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Islamic Education in The Digital Era: Overcoming Barriers and Maximizing Opportunities

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Abstrak

Artikel ini mengkaji dampak transformasi digital dan perkembangan ilmu pengetahuan terhadap pemikiran, pendidikan, dan masyarakat Islam. Studi ini menyoroti bagaimana stagnasi rasionalitas setelah era Ibn Rusyd, ditambah dengan tertutupnya pintu *ijtihad* dan dominasi penafsiran dogmatis, telah melemahkan kapasitas intelektual umat Islam dalam merespons tantangan global kontemporer. Dengan merujuk pada teori perubahan paradigma ilmiah (Kuhn), *future shock* (Toffler), dan masyarakat pengetahuan (Kumar), artikel ini berargumen bahwa pendidikan Islam harus beradaptasi melalui integrasi teknologi digital, reformulasi epistemologi, dan pengaktifan kembali Islamisasi ilmu pengetahuan. Studi ini juga menyoroti peluang dan ancaman di era digital, termasuk kebangkitan dakwah daring dan pembelajaran Islam virtual, serta penyalahgunaan media digital untuk tujuan radikalisme dan pornografi. Artikel ini menyimpulkan bahwa membayangkan ulang sistem pengetahuan Islam—melalui pendekatan kritis, etis, dan inovatif terhadap teknologi digital—merupakan langkah penting untuk memastikan relevansi Islam di abad ke-21. Beberapa rekomendasi strategis ditawarkan untuk menyelaraskan kembali pendidikan Islam dengan tuntutan zaman digital tanpa meninggalkan nilai-nilai spiritual inti.

Kata kunci: epistemology; islamisasi ilmu pengetahuan; ijtihad; pendidikan Islam; transformasi digital

Abstract

This article examines the impact of digital transformation and scientific development on Islamic thought, education, and society. It explores how the stagnation of rational inquiry following the post-Ibn Rushd era, compounded by the closure of *ijtihad* and the dominance of dogmatic interpretations, has weakened the intellectual capacity of Muslims to respond to contemporary global challenges. Drawing from theories of scientific paradigm shifts (Kuhn), future shock (Toffler), and knowledge society (Kumar), the study argues that Islamic education must adapt by integrating digital technologies, reformulating epistemology, and reviving the Islamization of science. It highlights both opportunities and threats in the digital era, including the rise of online da'wah and virtual Islamic learning, as well as the misuse of digital media for radicalism and pornography. The paper concludes that reimagining Islamic knowledge systems—through critical, ethical, and innovative engagement with digital tools—is essential to ensure Islam's relevance in the 21st century. Strategic recommendations are offered to realign Islamic education with the demands of the digital age, while preserving its core spiritual values.

Keywords: Epistemology; digital transformation; Islamic education; ijtihad; Islamization of science

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INTRODUCTION

By the end of the twentieth century, science had profoundly influenced various global challenges, including technological innovation, environmental sustainability, national security, and ecological preservation. These transformations marked a significant departure from the relatively slower pace of scientific progress in earlier historical periods, including the early and mid-twentieth century. (C. Verhaak dan R.Haryono Imam, 1989, p. 180;Sismondo, 2009)

Scientific progress has significantly influenced religious traditions, including Islam, which is practiced by a large portion of the global population. However, many Muslim communities have struggled to engage meaningfully with modern science, resulting in a widening intellectual and developmental gap between Islamic societies and those that have embraced scientific advancement. One of the critical challenges lies in the condition of Islamic education, from primary to higher levels, which has often been marked by outdated curricula, underqualified teaching staff, and non-professional pedagogical approaches. Consequently, Islamic educational institutions have frequently produced thinkers who are normative and dogmatic rather than analytical and progressive.

This intellectual stagnation is rooted in the rigid application of Sharia based on classical juristic opinions that are often treated as immutable truths. In the realm of Islamic science, this has generated a philosophical dilemma: the rational inquiry that once characterized Islamic civilization has been marginalized. Particularly after the influential theologian Al-Ghazali (d. 1111 CE) classified the study of science and technology as farḍ kifāyah (a collective obligation), scientific inquiry was increasingly viewed as secondary to religious sciences. Although Al-Ghazali acknowledged the value of beneficial sciences (ʿulūm al-maḥmūdah), his categorization arguably contributed to a shift in emphasis away from critical, empirical reasoning toward more servile forms of knowledge. This epistemological shift has had lasting consequences on the Muslim intellectual tradition, contributing to what many scholars describe as a crisis of knowledge in contemporary Islamic education. (Mas'ud, 2000 ; Sardar, 2006)

Post-Ibn Rushd Islamic thought witnessed a significant decline in critical and rational discourse, mainly due to the closing of the gates of *ijtihad* and the increasing dominance of conservative theological interpretations during the medieval period. Philosophical inquiry, especially those influenced by Greek traditions such as Aristotelianism, was viewed with suspicion by many orthodox scholars who considered it incompatible with Islamic teachings.

