusion drawing/verification, where the researcher draws synthetic conclusions regarding a techno-humanist integration model, verified against Islamic values and critical pedagogy theory to ensure the validity of the arguments (Xiao & Watson, 2019).

RESULTS AND DISCUSSION

The Concept and Process of Techno-Humanist Integration in Deep Learning

The integration of technology and humanism in Deep Learning is essentially a systematic effort to create a Hybrid Intelligence environment that aligns with the concept of *Ulul Albab*—human beings who are capable of integrating the power of thought (*fikr*/technology) and the power of remembrance (*dhikr*/spirituality). Educational transformation in the 5.0 era demands an understanding that technology excels in computational speed and data access (epistemic tool), while humans excel in value-making, empathy, and ethical judgment (ontological compass) (Yusuf et al., 2023). In the context of Society 5.0, the integration of technology and humanism becomes an epistemological and pedagogical necessity. Yusgiantara and Baidi view the utilization of artificial intelligence in Islamic education as something that must be placed within an interconnected epistemological framework, where rational knowledge, technology, and revealed values complement each other (Yusgiantara, 2025). Without such integration, technology has the potential to give rise to mechanistic learning that ignores the dimensions of *adab* (etiquette/morality) and moral consciousness, which are the core of Islamic education. Furthermore, the integration of Islamic values and ethics into character education in the digital era is becoming increasingly urgent to maintain students' moral balance amidst the flood of information (Eryandi, 2023).

This integration process does not occur automatically; rather, it requires structured pedagogical engineering. The process flow moves from digital information collection toward the internalization of human values. Within the framework of entangled humanism, it is stated that technology acts as a learning partner that stimulates the thinking process, but the teacher acts as the "weaver of meaning" who ensures that the process lands on a wise understanding. This is in line with the human role as the controller of technology, not its servant. The integration process flowchart formulated in this study is presented in Figure 1.

Based on the graph in Figure 1, it is clear that technology occupies the initial position as the provider of intellectual raw materials. However, these raw materials will not become Deep Learning competencies without passing through a process of filtration and dialectics guided by the teacher. The absence of the teacher's role in Stage 2 would cause students to get trapped in biased information or even hoaxes. This is where the teacher serves as the *Sanad Ilmu* (chain of knowledge), ensuring the knowledge gained by students is valid, blessed (*barokah*), and not misleading (Sapdi, 2023).

