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Digital Neuroethics and the Reconstruction of the Epistemology of Islamic Religious Education

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Abstract

The posthuman era is marked by the integration of artificial intelligence, biotechnology, and digital systems that transform educational epistemology. Digitalization gives rise to algorithmic disinformation and knowledge manipulation, thus demanding an adaptive reconstruction of the epistemology of Islamic Religious Education based on reflective ethics. This study aims to analyze the Digital Neuroethics paradigm as a conceptual basis for the reconstruction of the epistemology of Islamic Religious Education and formulate its implications for strengthening the scientific framework of religious education that is adaptive to digital transformation. The study uses a qualitative approach with a literature study type. Data were obtained from journal articles, scientific books, and relevant academic documents through documentation techniques and analyzed using data reduction, thematic categorization, and conceptual interpretation. Data validity was maintained through literature triangulation and consistency of theoretical argumentation. The results show that Digital Neuroethics enables the reconstruction of the epistemology of Islamic Religious Education through the integration of revelation, reason, and digital experience as complementary sources of knowledge. This model positions revelation as an ethical orientation, reason as a critical instrument, and digital experience as a practical space for the formation of moral awareness. The implications of the research confirm the theoretical contribution in the form of developing an integrative epistemological paradigm as well as a practical contribution to strengthening the curriculum and learning strategies of Islamic Religious Education that are responsive to moral complexity in digital society.

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INTRODUCTION

The development of contemporary civilization shows a shift towards what in the literature of the philosophy of technology is called the posthuman era, namely a phase when

the boundaries between humans, technology and digital systems become increasingly fluid (Jehalut et al., 2025). This concept is rooted in two main currents of thought, namely the theory of posthumanism which highlights the deconstruction of the position of humans as the center of knowledge and the sole agent in civilization, as well as the discourse of transhumanism which emphasizes the possibility of increasing human capacity through the integration of advanced technologies such as artificial intelligence, biotechnology, and autonomous computing systems (Fatimah Aliah & Dodi Irawan, 2024). In this context, humans are no longer understood as biological entities separate from technology, but rather as part of an interconnected cognitive and digital network. The integration of artificial intelligence, biotechnology, and the global digital ecosystem ultimately shapes new knowledge configurations that influence how humans learn, understand reality, and establish epistemic authority.

This transformation is taking place rapidly in the education sector. A UNESCO report confirms that the rapid development of digital education has not been fully matched by the readiness of an adequate ethical and regulatory framework (UNESCO, 2025). The World Economic Forum publication also points to the increasing risk of artificial intelligence-based disinformation, including the use of generative algorithms capable of producing massive amounts of manipulative content, thereby influencing public trust in sources of knowledge (World Economic Forum, 2024). In the Indonesian context, the digital transformation policy through the Merdeka Belajar program and strengthening national digital literacy demonstrate the government's commitment to integrating technology into the education system (Kementerian Pendidikan, Kebudayaan, Riset, Dan Teknologi, 2023). However, a number of studies show that the acceleration of digitalization also has implications for the emergence of new social and cognitive problems, such as increasing polarization of opinion in the digital space, the spread of fragmented religious narratives, and changes in the information consumption patterns of the younger generation which tend to be instant and algorithmic (Fakhrurridha et al., 2025).

These changes have direct implications for the epistemology of Islamic Religious Education. As a discipline that not only transmits normative doctrine but also shapes students' ethical and spiritual awareness, Islamic Religious Education faces challenges when the authority of religious knowledge no longer stems solely from educational institutions or religious scholars, but also competes with social media algorithms, search engines, and artificial intelligence based platforms (Gofur et al., 2022). This phenomenon has given rise to what some researchers call digital religious authority, a shift in the source of religious legitimacy from traditional authorities to digital systems that automatically mediate information. Its impacts include fragmented religious understanding, the simplification of religious teachings in short digital content formats, and a tendency toward religious formalism in cyberspace.