In extreme cases, proponents of philosophy were even declared heretical or faced severe persecution.

Al-Ghazali (1058–1111 CE), in his seminal work *Tahāfut al-Falāsifah* (*The Incoherence of the Philosophers*), launched a detailed critique of Muslim philosophers such as Ibn Sīnā (Avicenna, 980–1037 CE) and al-Fārābī (872–950 CE), accusing them of making significant errors in matters of metaphysics and theology. Al-Ghazali problematized the adoption of Aristotelian principles in Islamic philosophy, arguing that such approaches led to doctrinal deviations. While his intent may have been to safeguard Islamic orthodoxy, many scholars argue that his critiques inadvertently led to the marginalization of philosophical rationalism in the Islamic intellectual tradition.

Oliver Leaman (2001), a prominent scholar of Islamic philosophy, contends that Al-Ghazali's interventions marked a turning point that effectively curtailed the flourishing of rational thought in the Muslim world. Rather than allowing philosophical reasoning to develop freely, Al-Ghazali sought to impose epistemological constraints, thereby subordinating rational inquiry to theological orthodoxy. This, in turn, contributed to a broader intellectual stagnation in post-classical Islamic thought.(Leaman, 2001, p. 8)

The stagnation of *ijtihad* and rationalism within Islamic thought has resulted in a misalignment between the intellectual responses of contemporary Muslims and the rapidly evolving conditions of the modern world. As the global scientific paradigm continues to shift, Muslim societies often struggle to adapt their epistemological frameworks accordingly.(Sardar, 2000)

In the contemporary era, Muslims encounter multifaceted challenges across various domains of life, particularly in the mastery of science and technology, which serve as the principal indicators of modern civilization. This condition arises, among other factors, from the limited capacity of the Muslim community to adapt to the dynamics of social change and the evolution of time. Consequently, contemporary Islamic thought often struggles to distinguish between inherited intellectual traditions and the dynamic, context-sensitive interpretations of classical Islamic philosophy. In essence, Islam—rooted in the Qur'an and the Hadith—embodies values that promote human advancement, creativity, and affirm the role of humankind as *khalifatullah fil ardi* (the vicegerent of God on earth). (Kholdun, 2011, p. 436)

In the Middle Ages, the values and spirit of progress and creativity derived from the heart of the Qur'an gave birth to creative people such as al-Kindi, ar-Razi, al-Farabi, Thabit ibn Qurra ibn Sinan, Ibn Sina (Avicenna), al-Mas'udi, at-Tabari, al-Ghazali, Nasir Khusru, Omar

Khayyam, and others, allowing Islamic science to achieve impressive At the time, Islamic knowledge performed research in medical science, mathematics, geography, and even history. (Nakosten, 1996)

The collapse of Islamic Islam endured until the twenty-first century, when society was confronted with advances in science and technology. The numerous components of the Islamic education system, such as methods, goals, educators (teachers), students, curriculum, facilities, and environment, must adapt to the various needs of the twenty-first century. If not, Islamic educational institutions, including madrassas, boarding schools, and Islamic universities, will face a slew of issues, including graduates who are unable to compete. Even some Islamic educational institutes are regarded as extreme educational establishments. This assumption is based on the fact that the institution is anti-modern.

The fall of Muslims, according to As-Sheikh Muhammad al-Ghazali, is due to three factors: First, Arab characters enjoy the art of speaking. The ability to communicate with Arabs seems to be the basis of progress. Second, Muslims place greater emphasis on the collection of narratives (hadiths). Sunnah (hadith), which is a valid number, may be several thousand, followed by hundreds of thousands of people. What sharpens their intelligence and makes them only capable of quoting stories prevents them from discussing nature. Third, the disintegration of the law is the most significant cause of the backwardness of the people. (Muhammad al-Ghazali, 2008, p. 224)

From 1800 to the present, Islam's progress has slowed after the Renaissance in the West, which lasted until the twenty-first century. The emergence of the World Wide Web (WWW), a globally accessible information network, has further accelerated the West's dominance in technological advancement. As a powerful medium for communication, social interaction, and knowledge exchange, the WWW has been rapidly adopted by political organizations, social movements, journalists, humanitarian initiatives, and religious groups alike, reshaping the global landscape of information and cultural influence. (Tierney, 2016, p. 1)