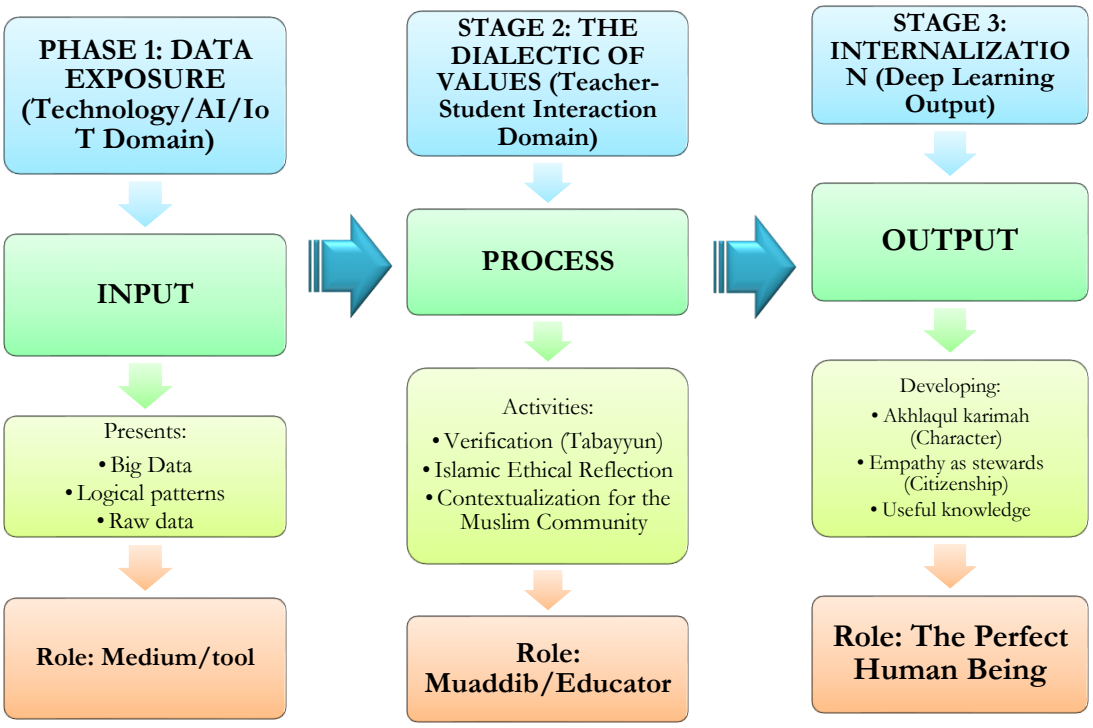

Figure 1. The Techno-Humanist Integration Process Flow toward Deep Learning

Integration Mechanism: Strengthening the Three Dimensions of Deep Learning

The implementation of deep learning in Islamic Education (PAI) during the Society 5.0 era demands a paradigm shift from rote-oriented learning toward reflective, contextual, and transformative learning. Panuntun et al. found that deep learning strategies in PAI are capable of encouraging students to link Islamic concepts with real-world social problems, ensuring that learning does not stop at textual understanding (Panuntun, 2025). This finding is consistent with the goals of Islamic education, which emphasize the unity of knowledge (*ilm*), action (*amal*), and character (*akhlak*).

Deep learning-based PAI models have also proven effective in enhancing students' critical and reflective thinking skills. Aliyah et al. demonstrated that the application of deep learning through problem-based and project-based learning allows students to construct religious understanding independently, dialogically, and meaningfully(Aliyah & Norlianti, 2025). This research formulates three specific mechanisms to apply the aforementioned integration concept into the mindful, meaningful, and joyful dimensions.

1. Integration in the Cognitive Domain (Mindful): AI as Logic Partner, Teacher as Referee for *Tabayyun*

   One of the primary challenges in the dimension of mindful learning is the decline of students' cognitive engagement due to their dependence on instant answers provided by AI. Integration is achieved by shifting the function of Generative AI (such as ChatGPT/Gemini) from an answering machine to a Debate Partner. Students are directed to use AI to search for logical arguments, historical data, or scientific patterns. The teacher's function is to maintain full control over the process of *Tabayyun* (clarification/verification) regarding the truth of the information. The utilization of

digital media and AI shows significant effectiveness when integrated pedagogically and ethically. Almardiah and Muis emphasize that digital media can increase student motivation and participation in PAI, especially when used to support interactive and reflective learning (Almardiah, 2025). The most vital digital literacy today is not the ability to operate tools, but the ethical capacity to evaluate information (Sari & Alfiyan, 2023). The teacher plays a role in posing reflective questions such as, "Does this AI data bring harm (*mudharat*) or benefit (*maslahat*) according to *sharia*?". Such reflective questions will force students to think critically—activating their critical reasoning (*Aql*) with full awareness—surpassing the capabilities of algorithms.

2. Integration in the Contextual Domain (Meaningful): IoT as Data Presenter, Teacher as Reinforcer of the *Khalifah* Role

Meaningful learning occurs when teaching materials are closely connected to the human task as *Khalifah fil Ardh* (steward/leader on earth). Internet of Things (IoT) technology is integrated as a tool to capture invisible physical realities—such as temperature, water quality, or soil vibrations—and present them as real-time data in the classroom. However, data is merely a collection of numbers. Technological efficiency in presenting environmental data must be accompanied by pedagogy that touches the affective side (Manik et al., 2024). The implementation of technology-supported project-based models has proven capable of increasing student creativity in solving contextual problems (Nusfiyah, 2024). The teacher guides students to interpret this pollution data as a call for social worship (*Hablum Minannas* and *Hablum Minal Alam*), thereby transforming statistical data into a narrative of community concern (*ummah*). For example, the teacher guides students to link air pollution data with the health of residents around the school. This process of connecting data (technology) with empathy (humanism) is what gives birth to true meaningful learning (Sholikin et al., 2022). As emphasized by Yahriyah et al., deep learning integration in PAI must be designed structurally to create meaningful and sustainable learning (Yahriyah et al., 2025).