At the educational policy level, the Indonesian national curriculum has emphasized character building and the development of the Pancasila Student Profile as the primary

learning orientation. However, the ethical dimension of reflection on the relationship between humans and technology, particularly in the context of the development of artificial intelligence and digital algorithms, has not been explicitly integrated into the conceptual framework of the Islamic Religious Education curriculum (Rohman et al., 2025). This condition indicates the need to reconstruct the epistemological paradigm of Islamic Religious Education to be more responsive to changes in the knowledge landscape in the posthuman era.

Theoretically, this study is based on Islamic epistemology which places revelation (*wahy*), reason (*'aql*), and experience (*tajribah*) as sources of knowledge which complement each other in the process of searching for truth (Azizah et al., 2023). This framework is then combined with neuroethical theories developing in contemporary philosophy and cognitive neuroscience. Neuroethics examines the moral implications of scientific understanding of the structure and function of the human brain, including how neurological processes influence moral decision making (Farahany & Ramos, 2020). Literature published by the National Institutes of Health emphasizes that neuroethics addresses not only technological interventions on the brain, but also how digital environments and technological design can influence cognitive processes and human ethical behavior (Nyaaba et al., 2025).

In a digital context, neuroethics provides a critical perspective on how social media algorithms, addictive app design, and data-driven recommendation systems can influence users' attention, emotions, and decision making (Hubby Dzikrillah Alfani et al., 2025). Exposure to persuasive technology has the potential to shape individual cognitive preferences, including in understanding religious information (Nasaruddin, & Mubarak, 2022). The integration of a neuroethical perspective with the epistemology of Islamic Religious Education allows for a new reading of the process of internalizing values, the formation of intentions (*niyyah*), and the moral responsibility of students in an increasingly complex digital environment.

Based on this framework, this study focuses on the digital neuroethics paradigm as the basis for reconstructing the epistemology of Islamic Religious Education. This paradigm positions human moral awareness and cognitive structure as the dialectical terrain between revelation, rationality, and digital technology. Within this framework, teachers no longer act merely as transmitters of knowledge but also as facilitators of reflective awareness, helping students understand the psychological, neurological, and ethical impacts of technology use. Thus, Islamic Religious Education is not simply oriented towards the transfer of normative doctrines but also needs to develop digital ethical literacy rooted in the values of monotheism and human responsibility as caliphs on earth.

Another dimension that complements this study is the integration of the digital neuroethics paradigm with the national education policy framework oriented toward twenty-first-century competencies. The digital transformation initiated by the government demands synchronization between technological innovation and strengthening students' religious character. From the perspective of constructivist and critical education theories,

students are understood as active agents who construct meaning through social and digital interactions. Therefore, digital neuroethics has strategic relevance in the development of curriculum, learning design, and evaluation systems for Islamic Religious Education that are adaptive to the global digital ecosystem. This integration has the potential to strengthen religious moderation, moral resilience, and spiritual literacy amidst the increasing complexity of information.

Several previous studies have discussed digital transformation in Islamic education, religious digital literacy, and the ethics of artificial intelligence in educational contexts. However, most of these studies still focus on the pedagogical dimension, media literacy, or normative approaches in religious education, without elaborating in depth on the neuroethical basis as the epistemological foundation for the formation of students' moral awareness. Furthermore, research integrating the perspectives of Islamic epistemology, cognitive neuroscience, and technology ethics within a systematic conceptual framework remains relatively limited. These limitations indicate a research gap in contemporary Islamic Religious Education discourse, particularly regarding the development of an epistemological paradigm capable of explaining the relationship between human cognitive structures, revealed values, and digital technology in the posthuman era.

Based on this gap, this study offers a conceptual contribution in the form of formulating a digital neuroethics paradigm as an integrative framework for reconstructing the epistemology of Islamic Religious Education. The aim of this study is to analyze the conceptual construction of this paradigm and formulate its implications for strengthening a more adaptive and transformative Islamic Religious Education scientific framework. Theoretically, this study is expected to enrich the discourse on the integration of science and religion in the context of the development of smart technology. Practically, the results of this study are expected to serve as a reference for the development of educational policies, curriculum design, and learning strategies in Islamic Religious Education that are more responsive to the moral, cognitive, and spiritual challenges of the digital era.