The dynamics of this international living system in the twenty-first century are high-speed and are only increasing faster, more complicated, and more thrilling. The dynamic is frequently startling since it occurs outside of rational expectation or calculation. It's terrifying, but it's true. The following components can be seen in the dynamics of 21st-century world life, which is also referred to as the information society rather than the industrial society, which ended in 1989 with the fall of the Berlin Wall, which later became a symbol of a world without

borders from ancient to modern, globalization, complexity, turbulence, dynamics, acceleration, and sustainability are all words that come to mind, connectivity, convergence, consolidation, rationalization, Global paradox and the power of thought. (Mastuhu, 2004, p. 10)

In fact, the information revolution is a mixed blessing. On the one hand, the wealth of information technology that allows all types of labor to be completed electronically was previously unthinkable. On the other hand, and this is more concerning, the digital century is having an impact that is incompatible with Islamic ideals and is moving Muslims further away from control. (Butt, 2001, p. 89)

This circumstance presents Muslims with both an opportunity and a challenge in terms of adapting to the problems and conditions of the twenty-first century, which limit the use of digital technology as a method of civilization advancement. At the current time, Muslims are not ready to adapt to the advent of digital technology. Conducted many activities such as church, school learning, and other social activities virtually during the COVID-19 pandemic. Because educational institutions lack the necessary digital infrastructure, learning during the COVID-19 era will be limited. As a result, direct learning remains superior to the use of other digital tools. The more complex the digital facilities employed, the higher the costs will be because digital technology is a costly infrastructure that can only be owned by developed and wealthy countries. As a result, this article investigates how Muslims use digital media in today's world.

The impact of globalization on Islamic education is profound, reflecting both opportunities and challenges in the digital era. As educational practices evolve in the face of rapid technological advancements, Islamic education must adapt to integrate new methods and technologies for effective knowledge sharing. The comprehensive literature review conducted highlights various strategies utilized within learning communities to enhance knowledge dissemination, thereby improving educational outcomes and accessibility. For instance, fostering collaborative learning environments, amplified by digital tools, allows for a richer exchange of ideas and resources among students and educators across the globe. (Zamiri & Esmaeili, 2024).

METHODS

The present study adopts a library research methodology, as the data sources are entirely derived from scholarly literature and documented materials relevant to the research (Zed, 2014)

(George, A. L., & Bennett, 2005) This approach is considered appropriate because the study focuses on analyzing existing theoretical frameworks, historical records, and conceptual discourses rather than empirical data. Through an in-depth examination of books, journal articles, and credible academic documents, this method allows for a comprehensive understanding of the topic, critical interpretation of prior studies, and synthesis of knowledge that contributes to the development of new insights within the field of Islamic education. This qualitative approach is particularly suitable for examining conceptual developments, ideological trends, and normative responses within Islamic discourse. The research is grounded in a descriptive-analytical framework, aiming to describe, document, and critically analyze the evolving dynamics between Islamic thought and digital technology (Al-Attas, 1993; Nasr, 2002). Through this approach, the study seeks to explore how Muslim communities, educational institutions, and scholars interpret and respond to the challenges and opportunities posed by the rapid advancement of digital communication and knowledge systems (Campbell, 2012; Anderson, 2015). Theoretically, the research is informed by the paradigm of Islamization of knowledge**,** which emphasizes the integration of divine revelation and contemporary epistemology as a response to secular-modernist knowledge structures (Al-Faruqi, 1982; Wan Daud, 1998). By critically engaging with the literature, this study contributes to ongoing discussions on epistemological reform within Islamic education and provides a foundation for developing a digitally aware Islamic pedagogy capable of navigating the complexities of the digital age.

