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Digital Revolution and the Shifting Paradigm of Knowledge: Islamic Scholars' Perspectives on Technology Ethics

Mustaqim[1], Ridha Ahida[1]
[1]Universitas Islam Negeri Sjech M. Djamil Djambek Bukittinggi, Indonesia
11225001@mhs.uinbukittinggi.ac.id *

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Abstract

The rapid advancement of digital technology has fundamentally transformed the ways knowledge is produced, disseminated, and validated, resulting in significant paradigm shifts across educational, religious, and social domains. This study aims to examine how Islamic scholars construct and negotiate ethical frameworks and knowledge paradigms in response to the digital revolution, particularly in relation to ontological, epistemological, and axiological dimensions of knowledge. Employing a qualitative approach with Critical Discourse Analysis (CDA), this study applies content analysis to examine classical and contemporary Islamic scholarly texts, academic publications, and authoritative digital discourses on technology and ethics. The findings reveal that Islamic scholars perceive the digital revolution as both a challenge and an opportunity: while digitalization disrupts traditional modes of authority and knowledge transmission, it also enables the emergence of more adaptive, inclusive, and context-sensitive models of Islamic scholarship and education. Furthermore, the analysis demonstrates an increasing emphasis on integrating spiritual and moral values with technological innovation to ensure ethical accountability and social benefit. This study implies that the formulation of technology ethics in the digital age requires a holistic integration of Islamic ethical principles with contemporary technological realities, offering a normative framework that promotes human well-being, social responsibility, and the public good.

INTRODUCTION

The development of knowledge has evolved in parallel with the dynamics of human history, which are continuously shaped by social and cultural conditions as well as technological advancement Tegegn, (2024). In the philosophy of science, three fundamental foundations are widely recognized as the basis of scientific inquiry, namely ontology, epistemology, and axiology (Turner, 2022). These three principles play a crucial role in determining how knowledge is constructed, how its validity is assessed, and how its benefits are directed toward human life. From an Islamic

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scholarly perspective, knowledge is not viewed solely through the lens of logic, but is also closely connected to spiritual and ethical values (Amir & Rahman, 2023; Haryadi et al., 2024). Consequently, the development of knowledge is driven not only by rationality but also by moral and spiritual values that guide its purpose and application.

With the advent of the digital transformation era, the realm of knowledge has undergone significant changes. Technological advancements have reshaped the ways in which humans acquire, manage, and disseminate information. Libraries that once existed as physical spaces have evolved into digital platforms, face-to-face learning has shifted toward online classrooms, and scholarly communication has expanded into technology-based global forums (Zen, 2019). While these conditions create substantial opportunities for knowledge development, they also pose challenges for Islamic education, such as the erosion of adab, the overwhelming influx of unfiltered information, and the tendency toward instant learning practices (Anggraeni et al., 2023; Riyanto et al., 2025). Therefore, the digital era must be approached with strategic preparedness to ensure that technological progress remains aligned with the ethical and value-based foundations of Islamic education.

Given these evolving conditions, more rigorous research is required to understand the shifting paradigms of knowledge in the digital age. These shifts are not limited to changes in learning methods but also affect how knowledge itself is conceptualized and interpreted. Such transformations inevitably have far-reaching implications for Islamic education, which has long been rooted in the values of adab, scholarly traditions, and the authority of ulama (Mohiuddin, 2023). For this reason, the involvement of Islamic scholars in providing ethical guidance becomes increasingly important to ensure that the use of technology does not deviate from Islamic values. Accordingly, studies on digital ethics and the role of ulama can serve as a foundation for ensuring that technological development remains aligned with the principles of revelation.