METHODS

This research uses a qualitative approach with a literature study design combined with conceptual analysis methods to explore the relationship between digital neuroethics, educational philosophy, and posthuman theory in the context of Islamic Religious Education. Conceptual analysis methods are used to explore the meaning structures, ontological assumptions, and epistemological implications of key concepts developing in contemporary literature (Sugiyono, 2017). Primary literature sources were obtained through systematic searches of academic databases such as Google Scholar, DOAJ, and the SINTA indexed national journal portal using the keywords neuroethics, religious education, posthumanism, and educational transformation. Inclusion criteria were based on scientific publications within the last ten to fifteen years that were directly relevant to the study theme and contained strong theoretical arguments. Each selected document was critically

analyzed through in-depth reading, analytical note-taking, and identification of key concepts related to the epistemological reconstruction of Islamic Religious Education (Anto et al., 2024).

The analysis process is carried out through the stages of data reduction, conceptual categorization, and thematic interpretation which are directed at philosophical synthesis (Miles et al., 2014). In the initial stage, the researchers identified and grouped the findings into key themes, such as the ethical dimensions of neurotechnology, the anthropological implications of posthumanism for the concept of religious human beings, and the transformation of educational goals in a digital society. Next, each theme was analyzed through a philosophical approach, examining the epistemological assumptions underlying the authors' arguments and comparing emerging perspectives within the discourses of neuroethics, philosophy of education, and religious studies (Lexy J. Moleong, 2018). This analysis is not only descriptive, but also critical-interpretive in nature to assess the relevance and limitations of these concepts within the framework of developing Islamic Religious Education that is responsive to changes in technology and knowledge culture.

Based on this conceptual synthesis, this study developed an epistemological analysis framework encompassing three main stages: philosophical analysis, conceptual reconstruction, and the formulation of a new epistemological model for Islamic Religious Education. The philosophical analysis stage examines the relationship between knowledge, technology, and morality from a neuroethical perspective, as well as its implications for the concept of humans as subjects of religious education. The conceptual reconstruction stage focuses on restructuring the relationship between revelation, reason, and digital experience as sources of knowledge in the educational process. The final stage produces an integrative epistemological model that combines religious ethical values with critical awareness of the development of neurotechnology. The validity of the study is maintained through literature triangulation, argument consistency testing, and verification of the concept's suitability to recognized educational and ethical theories in academic studies (Robert K. Yin, 2018).

RESULTS AND DISCUSSION

Philosophical Analysis of the Concept of Digital Neuroethics in the Context of Islamic Religious Education

The development of digital technology in recent decades has significantly changed the way humans acquire knowledge, interact, and build structures of moral awareness (Bahijah & Khumairoh, 2025). This transformation is not only technological in nature, but also impacts the cognitive and neuropsychological dimensions of humans, influencing the decision-making process and the formation of ethical values in social life. In this context, an interdisciplinary field of study known as digital neuroethics has emerged, namely the study of the relationship between digital technology, the human nervous system, and the ethical implications arising from their interaction. This perspective emphasizes that digital technologies such as information algorithms, social media, and artificial intelligence are not

neutral, but rather have the ability to shape users' attention patterns, cognitive preferences, and moral tendencies through certain neurocognitive mechanisms. Therefore, digital neuroethics seeks to philosophically examine how the interaction between digital technology and human brain structures can influence moral autonomy, ethical responsibility, and the dynamics of value formation in modern society.

In the context of education, especially Islamic Religious Education, the development of digital technology creates new learning spaces that are no longer limited to face-to-face interactions in the classroom (Aflah et al., 2025). Students now obtain religious information through various digital platforms, which shape how they understand religious teachings, construct moral meaning, and build religious identity. This phenomenon demonstrates that the process of internalizing religious values is influenced not only by the authority of teachers or religious texts, but also by the digital systems that regulate information distribution and mediate learning experiences. Philosophically, this situation demands critical reflection on how digital technology influences the cognitive processes involved in understanding Islamic teachings and how religious education can respond constructively to these changes. The integration of digital technology in Islamic education serves not only as a learning tool but also as an epistemic environment that shapes students' thinking, interpretation, and moral orientation in a digital society.