.RESULT AND DISCUSSION

The Islamic Condition In The Present And Future

Toffler explicitly discusses the role of knowledge and technology in influencing change and, as a result, shaping the emergence of new types of societies in his theory. As a result of technological advancements, some countries are ill-prepared to deal with them, resulting in panic and stress, which Alvin Toffler coined the term "future shock" to describe the devastating and disorienting stress caused by various changes that occur in an inordinately short period of time. Future surprises are no longer a distant threat, but a real disease that many people are already suffering from. In medical and psychiatric terms, he can be described as having a psycho-biological condition. It is a change-related chronic condition. (Toffler, 1971)

According to Krishan Kumar (2001), the theory of future societies has long piqued the interest of many Western academics. He claims that: "There have been persistent claims over

the last quarter-century that Western societies have entered a new era in their history." While they have undoubtedly experienced an industry, there has been enough of a shift that they can no longer be considered under old names or through old theories. Western society is now classified as "post-industrial" in a variety of ways, including "post-Fordist," "post-modern," and even "post-historic." Their theory focuses primarily on the transition to a service economy and a "knowledge society." Furthermore, the social and political changes that can occur as a result. We find claims in these more recent theories that go beyond economics and politics to encompass Western civilization and even the entire world. These theories see signs of a turning point in the evolution of modern society in the information and communication revolution, the transformation of work and organization in the global economy, and the crisis of political ideology and cultural beliefs. (Fariza & Wan, 2012)

Toffler explicitly discusses the role of knowledge and technology in influencing change and, as a result, shaping the emergence of new types of societies in his theory. The rapid transition from an "industrial society" to an "industrial super society" is referred to as Future Shock. Such rapid transitions have profound social consequences in the past and present, even if they are considered disruptive, as people become increasingly overwhelmed, confused, and isolated..

The resurgence of modern economic growth that occurred after the turn of the century and was primarily triggered by China has undergone development today, according to Emilio Lodice's Future Shock 2.0 forecast, which was first released in 2014. China's rise as an economic power has dominated developing countries, taking advantage of infrastructure experiments that yield little financial gain while causing significant environmental harm. (Gingerich, 2020)

Opportunities To Use Digitally Based Technology In Islamic Teaching

Islam Has Supported The Development Of Sciences

The concept of ilm is one of the most apparent, comprehensive, and profound concepts found in the Qur'an. Of course, ilm is only a derivative of tawhid, the central theme and basic idea of the Qur'an, in this important position. The Qur'an alludes to the root of the word ilm and its derivation 800 times, demonstrating how important ilm is in the Qur'an. The Qur'an is written verses (qauliyah verses) in Islam's eyes, and the universe is unwritten verses (Kauniyah verses), both of which are tangible proofs of Allah's existence, power, and greatness. The relationship

between science and Islam is the most important Islamic mu'jizat. The first surah revealed to the Prophet Muhammad (peace be upon him) emphasizes the importance of tawhid, the benefits of education, and how to acquire knowledge. (Nurdin, 2000, p. 1)

The creation of the planet Earth and sky (Al-Anbiya' 21:30), the planet is round. It rotates on its axis (Az-Zumar 39:5), the planet Earth circulates according to its orbit around the sun (An-Naml 27:88), and the creation of all creatures in pairs (Al-Qiyamah 75:3-4). (Yasin 36: 36). (Nurdin, 2000, p. 3)

According to Umar A. Jenie, Islam is a religion that needs the most touch and support of science and technology. (Jenie, 1998, p. 11). The events of the universe and various other natural processes are mentioned in the Qur'an, as well as the creation of living things, including man, who is driven by the year's desire and his intellect to investigate everything around him. The Qur'an, on the other hand, is not a cosmology, biology, or science textbook. (Baiquni, 1999, p. 106) As a result, the Qur'an places cosmology in its proper context, namely, within the context of total human experience. Reason and advice necessitate Islamic knowledge, but Islamic values and ethics must guide them. (Butt, 2001, p. 70)

The Qur'an itself provides a strong epistemological foundation for the advancement of science, as it consistently encourages reflection (*tafakkur*), observation of nature (*tadabbur*), and the pursuit of knowledge (*'ilm*) as acts of worship and intellectual responsibility. Such principles inspired the emergence of scientific inquiry during the classical Islamic period, when scholars such as Al-Kindi, Al-Farabi, Ibn Sina, Al-Ghazali, Ibn Rushd, and Al-Biruni developed diverse disciplines—including philosophy, medicine, astronomy, mathematics, and physics—by integrating reason with revelation. Through this analytical lens, the present study aims to demonstrate that Islamic teachings not only accommodate but actively promote scientific progress as part of humankind's mandate as *khalifatullah fil ardi* (God's vicegerent on earth).

Development Of the Islamic Da'wah System With Virtual And Other Social Media

Digital media, like traditional communication channels, undoubtedly has certain drawbacks as well. A new culture, popularly known as cyberculture, is one of them. A virtual culture that upholds Islamic values and ethics must promote Islamic communication (da'wah), which has a vision and message geared to the divine. Islam was sent to the world as a compassion. (Saleh, Sadhriany Pertiwi , Hafied Cangara , Safiyyah Sabreen, 2022)

Most da'is now use digital media such as YouTube, Instagram, and other social media to communicate their dakwah studies and meet their worshipers virtually. Various religious teachings, schools, and ideologies embraced by groups of worship organizations in Islam, such as NU, Muhammadiyah, and other community organizations, are spread using digital media.