3. Integration in the Creative Domain (Joyful): Technology as Canvas, Teacher as Spiritual *Murabbi*

The dimension of joyful learning is often misunderstood as merely playing games, whereas its essence is the inner satisfaction felt when successfully creating something. In this integration, multimedia technology is positioned as a canvas that enables students with various physical or technical limitations to continue creating and proselytizing (*dakwah*) through visual and audio means. However, students' inner satisfaction does not spring from software sophistication, but from the appreciation of the teacher as a *Murabbi* (educator of the soul). Zarkani et al. emphasize that the actualization of AI in Islamic education must be framed by ethical controls and values of *adab* so as not to displace the teacher's role as the educator of the soul (Zarkani et al., 2024). Emotional validation from the teacher—in the form of a proud gaze, prayers, sincere praise, and constructive feedback—is the key to students' intrinsic motivation (Pangarti & Yaswinda, 2023). AI can provide scores, but only a teacher can touch the heart (*Qalb*). Therefore, this integration affirms that the spiritual bond (*Rabithah*) between teacher and student is an irreplaceable fundamental element.

Table 1. Techno-Humanist Integration Strategy Matrix

Deep Learning Dimension	Role of Technology (Computational Power)	Role of Teacher (Contextual Power)	Integration Result (Hybrid Intelligence)
Mindful (Cognitive)	Presenting big data, scenario simulations, and algorithmic logic.	Performing verification (*tabayyun*), ethical assessment, and philosophical reflection.	Critical thinking skills grounded in truth (*Shiddiq*).
Meaningful (Contextual)	Bringing virtual reality and real-time IoT sensor data.	Connecting data with the duties of stewardship (*khalifah*) and empathy.	Deep and relevant understanding of material for the benefit of humanity (*Relevance*).
Joyful (Affective)	Facilitating varied creative media (video, coding, design) for digital *dakwah*.	Providing emotional appreciation, personal motivation, and a touch of compassion (*Rahmah*).	Happiness in seeking knowledge and self-confidence.

Example of an "All-in-One" Strategy: Empathy-Based Digital Social Campaign Project

Various challenges arise in this implementation, including the limited digital literacy of educators, the risk of dehumanization, and the potential degradation of *adab* (etiquette). Az-zahrah and Ginting identify that the main challenge lies in the readiness of teachers to manage technology pedagogically and value-based (Az-zahrah & Ginting, 2025). To overcome these challenges while simultaneously implementing all three dimensions and addressing doubts about the effectiveness of integration in the field, this study recommends a comprehensive strategy called the "Digital Social Campaign Project." This is a modern form of *Dakwah Bil Hal* (proselytizing through concrete action/exemplary behavior). This strategy is not merely a common assignment, but a micro-learning ecosystem that forces intense collaboration between technological capabilities and the humanistic sensitivity of students in three crucial stages:

1. Stage 1: Data Research (Dominance of the Mindful Dimension)

   In the initial stage, students are assigned to identify a social problem (*umat*) in their environment, such as cyberbullying or plastic waste. Students use AI tools to search for global statistical data, case trends, and theories regarding the causes of the problem. In this activity, technology works at its maximum. However, the teacher mandates that students do not blindly accept the data provided by AI. Students must conduct cross-verification and engage in classroom discussions to determine the correct perspective. This process of validating digital data through human reasoning trains students to be mindful of the information they consume, preventing them from becoming passive consumers of AI algorithms (Wathon, 2024).

2. Stage 2: Field Contextualization (Dominance of the Meaningful Dimension)

   After gathering data, students head into the field or use social media to observe the direct impact of the problem. This trains students to build empathy with fellow Muslims (*Ukhuwah*). Students interview victims or observe the surrounding environment, assisted by recording technology or digital surveys. Della et al. emphasize that the development of Islamic Education (PAI) teaching materials based on deep learning must integrate technology, social context, and Islamic values in a unified manner (Della et al.,

2025). At this stage, the teacher plays a vital role in guiding students to make sense of the data. True digital literacy must culminate in a caring character (Sugiarto & Farid, 2023). The teacher can pose triggering questions such as, "How would you feel if the statistical data of these natural disaster victims were your own family?". This process transforms data into a meaningful experience that touches the students' humanity and concern.