Digital neuroethics offers a new perspective on understanding the relationship between technology, moral awareness, and religious character formation. In a digital environment filled with recommendation algorithms and a rapid flow of information, the human brain undergoes cognitive adaptation processes that can influence how individuals process values, emotions, and ethical considerations (Eberwine & Jeffrey Kahn, 2020). This has direct implications for the process of religious education, as the formation of moral character and awareness occurs not only through the delivery of normative material but also through cognitive experiences shaped by the digital environment. Thus, a philosophical analysis of digital neuroethics reveals that religious character formation must consider the neurocognitive dynamics influenced by digital technology. From this perspective, religious education needs to develop a pedagogical approach that emphasizes not only cognitive aspects but also the emotional, reflective, and moral dimensions of students' awareness in navigating the complexities of the digital ecosystem.

Within the philosophical framework of Islamic Religious Education, digital neuroethics can also be understood as an effort to broaden the epistemological horizon of Islamic education in facing contemporary digital realities (Freire, 1998). Religious education is no longer merely a normative transmission of religious doctrine; it must also foster critical awareness of the knowledge structures formed in the digital space. This aligns with the concept of critical education, which emphasizes the importance of reflecting on power relations, knowledge structures, and the social mechanisms that shape individual consciousness. Through this approach, students become not merely consumers of digital information but are also able to develop a reflective awareness in assessing the truth,

authority, and validity of the religious knowledge they encounter in the digital space. Thus, the integration of digital neuroethics in Islamic Religious Education has the potential to foster a learning paradigm that places critical awareness as the foundation for understanding religious teachings amidst the complexity of modern technology.

Furthermore, a philosophical analysis of digital neuroethics also opens up opportunities for innovation in the development of an Islamic Religious Education curriculum that is more responsive to changing times. The curriculum serves not only as a framework for delivering Islamic teachings but also as a pedagogical system that shapes students' thinking structures and value orientations in digital life (Ni'mah et al., 2025). In this context, curriculum development can be directed at integrating digital literacy, neuroethical awareness, and strengthening spiritual values as the ethical foundation for technology use. This approach allows religious education to be not only normative but also transformative in developing the moral awareness of the digital generation. By integrating ethical reflection on technology into the learning process, Islamic Religious Education can serve as a character-building space capable of balancing intellectual, spiritual, and technological development in students' lives.

As a conceptual contribution, research on digital neuroethics in the context of Islamic Religious Education offers a new framework of thought that places digital technology as an integral part of the process of forming religious awareness (Suratin & Munawarsyah, 2025). This approach emphasizes that religious education in the digital era needs to shift from a paradigm of knowledge transmission to a paradigm of consciousness transformation. This means that the learning process aims not only to convey religious teachings but also to develop students' reflective abilities in understanding the relationship between technology, morality, and spirituality. Thus, the integration of digital neuroethics can form the basis for developing a religious education model that is more adaptive to social and technological change. This approach also provides theoretical contributions in broadening the study of Islamic educational philosophy, particularly in formulating an educational paradigm capable of maintaining an ethical and spiritual orientation amidst global digital transformation.

Reconstruction of Islamic Knowledge Sources from a Digital Neuroethics Perspective

In the classical Islamic epistemological tradition, the sources of knowledge are generally formulated through three main foundations, namely revelation (*al-wahy*), reason (*'aql*), and empirical experience (*tajribah*) (Kurniasih et al., 2024). Revelation is positioned as the ultimate source of truth, providing normative, ethical, and spiritual guidance for human life. Reason functions as a rational instrument that enables humans to interpret, understand, and develop the meaning contained in revelation. Meanwhile, empirical experience provides a space for humans to acquire knowledge through observation of social and natural realities (Suratin & Munawarsyah, 2025). Within the framework of Islamic Religious Education, these three sources form a complementary epistemic system and serve as the

foundation for the development of religious awareness and social ethics in students. However, the dynamics of digital technology development in the 21st century have brought about significant changes in the way humans access, produce, and validate knowledge. This situation demands a more contextual epistemological reflection on the development of knowledge in the digital space.