Muslims' use of the Internet is used to visualize Islam's face in cyberspace. Positively, the Internet has evolved into a channel for *da'i* to communicate Islamic teachings. For Muslims, the Internet is a sign of spirituality. In the practice of Islamic teachings, the Internet has a significant impact. Take, for example, the use of the Internet as a source of religious information. One of the influences of internet use in spreading Islamic da'wah is the emergence of Islamic-breathing sites in the form of websites, social media accounts, digital Islamic applications, and others.

According to the findings of Asna's 2016 study, da'wah studies have begun to examine digital media such as mobile devices, digital magazines, and the use of social media for da'wah. They have also begun to discuss the phenomenon of Ustadz who are popular on social media, such as Ustadz Abdul Somad, Hanan Attaki, Aa Gym, and other Ustadz who are popular on social media. In 2017, digital proselytizing from da'wah academics, analysis of radicalism in digital media, and mainstreaming the study of Moderate Islam in digital media began to be presented. In 2018, the issue of digital literacy in da'wah activities became more prominent. In 2020-2021, the focus of digital proselytizing will be on the da'i response to the COVID-19 pandemic. (Marwantika, 2022)

Islamic da'wah has entered a new era thanks to digital technology. Digital technology not only facilitates da'wah management, but it also creates new social classes related to da'i classes:

1. This cyber world was a challenge for the astute da'i. The yellow book's messages become engaging, proselytizing content that is easily digested by the general public.
2. Da'i, who had survived traditional nature, refused to allow muhibbins to digitize their yellow book-based da'wah, but allowed muhibbins to do so.
3. Da'i worked with digital technology, but was not accompanied by professional management, so he did not reap the full benefits of the technology like the first group. (Risdiana et al., 2020)

Furthermore, the global community's main concerns are "online fatwas" and "virtual counseling." The introduction, growth, and use of Information and Communication Technology (ICT) have created a new public space in which the concept of different coexistence between Islam and the State is debated. When it comes to cyberspace, the Internet brings jihad-related

issues into sharp focus because anyone can claim to be an Islamic authority and be qualified to make statements and issue fatwas. Online religious forums are used not only to provide Islamic advice, but also to allow Internet users to meet and interact with others who share their religious beliefs and values. (Chawki, 2010)

Many institutions are taking advantage of the digital era to make it easier for Muslims to issue zakat via virtual media. Religious guidelines govern the use of zakat digitalization. Through various considerations of the ummah's benefit (maqsid as-shari'ah), the use of virtual media as a means of zakat transactions has been tested and legalized. (Cholifah, 2019)

The National Amil Zakat Agency makes use of Zakat's digitalization. Noor Achmad, chairman of the National Amil Zakat Agency, said that because digitalization is devoid of convolution, it makes it easier for people and communities to pay Zakat, especially during the COVID-19 pandemic. With the digitization of Zakat during the COVID-19 pandemic, the community's desire to donate grew in 2020, raising Rp 385.5 billion in Zakat, Infaq, and Sadaqa funds, up from Rp 296 billion in 2019. This represents 101.44 percent of the ZIS collection goal set for early 2020.

Furthermore, Muslim scholars utilize their expertise to respond to the diverse questions raised by internet users, particularly those addressed by Abdul-Azeez ibn Baaz (former Grand Mufti of Saudi Arabia), Hammad Ibn Mohamed Al-Ansari, Mohamed Nasiruddin al-Albani, and Muhammad ibn al-Uthaymeen all of whom were among the most influential Islamic scholars of the twentieth century. In contrast to *Islam Online*, the *Fatwa-Online* platform does not provide a *Live Fatwa* service that enables direct interaction between users and scholars. Nevertheless, the emergence of these digital platforms marks a significant advancement in the development of the Islamic da'wah system, as virtual and social media have become effective instruments for disseminating religious knowledge, expanding global access to Islamic jurisprudence, and creating interactive learning environments that transcend geographical boundaries.

Opportunities In the Application Of Digital Technology In Islamic Learning.

According to Muhadjir Effendy, the Indonesian Minister of Education and Culture, the penetration of Industry 4.0 results in an increase in learners' competencies, particularly in the areas of critical thinking, innovation and creativity, communication and interpersonal abilities, collaboration and teamwork, and self-assurance. However, this transformation is not limited to

technological adaptation or skill enhancement; it calls for a deeper philosophical and epistemological renewal, especially within Islamic education.