3. Stage 3: Creation and Work Showcase (Dominance of the Joyful Dimension)

In the final stage, students create positive content as a solution. They combine their understanding into a digital campaign product, such as a short video, poster, or podcast made using creative applications like Canva, Capcut, etc. Technology helps students produce aesthetic work easily. However, the peak of Joyful Learning occurs during the showcase session. The teacher provides appreciation, gives deep and heart-touching feedback, and facilitates reflective discussions. This proves that social recognition and the sense of pride because one's work is beneficial to others (*Khairunnas Anfa'uhum Linnas*) provide a much greater happiness in learning than mere numerical grades (Marsofely & Setiawan, 2023).

Transformation of the Teacher's Role

The success of this Islamic-based integration strategy of technology and humanism as a reinforcer of Deep Learning depends heavily on the willingness of teachers to undergo a fundamental transformation of their roles. In this regard, Harsanto et al. emphasize the importance of integrating Islamic ethics into digital learning to maintain a balance between technology and human values (Harsanto et al., 2025). The narrative that teachers will be replaced by technology is debunked when we see the complexity of the new roles teachers must perform in this Deep Learning model.

Teachers no longer serve merely as deliverers of material; instead, they return to their three natural roles (*fitrah*). The first *fitrah* is as a *Mu'addib* (Inculcator of *Adab*), an educator who filters information so that students behave with *adab* in the virtual world. Amidst a flood of information that is often biased or hoaxed, the teacher is the last bastion teaching students to distinguish right from wrong and appropriate from inappropriate. In line with this, Zaimina asserts that digital literacy must be directed toward moral awareness in interacting with technology, not just technical ability (Zaimina & Zahrah, 2024). This internalizing of values is a purely humanistic process because it prioritizes an approach that is humane, attentive, and respectful of each student's individuality. The goal is to develop students' moral, ethical, and social aspects in an empathetic and understanding way, without pressure or coercion. In this process, students are given the opportunity to internalize values that will shape their personality and behavior in daily life, such as honesty, responsibility, mutual respect, and cooperation (Fauziah, 2022).

The second *fitrah* of a teacher is as a *Murabbi* (Nurturer of the Soul), an educator who guards the mental and spiritual health of students from digital fatigue. Teachers must be sensitive to the digital burnout experienced by students and act as a figure who provides psychological support, listens to grievances, and builds student self-confidence—an affective function impossible for a robot to perform. As humans, teachers have the ability to feel, interact emotionally, and provide comfort that cannot be replaced by any tool or device. This stable inner condition is a prerequisite for deep thinking processes. This is reinforced by the

findings of Rahmawati et al., which show that deep learning contributes significantly to students' critical thinking skills when the teacher plays an active role as a guide for reflection and value dialogue (Rahmawati et al., 2025).

The third *fitrah* is as a facilitator of knowledge who designs blended learning. This aligns with the assertion of Ardani et al. (2025) that PAI innovation in the Society 5.0 era demands a systematic approach that holistically integrates technology, pedagogy, and Islamic values. The teacher must decide when students need to use AI for efficiency and when they must detach from technology for face-to-face discussion. This role demands high-level pedagogical skills that machines do not possess (Bray et al., 2023). Educators in this era are required to have positive perceptions and adaptive skills toward social-emotional learning to create an environment that supports the holistic growth of the child (Selian & Amalia, 2024).

CONCLUSION

Based on a deep analysis of the integration of technology and Islamic-based humanism, this study concludes that the fear of the diminishing role of teachers in the Smart Society 5.0 era is unfounded when viewed from the perspective of Islamic Education. Technology, with all its sophistication in data processing and efficiency, is merely a tool that requires a "soul" to become meaningful. The proposed integration strategy—utilizing AI as a logical partner (Mindful), IoT as a basis for social empathy (Meaningful), and digital media as a canvas for expression and a means of *syiar* (Joyful)—proves that technology can actually enhance a teacher's capacity to mold the *Ulul Albab* generation. Within this Deep Learning framework, the teacher acts as a director who merges technology with human and spiritual touches.

This research suggests that educators and policymakers should view technology not as a threat, but as a partner that can enrich the quality of interaction in the teaching and learning process. The future of education depends not only on technological advancement but rather on the teacher's ability to utilize that technology to strengthen more humane learning relationships, creating a generation that is not only technologically savvy but also wise, possesses deep human values, and is spiritually devout.

However, this study acknowledges several limitations. As a library-based research, the proposed model of techno-humanist integration remains at a theoretical and conceptual level. The effectiveness of the "Digital Social Campaign Project" and the transformation of the teacher's role into *Mu'addib* and *Murabbi* in an AI-driven environment have not been empirically tested across diverse educational settings. Furthermore, this study does not deeply address the "digital divide" or the disparity in technological infrastructure and digital literacy levels among educators in rural or underfunded Islamic educational institutions, which may hinder the universal application of this model.