The research problems addressed in this paper encompass four main focuses: how the digital revolution influences the construction of contemporary knowledge, how paradigm shifts in knowledge occur from ontological, epistemological, and axiological perspectives, Islamic scholars' views on Islamic education amid the wave of digitalization, and strategies for integrating Islamic values with technology (Ibrahim et al., 2025; Zahirah & Suhaedi, 2025). In line with these issues, the objectives of this study are to explain the impact of the digital revolution on the development of knowledge, analyze changes in knowledge paradigms across the three fundamental domains, identify opportunities and challenges for Islamic education in the digital era, and describe the formulation of ethical frameworks for the use of technology based on Islamic values.

METHODS

This study employs a qualitative approach using Critical Discourse Analysis (CDA) to examine in depth the construction of knowledge paradigms and the formulation of technology ethics from the perspective of Islamic scholars in the digital era. This approach is selected because it enables an exploration of power relations, scholarly authority, and meaning-making processes embedded in religious and academic discourses, particularly in relation to the ontological, epistemological, and axiological transformations of knowledge (Bartlett & Vavrus, 2016; Lee & Kim, 2019; Mukhlis et al., 2020; Qahar Sarwari & Adnan, 2023). Content analysis is applied as an operational method to systematically identify, code, and categorize key themes emerging from the texts, thereby ensuring a structured and rigorous discourse analysis (Engkizar et al., 2025; Engkizar et al., 2023; Kyngäs, 2020; Pohontsch, 2019).

The data sources consist of written texts and discursive documents, including classical and contemporary works of Islamic scholars, peer-reviewed journal articles, books on the philosophy of science, and academic publications addressing the digitalization of knowledge, Islamic education, and technology ethics. All sources are selected purposively based on thematic relevance, scholarly authority, and their contribution to the discourse on technology ethics from an Islamic perspective. The analysis focuses on discursive structures, dominant narratives, and the positioning of Islamic scholars in responding to digital transformation and shifts in knowledge authority (Chassignol et al., 2018; Engkizar et al., 2025).

Data analysis is conducted through several stages, namely data organization, discourse reduction, thematic coding, and critical interpretation. During the coding stage, texts are examined to identify concepts, arguments, and discursive patterns that represent Islamic scholars' perspectives on the challenges and opportunities of the digital revolution. The findings are then interpreted critically by linking them to the framework of the philosophy of science and the values of Islamic education. Through this approach, the study produces a comprehensive analytical account of technology ethics grounded in Islamic values and its implications for the development of knowledge and Islamic education in the digital age.

RESULT AND DISCUSSION

The Impact of the Digital Revolution on the Construction of Contemporary Knowledge

Knowledge Becoming More Open

Digitalization has opened broad access to knowledge that is no longer constrained by geographical or temporal boundaries (Tegegn, 2024; Zen, 2019). In the past, sources of knowledge were concentrated in universities and physical libraries, whereas today scientific journals, knowledge databases, and Islamic studies can be accessed online by anyone. This transformation has given rise to collaborative learning patterns and increasingly robust information networks. Moreover, the production of new knowledge no longer depends solely on academics, but also involves the wider community through discussions, educational content, and knowledge-sharing platforms (Anggraeni et al., 2023). Therefore, it can be understood that digitalization has fostered the emergence of a more open and interactive learning society.

Transformation of Scientific Methods

Research methods in the modern era have undergone significant transformation. Data collection no longer relies solely on conventional observation, but has expanded through the use of big data, artificial intelligence, digital ethnography, and learning analytics (Zen, 2019). Artificial intelligence technology has emerged as a cognitive partner that assists researchers in literature exploration, information processing, and the construction of preliminary research frameworks (Yao, 2022; Zawacki-Richter et al., 2019). These changes encourage the academic world to move toward more data-driven research approaches and greater openness to multidisciplinary collaboration (Hartati et al., 2022). Thus, digital innovation has accelerated research processes while simultaneously expanding the scope of scientific methodologies.