The development of information technology has fundamentally changed the epistemological landscape of education, including in the context of Islamic Religious Education. Religious information is no longer solely acquired through direct interaction with teachers, scriptures, or traditional social environments, but also through digital platforms such as social media, online learning systems, and various artificial intelligence-based applications. This transformation has created a new form of experience that can be called the digital experience, namely the process of human interaction with knowledge through technological media (Amalia et al., 2024). In this context, digital experiences are not merely a means of conveying information but also shape how individuals understand, assess, and internalize religious knowledge. Thus, digital space serves as a new epistemic arena that influences the process of shaping religious understanding in modern society.

From a digital neuroethics perspective, digital experiences can be understood as cognitive extensions that expand the human brain's capacity to process information. Digital neuroethics examines the relationship between the development of digital technology and neurological processes, including how technology influences how humans think, make moral decisions, and construct value systems (Alfi et al., 2023). In this context, human interaction with digital technology impacts not only cognitive aspects but also ethical and spiritual dimensions. Digital technology can modify attention patterns, memory, and the moral evaluation processes that occur in the human brain. Therefore, the reconstruction of epistemology in Islamic Religious Education needs to consider this neurocognitive dimension so that the religious learning process can continue to foster reflective and responsible moral awareness.

The reconstruction of Islamic knowledge sources from a digital neuroethics perspective is not intended to replace the classical epistemological structures that have long been the foundation of Islamic scholarship. Rather, this approach seeks to broaden our understanding of how knowledge acquisition occurs in the context of modern technology (Rahmandani et al., 2025). Revelation remains the primary normative source, providing value orientation and ethical principles in human life. Reason serves as a critical tool that enables individuals to verify information circulating in the digital space. Meanwhile, digital experience can be understood as a space of epistemic mediation that brings humans together with various forms of new knowledge. Thus, this reconstruction positions digital technology as a medium that influences the interaction between revelation, reason, and human experience in the process of forming religious knowledge.

A digital neuroethics approach also opens up the possibility of developing a more integrative and reflective epistemological model of Islamic Religious Education that

addresses the dynamics of technology. One important contribution of this perspective is the development of critical awareness regarding digital knowledge production, particularly in addressing the phenomena of algorithmic bias, information manipulation, and the spread of religious disinformation in the digital space (Hakim & Dahri, 2025). In this context, education serves not only as a means of transmitting knowledge but also as a space for developing critical awareness, enabling students to assess the validity and integrity of digital information. Therefore, the epistemological reconstruction of Islamic Religious Education needs to integrate the dimensions of digital literacy, technological ethics, and reflective skills in understanding the increasingly complex digital reality.

The reconstruction of Islamic knowledge sources from a digital neuroethics perspective provides a significant conceptual contribution to the development of a new paradigm in Islamic Religious Education that is adaptive and responsive to changes in the times (Widodo & Hadi, 2026). This paradigm views digital technology not merely as a learning tool or medium, but as an integral part of an epistemic ecosystem that shapes the production, distribution, and internalization of religious knowledge. In this context, human interaction with digital technology influences understanding of religious values, moral awareness, and social responses. The integration of Islamic normative sources with rationality, empirical experience, and digital learning enables Islamic Religious Education to develop contextual, reflective, and transformative learning.

Table 1. Sources of Knowledge of Islamic Educational Epistemology in Digital Neuroethics

No.	Aspect	Epistemological Characteristics	Relevance in Digital Neuroethics Perspective
1.	Revelation (*al-wahy*)	Revelation as the highest source of normative truth in Islamic epistemology.	Revelation becomes a moral compass for digital neuroethics in assessing information and the use of technology.
2.	Reason (*'aql*)	Reason as a rational instrument to understand, interpret, analyze, and verify the meaning of revelation.	Critical reasoning evaluates digital information, detects algorithmic bias and online religious disinformation.
3.	Empirical Experience (*tajribah*)	Empirical experience as a source of knowledge through observation of social and natural reality.	Digital experiences shape human cognition, memory, attention, and internalization of religious knowledge.