The digital transformation brought about by the Fourth Industrial Revolution demands not only technological adaptation but also a philosophical reorientation in Islamic education. As Syed Muhammad Naquib al-Attas (1980) emphasizes, the primary aim of Islamic education is the cultivation of *adab*—the integration of knowledge, virtue, and spiritual discipline—rather than mere technical proficiency. In this regard, digital literacy should serve as a means to reinforce moral and intellectual balance rather than promote mechanistic learning. (S. N. Al-Attas, 1980). Ziauddin Sardar (1985) further argues that the Muslim world must critically engage with modern science and technology through an ethical and Islamic worldview, transforming technology into a tool for empowerment and not alienation (Sardar, 1985). Similarly, Fazlur Rahman calls for a continuous renewal of Islamic thought through a contextual interpretation of revelation, which is vital for preparing Muslims to navigate the moral and epistemological challenges of the digital age (Raḥmān, 1984). Osman Bakar (1998) complements this view by highlighting the necessity of re-establishing the *unity of knowledge* (*tawhid al-'ilm*) to bridge the gap between religious and modern sciences. Therefore, the digital transformation in Islamic education must go beyond the adoption of technology—it must embody an epistemological renewal grounded in Islamic principles to ensure that innovation and faith advance together in shaping holistic human development.(Bakar & Bakar, 1998)

The advancement of technology necessitates a method of teaching that is in line with the demands of the fourth industrial revolution, or period 4.0. The Internet and computers have evolved into tools for facilitating teaching and learning. In the industrial revolution era, the learning process used to be done face-to-face directly between teachers and pupils. Online classes that use social media or other media to complement the online learning process can be used for 4.0 learning. Indonesia, still reeling from the effects of the industrial revolution age 4.0, was taken aback by the new notion of society 5.0. Creativity, critical thinking, communication, and cooperation, also known as the 4Cs, are today's emphasis of 21st-century education expertise.

Students may be more interested in acquiring Islamic education if digital technology is used in Islamic courses. Teachers can employ a variety of digital tools in Islamic studies, Arabic, science, and mathematics to help students learn and teach. Because digital applications include animation and simulation, students will appreciate learning how to use them. In short, digital technology can increase the quality of learning and teaching in Islamic education.

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The classroom is a physical location in which formal learning and teaching take place. The primary goal of an effective class is to transmit knowledge in the most efficient manner feasible. As a result, the design of technology-integrated classrooms must allow for a variety of instructional activities, such as active learning. Cooperative learning, technology-enhanced learning, and applicable assessment and evaluation. Furthermore, the creation and usage of teaching and learning aids like digital applications should be promoted. According to a review of relevant literature, the main challenges in implementing digital technology in Islamic schools include a lack of adequate facilities and equipment, a shortage of qualified teachers, and a hostile learning environment that prevents students from attaining the desired level of education. (Lubis, 2018).

Islamic studies' attempts to be digitalized have yielded modest successes, enormous obstacles, and outstanding potentials. It is a good development that Islamic education is now available online, both formal and informal, and that it has experienced such rapid growth in recent years. The Islamic Online University (IOU), which provides tuition-free undergraduate and graduate courses in Islamic Studies, is the paradigmatic organization in this regard. The institution now has 50,000 students from 206 countries, up from 1,500 in 2007 (http://islamiconlineuniversity.com/about-us.php). The Knowledge International University (Saudi Arabia), Shar'ah Academy of America, SuniPath Islamic Academy, and Al-Mad'nah International University are similar schools that offer online Islamic Studies courses in a variety of disciplines (Online & On-campus), Dārul-`Ulūm Online and Hud Academy are just a few examples. The Oxford Islamic Studies Online is a comprehensive library of recent research with more than 5,000 interconnected references.

The Challenges Facing Islam In The Digital Age

Radical Islam has used technology as a means to spread extremism and terrorism

Two well-known but separate topics, military jihad and information and communication technology, including social media, have been successfully combined by the Islamic State. The Islamic State's covertly excellent military and ultra-aggressive jihad generate a quasi-syncretic fusion of religious intolerance and the use of modern information technologies. Because modern jihad crosses geographical boundaries, it is necessary to recognise that countering the propaganda of the Islamic State is just as crucial as engaging in physical conflict. The combination of military jihad with modern technology has come to

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symbolize a particular era; specifically, it is an expression or manifestation of both theoretical concepts and the current cultural and ideological context.