Based on these limitations, future research should focus on empirical validation through Classroom Action Research (PTK) or Case Studies in various Islamic schools (*Madrasah*) and Boarding Schools (*Pesantren*) to observe the practical challenges and measurable impacts of this integration on students' character and deep learning competencies. Subsequent studies are also encouraged to develop a more technical "Digital Adab Rubric" or specific pedagogical guidelines that can help teachers navigate ethical

dilemmas when using Generative AI. Finally, further exploration is needed regarding the development of "Prophetic AI" or Islamic-centered algorithms that are natively designed to support *Tadabbur* and *Tafakkur* in the learning process, ensuring that technology serves not just as a tool, but as a medium for spiritual and intellectual growth.

BIBLIOGRAPHY

Almardiah, D. H. (2025). The Effectiveness Of Digital Media In Learning Islamic Religious Education (Pai) In The Era Of Society 5. 0: Study Of The Integration Of Technology And Religious Values. 3(1). https://doi.org/10.59548/jed.v3i1.463

Ardani, M. H., Putra, Arifin, M., & Shodikin, E. N. (2025). Kamaliyah: Jurnal Pendidikan Agama Islam. 3(2), 328–343.

Az-zahrah, N., & Ginting, R. F. (2025). Pembelajaran Pendidikan Agama Islam Di Era Society 5.0: Tantangan Dan Peluang. 12(3).

Biesta, G. (2020). Risking Ourselves in Education: Qualification, Socialization, and Subjectification Revisited. Routledge.

Bray, A., Girvan, C., & Chorcora, E. N. (2023). Teachers as digital facilitators: Navigating the shift from content delivery to learning design. Global Education Journal, 9(3), 45–62.

Della, D. A., Attamimi, T. A., Hasanah, U., Khairunnisa, R., & Noor, M. (2025). Pengembangan Bahan Ajar Pendidikan Agama Islam Berbasis Pendekatan Pembelajaran Mendalam (Deep Learning) Dhia Alfa Della Politeknik Negeri Tanah laut Taufik Abdullah Attamimi Politeknik Negeri Tanah laut Uswatun Hasanah Politeknik Negeri Tanah laut Riri. 9(4), 2161–2183. https://doi.org/10.35931/am.v9i4.5527

Diantama, S. (2023). Pemanfaatan Artificial Intelligence (AI) dalam dunia pendidikan. DEWANTECH: Jurnal Teknologi Pendidikan, 1(1), 8–14.

Eryandi, E. (2023). Integrasi nilai-nilai keislaman dalam pendidikan karakter di era digital. Kaipi: Kumpulan Artikel Ilmiah Pendidikan Islam, 1(1), 12–16.

Fauziah, N. (2022). Teori konstruktivisme Piaget: Implementasi dalam pembelajaran Al-Qur'an Hadis. JSG: Jurnal Sang Guru, 1(3), 215–223.

Fuaody, C. N., Anggraeni, I., Maulidia, L., & Nugraha, R. G. (2024). Analisis pengaruh digital terhadap komunikasi sosial anak dalam kehidupan sehari-hari. Jurnal Basicedu, 8(1), 327–337.

Harsanto, M., Mayasari, A. E., & Mustofa, T. A. (2025). Kajian Literatur Integrasi Etika Islam Dalam Pembelajaran Digital Untuk Generasi Muda. 6963–6973.

Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2022). Artificial Intelligence in Education: Promise and Implications for Teaching and Learning. Journal of Artificial Intelligence in Education, 32(2), 210–230. https://doi.org/10.1007/s40593-021-00265-9

Manik, Y. M., Julianingsih, D., & Ramadhani, T. (2024). Manfaat integrasi IoT dalam pengembangan perangkat lunak di sektor pendidikan. Jurnal MENTARI: Manajemen Pendidikan Dan Teknologi Informasi, 2(2), 155–164.

Marsofely, R. L., & Setiawan, Y. (2023). Bagaimana pembelajaran edugame perilaku hidup bersih dan sehat (PHBS) mempengaruhi perubahan sikap dan perilaku siswa? Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 7(3), 3468–3476.