Thus, the reconstruction of Islamic epistemology based on digital neuroethics emphasizes the importance of renewing the paradigm of religious education, oriented not only toward the transmission of normative knowledge but also toward the formation of ethical awareness in facing digital realities. The integration of revelation, rationality,

empirical experience, and digital experience enables Islamic Religious Education to play a more strategic role in shaping critical, adaptive, and responsible religious character. Within this framework, religious education not only maintains the continuity of Islamic intellectual tradition but also develops students' reflective capacity to navigate the digital space ethically and wisely. Therefore, this paradigm serves as a conceptual foundation for developing an Islamic Religious Education learning model that is relevant to the challenges of a digital society while remaining firmly rooted in the fundamental values of Islamic teachings.

New Epistemological Model: The Relationship between Revelation, Reason, and Digital Experience in Islamic Religious Education

The development of digital technology has brought significant changes to the way humans acquire, process, and validate knowledge, including in the context of religious education. This situation demands a reconstruction of the epistemology in Islamic Religious Education to respond to the cognitive dynamics emerging in the digital space. Classical epistemology, which places revelation and reason as the primary sources of knowledge, needs to be expanded to consider digital experiences as a new dimension in the process of forming religious awareness (Wajdi et al., 2025). Through this approach, religious knowledge is acquired not only from traditional texts and authorities, but also through interaction with an increasingly complex digital information ecosystem. Therefore, an epistemological model is needed that can explain the relationship between revelation as a normative source, reason as an interpretive instrument, and digital experience as a practical space for knowledge. This model is crucial for Islamic Religious Education to remain relevant in the face of technology-driven social transformation while maintaining the integrity of Islamic values in modern life.

Within this new epistemological framework, revelation remains fundamental as a source of values and normative orientation in the educational process. Revelation is understood not only as a source of law and theological doctrine, but also as an ethical framework that provides guidance for humans in navigating complex digital realities (Firmansyah et al., 2025). In this context, revelation serves as a moral foundation that guides the responsible use of technology, ensuring that digital development does not lead to ethical degradation or disorientation. Islamic Religious Education plays a role in internalizing the ethical principles of revelation into students' digital lives, enabling them to develop contextual and reflective religious awareness. Thus, revelation is positioned not as a static source of knowledge, but as normative inspiration that continues to be dynamically interpreted in response to changing times.

Apart from revelation, reason has an important role as a reflective instrument that enables individuals to understand, interpret and evaluate various information circulating in the digital space (Harris & Roter, 2024). The digital era presents a vast flow of information, not all of which has reliable epistemic validity. Therefore, critical and reflective thinking

skills are crucial components in developing the epistemology of Islamic Religious Education. Reason serves not only to understand religious texts but also to critique religious narratives that develop in digital media, including the potential for disinformation, digital radicalism, and narrow religious interpretations. By strengthening this rational function, Islamic Religious Education can shape students with a critical awareness of knowledge production in the digital space. This approach aligns with the critical education paradigm, which emphasizes the importance of rational reflection in the process of intellectual liberation.

The third dimension of this epistemological model is digital experience as a practical space for knowledge that shapes how individuals understand religion. Interaction with digital platforms, online discussions, and access to global Islamic literature have opened up new possibilities in the process of religious learning (Syarif & Hannan, 2022). Students are no longer solely dependent on a single authority to acquire religious knowledge, but can instead access multiple perspectives that enrich their understanding. However, digital experiences also pose risks in the form of knowledge fragmentation and ideological polarization that can influence how individuals understand religion. Therefore, Islamic Religious Education needs to develop pedagogical strategies that can direct digital experiences into constructive and reflective learning tools. The integration of digital technology into religious learning must be systematically designed to strengthen Islamic epistemology while improving the quality of Muslim human resources in the digital era.