Shifts in Knowledge Authority

The structure of authority within the realm of knowledge has experienced a noticeable shift. Whereas authority was previously held by *ulama*, academics, or formal institutions, knowledge authority has now become more dispersed and decentralized (Riyanto et al., 2025). Technology practitioners, content creators, and even ordinary internet users can contribute to the production and dissemination of knowledge. While this condition offers positive outcomes in terms of broader access

to knowledge, it also presents threats such as hoaxes, misinformation, and the proliferation of pseudoscience (Anggraeni et al., 2023). Therefore, digital literacy becomes an essential responsibility that every Muslim must possess in order to remain critical and wise in engaging with information.

Shifts in Knowledge Paradigms

Ontological Dimension

Contemporary scientific reality is no longer confined to physical forms alone but has expanded into the digital realm. Virtual identities, user data traces, and metaverse interaction spaces have become new objects of scientific inquiry (Grass, 2024; Susanti & Fachrudin, 2024). The presence of data-based realities influences scholarly perspectives on existence and being. Concepts of objectivity now coexist with digital representations constructed through data and algorithms. Thus, technology has broadened the scope of scientific reality toward increasingly complex virtual dimensions.

Epistemological Dimension

The ways in which humans acquire knowledge have changed dramatically. Sources of knowledge are no longer limited to teachers, books, or direct experience, but have expanded to include digital databases, applications for hadith and tafsir studies, scholarly podcasts, and artificial intelligence-based learning assistance (Alotaibi & Alshehri, 2023; Suhendi, 2024). This condition indicates that learning is no longer dependent on a single channel, but has evolved into a multi-source system. In the context of Islamic education, the role of teachers has shifted toward that of literacy facilitators and guides to understanding, rather than sole holders of knowledge authority (Pallathadka et al., 2023). Consequently, digital transformation has created new learning patterns that are more open and diverse.

Axiological Dimension

Technology attains value when it is used for purposes that bring public benefit. However, digital development also presents various ethical issues such as plagiarism, cyberbullying, irresponsible use of artificial intelligence, and the spread of religious hoaxes (Festl et al., 2012; Marwah et al., 2024). These conditions demand moral awareness in the use of digital tools and information management. In Islamic education, a crucial task is the formation of students' character so that they possess media ethics and intellectual responsibility (Parhan et al., 2021; Tohara et al., 2021). Thus, the internalization of digital morality becomes a key factor in ensuring that technology remains aligned with values of goodness and benefit.

Islamic Scholars' Views on Digital Technology in Education

This study also collected perspectives from 20 teachers and Islamic scholars at *Pondok Pesantren*. From an interview with one senior scholar who serves as the Head of the Foundation, it was emphasized that technology is an inevitable part of contemporary development. He stated:

> *…Technology is essentially a tool. If we fill it with goodness, it becomes a field of da'wah; but if we use it for harmful purposes, it will damage the morals of the younger generation (informant).*

He views technology as a major opportunity for expanding knowledge and *da'wah*. Religious lectures that were previously attended by only dozens of students can now reach thousands of audiences through YouTube or live streaming.

Meanwhile, one teacher added:

> *…Today's students learn quickly because materials are easily accessible through the internet. But that is also where the danger lies knowledge can be obtained without a teacher. In Islamic tradition, however, sanad is essential (informant).*

This illustrates the dual nature of technology: while it facilitates access to knowledge, it may also weaken teachers' authority if not properly guided.

Digital Ethics from the Perspective of Islamic Scholars

Islamic scholars generally agree that the use of technology in education must be grounded in values of *adab*, moral conduct (*akhlaq*), and *maqasid al-shariah*. The interviews identified three core values of digital ethics:

Table 1. Digital ethics from the perspective of Islamic scholars

Ethics	Explanation	Example of Implementation
Adab in seeking knowledge	Technology is merely a tool; teachers remain central	Watching lecture videos → continuing direct study for *tabarruk* of knowledge
Responsibility in information	Verification (*tabayyun*) before sharing religious content	Not sharing hadith without checking sources
Safeguarding intellect and morality	Avoid immoral content and harsh speech	Filtering content on students' mobile devices

Strategies for Integrating Islamic Values and Technology

Several strategic steps can be undertaken in formulating ethical guidelines for technology use based on scholars' perspectives and the principles of *maqasid al-shariah*. The first step is strengthening the value of *tawhid* as the foundation of digital literacy (Fitriyani, 2020; Wang et al., 2023). This theological awareness reminds users that technology is merely a tool, not the ultimate purpose of life. With this perspective, humans maintain control and avoid digital dependency. *Tawhid* serves as guidance to ensure that technological use does not exceed moral and spiritual boundaries.