McTighe, J., & Silver, H. F. (2020). Teaching for deeper learning: Tools to engage students in meaning making. ASCD.

Nusfiyah, K. (2024). Model pembelajaran Project-Based Learning (PjBL) melalui video project dalam meningkatkan kreativitas dan keterampilan peserta didik. Journal of Islamic Education, 2(1), 16–21.

Pangarti, W. M., & Yaswinda, Y. (2023). Pembelajaran berbasis multimedia untuk meningkatkan kemampuan kognitif anak usia dini. Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 7(3), 2589–2599.

Panuntun, S. (2025). At Turots: Jurnal Pendidikan Islam Implementation of deep learning strategy in islamic religious education to internalize islamic values at smk hisba buana semarang. 7(1), 110–123.

Rahmawati, N. N., Jannatul, T., Syifaullana, R., Habibullah, I., Aliffiansyah, I., & Mardhiah, I. (2025). Hikmah: Jurnal Studi Pendidikan Agama Islam Peran Deep Learning dalam Proses Pembelajaran Pendidikan Agama Islam terhadap Pengembangan Kompetensi Berpikir Kritis Siswa. (November).

Sapdi, R. M. (2023). Peran guru dalam membangun pendidikan karakter di era Society 5.0. Jurnal Basicedu, 7(1), 993–1001.

Sari, D. N., & Alfiyan, A. R. (2023). Peran adaptasi game (gamifikasi) dalam pembelajaran untuk menguatkan literasi digital: Systematic literature review. UPGRADE: Jurnal Pendidikan Teknologi Informasi, 1(1), 1–10.

Selian, S. N., & Amalia, H. (2024). Persepsi pendidik tentang pembelajaran sosial emosional anak usia dini. Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 8(2), 303–312.

Sholikin, N. W., Sujarwo, I., & Abdussakir, A. (2022). Penerapan teori belajar bermakna untuk meningkatkan literasi matematis siswa kelas X. Jurnal Cendekia: Jurnal Pendidikan Matematika, 6(1), 386–396.

Siti Rabiatul Aliyah, Nuni Norlianti, M. (2025). Model Pembelajaran Pai Berbasis Deep Learning. 6(5), 2341–2354.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. Journal of Business Research, 104, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Sugiarto, S., & Farid, A. (2023). Literasi digital sebagai jalan penguatan pendidikan karakter di era Society 5.0. Cetta: Jurnal Ilmu Pendidikan, 6(3), 580–597.

Turkle, S. (2021). The empathy diaries: A memoir. Penguin Press.

Wathon, A. (2024). Pendekatan deep learning dalam Kurikulum Merdeka. WJME: World Journal of Mathematics and Education, 1(2), 55–65.

Xiao, Y., & Watson, M. (2019). Guidance on conducting a systematic literature review. Journal of Planning Education and Research, 39(1), 93–112. https://doi.org/10.1177/0739456X17746503

Yahriyah, S., Nasikin, M., & Setyaningrum, T. (2025). Integration Of Deep Learning Technology In Islamic Religious Education (PAI). 6(3), 550–558.

Yusgiantara, A. (2025). Memasukkan Kecerdasan Buatan Ke Dalam Pendidikan Islam : Kerangka Epistemologis Untuk Interkoneksi Pengetahuan Di Era Industri 5. 0 Incorporating Artificial Intelligence into Islamic Education: An Epistemological Framework for Knowledge Interconnection . 6(c).

Yusuf, M., Julianingsih, D., & Ramadhani, T. (2023). Transformasi pendidikan digital 5.0 melalui integrasi inovasi ilmu pengetahuan dan teknologi. Jurnal MENTARI: Manajemen Pendidikan Dan Teknologi Informasi, 2(1), 12–20.

Zaimina, A. B., & Zahrah, F. (2024). Literasi Digital Dalam Pembelajaran Akidah Akhlak Di Era Society 5.0: Analisis Pustaka Tematik. Al-Adabiyah: Jurnal Pendidikan Agama Islam, 5(2), 199–208. https://doi.org/10.35719/adabiyah.v5i2.1093

Zarkani, M., Pradipta, L., Bahari, J., & Bahri, S. (2024). Actualization of the Use of Artificial Intelligence (AI) in Developing Islamic Education in the Era of Society 5. 0. 6(1), 57–71. https://doi.org/10.15575/kp.v6i1.