From a broader perspective, the relationship between revelation, reason, and digital experience can be analyzed through a digital neuroethics approach, a study that highlights the relationship between technological development, human cognitive structure, and the ethical dimension of decision-making. The development of information technology not only changes communication patterns and access to knowledge but also influences how the human brain processes information, assesses truth, and develops moral value orientations (Siroj & Ulfah, 2025). In this context, the integration of digital neuroethics into Islamic Religious Education is increasingly crucial to ensure that technological acceleration does not shift human moral and spiritual orientation. This approach emphasizes that the use of digital technology must always be accompanied by ethical reflection and social responsibility. Thus, the epistemology of Islamic Religious Education is not solely oriented toward strengthening the cognitive dimension, but also toward developing moral awareness capable of guiding the wise use of technology in a digital society.

The integration of digital neuroethics in Islamic Religious Education requires the development of a learning framework that not only emphasizes normative understanding of religious texts, but also pays attention to the cognitive dynamics of students living in a technological environment (Suratin et al., 2024). The digital reality, saturated with rapid information flows, social media algorithms, and artificial intelligence, shapes the attention patterns, preferences, and decision-making processes of the younger generation. Therefore, a neuroethical approach can serve as a conceptual foundation for connecting the values of

revelation with the psychological and neurological dynamics of modern humans. Islamic Religious Education, in this regard, needs to facilitate a process of critical reflection on how technology affects emotions, empathy, and individual moral capacities. With this approach, the educational process emphasizes not only the transfer of religious knowledge but also building students' reflective capacity to face the complexities of digital life ethically and responsibly.

As a conceptual development, this study offers an implementation model of "Quranic Digital Neuroethics" in Islamic Religious Education that integrates three main components: revelation literacy, rational reflection, and ethically guided digital experiences. This model can be implemented through three concrete learning strategies. First, digital reflective learning, which involves reflective activities based on digital cases such as analyzing social media content, hate speech, or disinformation from the perspective of the values of the Qur'an and Hadith. Second, ethical digital simulation, which uses technology-based simulations or case studies to train students to make moral decisions in digital situations. Third, neuro-reflective journaling, which is a reflective recording practice that encourages students to understand how their emotions, attention, and cognitive responses are formed when interacting with technology. This approach allows Islamic Religious Education to systematically integrate the spiritual, rational, and experiential dimensions of digital learning, making religious learning more contextual and relevant to the realities of contemporary digital life.

Based on this framework, the new epistemological model in Islamic Religious Education can be understood as a dynamic relationship between revelation, reason, and digital experience that complement each other in the process of forming religious knowledge. Revelation provides a normative value orientation and ethical framework, reason functions as an instrument of interpretation, criticism, and rationalization of knowledge, while digital experience becomes a practical space that broadens the horizons of religious learning in the context of modern life. The main contribution of this epistemological model lies in its ability to integrate normative, rational, and empirical dimensions within a single framework that is adaptive to technological developments. With this approach, Islamic Religious Education functions not only as a means of transmitting religious knowledge but also as a space for intellectual and moral transformation that shapes a generation of Muslims who are critical, adaptive, and possess integrity in facing the challenges of a constantly evolving digital civilization.

CONCLUSION

The development of digital technology has transformed the way humans acquire, process, and validate knowledge, while influencing cognitive structures and moral awareness through neurocognitive mechanisms discussed in the study of digital neuroethics. In the context of Islamic Religious Education, this phenomenon demands an epistemological reconstruction that integrates revelation as a normative source, reason as a

critical rational instrument, and digital experience as a practical space for knowledge that shapes students' religious understanding. The interaction between technology, the human brain, and value systems shows that the formation of religious character is influenced not only by the transmission of religious doctrine, but also by the digital environment that mediates the learning experience. Therefore, Islamic Religious Education needs to develop an integrative pedagogical paradigm that emphasizes digital literacy, neuroethical awareness, and moral reflection based on the values of revelation. The implication is that curricula and learning strategies need to be designed transformatively to be able to shape students who are critical, adaptive, and have integrity in the digital ecosystem. Further research is recommended to empirically test the Qur'anic digital neuroethics learning model through an interdisciplinary approach that integrates Islamic educational philosophy, neuroscience, and digital technology studies.

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