The second step involves instilling *adab* in both the production and consumption of information (Alfurqan et al., 2019; Yanti & Hayani, 2023). Digital ethics include honesty in writing, avoidance of plagiarism, and refraining from spreading hoaxes. This is crucial given the overwhelming flow of digital information that easily exposes society to misleading content. Users are required to adopt a critical yet responsible attitude in disseminating knowledge. Thus, *adab* becomes the foundation for dignified digital engagement grounded in Islamic values (Baroud et al., 2025; Kassymova et al., 2025).

The third step is strengthening an Islamic-based digital literacy curriculum (Arif et al., 2024; Mukarromah et al., 2025; Yanto, 2020). Integrating classical Islamic texts (*kitab turath*) with modern technology can produce learning that is relevant to contemporary needs without abandoning the classical Islamic intellectual heritage. This curriculum can combine textual understanding with practical digital skills, producing a generation that is intellectually competent and morally upright. The success of this integration demonstrates that Islamic intellectual tradition can synergize with technological advancement.

The fourth step is encouraging the use of technology for public benefit (*maslahah*) (Hartati et al., 2022). Digital technology can serve as a medium for educational da'wah, scientific research development, and application-based social services. When used positively, technology becomes a tool of empowerment for the *ummah*. This potential can rapidly and effectively expand the reach of religious knowledge and *da'wah*. Therefore, orientation toward *maslahah* must serve as the primary direction in technological utilization.

The final step is establishing ethical regulations for artificial intelligence to safeguard human dignity (Riyanto et al., 2025). Regulation is necessary to balance innovation with moral responsibility. Such oversight can prevent data misuse, algorithmic bias, and information manipulation. With ethical guidelines in place,

artificial intelligence can be developed safely and justly. Ethical regulation thus acts as a safeguard to ensure that technological progress remains aligned with the objectives of *maqasid al-shariah* (Izza, 2018).

From this discussion, it can be understood that integrating Islam and technology does not mean rejecting modernity. On the contrary, Islam offers moral guidance to direct digital development toward greater public benefit. Technology can function as a means of worship, knowledge dissemination, and social service. Through the values of *tawhid*, digital *adab*, literacy education, and artificial intelligence ethics, technology finds its proper direction of use. Ultimately, digital progress can become an essential component in building a religious and just civilization.

CONCLUSION

Digital transformation has brought fundamental changes to the construction of contemporary knowledge by reshaping its ontological, epistemological, and axiological dimensions. Scholarly reality is no longer confined to physical spaces but has expanded into virtual environments and data-driven systems that redefine how knowledge is acquired, validated, and disseminated. The findings of this study indicate that while the digital revolution offers substantial opportunities for innovation in education, *da'wah*, and the development of more adaptive forms of Islamic scholarship, it also presents serious challenges, including shifts in knowledge authority, ethical degradation, and the proliferation of misinformation. Therefore, the integration of Islamic values such as *tawhid*, scholarly *adab*, and the principles of *maqasid al-shari'ah* is essential in formulating ethical frameworks for the use of technology. This study emphasizes that strengthening value-based digital literacy and ensuring the active involvement of Islamic scholars in framing technology ethics are strategic measures to ensure that digital advancement functions not merely as an instrumental force, but as a means of fostering a modern civilization grounded in justice, morality, and the pursuit of the public good.

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