In numerous domains, such as business (business style), picnic (picnic style), learning (learning style), entertainment (entertainment style), sexual (sexual method), and so on, the advancement of science and technology has revolutionized lifestyles. For example, the advancement of cutting-edge internet technology has spawned the internet lifestyle, which Bill Gates dubs "Business @ Speed of Thought." Companies require a digital nervous system that can "....run quickly and efficiently, respond quickly to opportunities and emergencies, get valuable lightning information for people within the company who need it, make decisions and interact with customers quickly, just as the internet network itself is complex. (Piliang, 2004, p. 60)

As stated, the Islamic State of Iraq and the Levant (ISIL) uses digital media. The "Caliphate" emphasizes what we call "a strategy for disseminating political and religious information." ISIL uses public execution videos to promote its image as a proto-state, a legitimate sovereign entity, and a legitimate religious authority. Furthermore, the data shows that by establishing a political agenda through graphic executions, ISIL hopes to promote its religious agenda through a narrative centered on the killings themselves, which is meticulously staged, translated, and targeted at a specific audience. It is part of the "Cosmic War," which refers to the resurgence of historical conflicts, abstract confrontations between good and evil, and personal and social concepts. In global, glocal, and digital media, the core principle of ISIL's political and religious agenda is developed and promoted. (Barr, 2017)

As stated, the Islamic State of Iraq and the Levant (ISIL) strategically employ digital media to advance what can be described as “a strategy for disseminating political and religious information.” The so-called “Caliphate” utilizes public execution videos to construct its image as a proto-state, a legitimate sovereign entity, and an authoritative religious power. Furthermore, evidence suggests that by crafting a political narrative through graphic executions, ISIL simultaneously advances its religious agenda by embedding theological justification within a dramatized narrative of violence. These videos are meticulously staged, translated, and tailored to specific audiences, making them powerful tools of persuasion. In a broader context, this communication strategy can be viewed as part of what scholars term the “Cosmic War,” which symbolizes the reemergence of historical conflicts and abstract struggles between good and evil, embedded within both personal and societal frameworks. In global, glocal, and digital

media landscapes, the core principles of ISIL's political and religious agenda are thus developed, reinforced, and widely propagated (Barr, 2017)

The "strategic communication strategy to counterterrorism" refers to the global media's attempt to combat terrorism by mentioning exclusively Western sources of information. Nonetheless, research has shown that, in the last decade, terrorist organizations have predominantly used the Internet to promote and lobby for jihadist ideology, owing to this shift and the advent of new media.

On a practical level, research on the media and terrorist groups has mostly focused on the responses of Western public and media organizations, crisis communication practices, and media portrayals of terrorism "All of this is seen through the eyes of Western media as producers. Using Entman's framing theory, he selects "some aspects of perceived reality and makes them more prominent in communicating the text, in such a way as to promote the definition of a particular problem, causal interpretation, and/or moral evaluation," focusing on classic media coverage of terrorist acts and the responses the West uses in print, television, radio, and cartoons.".

Digital media can also cause images of religious symbols to be created, which are then exploited as a sign of da'wah by certain parties. Even these photos are frequently distorted by da'wa. Worse, when image is combined with information technology, reality is blurred, and what appears is the massification of good facts. So don't be shocked if a new concept of teachings takes precedence over tolerance ideals and the role of faith in religion. Because of the different images in digital media, the group's followers believe they are the most authentic (Purwanto & Nuha, 2020).

Maajid Nawaz, the former leader of Hizb ut-Tahrir (HT), the world's extremist group that sought to overthrow the government with a military coup and form a superpower that covers the entire Islamic world, told us that his organization has a policy of recruiting employees from mobile phone companies to overthrow the government. "We set up a propaganda outlet outside Motorola's Pakistan offices, recruited some Motorola employees, and then revealed the editor's phone numbers of Pakistan's major newspaper," he explained. Members of the HT will send propaganda-laden text messages to editors, confirming their plan and even threatening them. According to Nawaz, Motorola employees assisted Hizb ut-Tahrir by concealing its members' names while signing up for phone service, allowing them to operate unnoticed. (Schmit, 2014)

Al Ulya: Jurnal Pendidikan Islam
Fakultas Tarbiyah
Universitas Nahdlatul Ulama Sunan Giri
Vol. 10 No. 2, October 2025, Hlm: 265-288
PISSN: 2540-8127 | EISSN: 2597-6656

Many groups (on all sides) have labeled e-jihad (or characterized it as 'inter-fada') in this digital age, notably concerning the wars in Palestine and Israel (and more recently, with 9-11), which has been dubbed e-jihad (or described as 'inter-fada'). The use of the term jihad in this context is intriguing, given that it has also been applied to various forms of activity in English. The traditional concept of jihad as a Muslim inner spiritual struggle has been blurred in cyberspace by digital media, which is being used as a weapon to persuade the public that the term jihad is not the same as jihad in traditional concepts..

Within Virtually Islamic, the topic of online activism in Islam involving Cyber Islamic Environments was proposed as a potential source of tension as Internet technology becomes more widely available and accessible. Various 'Islamic' groups, particularly those involved in the battles in Chechnya, Palestine, Käshmir, and Afghanistan, have demonstrated this through internet operations aimed at promoting their cause while also disrupting the online activity of their ideological and military opponents. The phrase e-jihad has become a language to legitimate hacking, cracking, and other logical technology applications directed at assaulting opponents, as well as propaganda (or e-da'wa?) to transmit a specific worldview, potentially to a select and sympathetic audience, but also to a larger global audience (Muslim and others).

Digital Media Tools For The Dissemination Of Pornographic Content

The phenomenon of pornography and pornography today has achieved rapid development and has touched every layer of society without being hindered by geographical barriers again. Even rural communities geographically far from the city, where it is assumed to be the centre of pornography and pornography, did not escape touch. Pornography and pornography from the perspective of Islamic law are forbidden; it is normatively based on several verses in the Qur'an and some hadiths of the Prophet (saws) that are strictly forbidden. In addition, the provisions in the MUI Fatwa dated August 22, 2001, No. 287 of 2001 clearly and unequivocally prohibit pornography and pornography in all its forms. The nature of electronic communication tools, especially the Internet, raises serious ethical issues. As one such moral issue, internet pornography has become a massive market.(Al-Fadhli, Salah M. Hasan A. Abbas, Ali A. Dashti, 2014)

To explore pornographic viewing, a first large-scale transnational survey was conducted in Arab countries. In this poll, 88 percent of people said they had watched pornography at least once in the previous year, 68.69 percent in the previous month, and 50.47 percent in the previous seven days. This figure is higher than that found in studies from

Al Ulya: Jurnal Pendidikan Islam
Fakultas Tarbiyah
Universitas Nahdlatul Ulama Sunan Giri
Vol. 10 No. 2, October 2025, Hlm: 265-288
PISSN: 2540-8127 | EISSN: 2597-6656

Australia (87%), Italy (62%), and Bangladesh (47-72%), yet it is lower than the Swedish figure of 18.23. (98 percent). This high prevalence was unexpected, given that just 15.18 percent of individuals gave explicit authorization to watch pornography. The data can be interpreted in the paradoxical premise that a larger obsession with sexual/explicit content in private internet activity is connected with a higher dominance of right-leaning religion and ideology in Arab countries.

There was a strong association between the proportion of religiosity/conservatism and web searches for sex-related content and sexual images in a study analyzing the relationship between state-level religiosity/conservatism and Google Trends of sexual content in the United States. Another study of 1303 German students and 1135 Polish students found that Polish students were more devout, but that their first interaction with pornographic material occurred at a younger age. (Eljawad MA, Se'eda H, Ghozy S, El-Qushayri AE, Elsherif A, Elkassar AH, Atta-Allah MH, Ibrahim W, 2021)

The Need to Master Advanced Science and Technology Quickly" vs. "Low Digesting Ability and Narrow Odds.

In modern times, it is inevitable that the need to win the competition so as not to be eaten" by other parties. Today, there is already a concept of "win-win solution" in competition/fight. However, a very painful gap will still exist due to differences in ability; On the one hand, it can win the competition by measuring series. On the other hand, it can only win the contest by counting series so that the gap between the strong and the weak remains wider.

The world is swiftly changing, science and technology are rapidly evolving, and electronic equipment such as telephones, televisions, and information communication tools are rapidly becoming obsolete. As a result, the requirement to think and respond intellectually, swiftly and appropriately is unavoidable. However, with limited human resources and poverty engulfing the Indonesian nation (ummah Islam), today's job plan is odd or complicated.

The Global Talent Competitiveness Index (GTCI) (PDF) assesses countries according to their human resource skills or talents. Per capita income, education, information, computer technology infrastructure, gender, environment, tolerance level, and political stability are some of the indicators used to assess this index. Singapore was ranked first in ASEAN with a score of 77.27. Malaysia (58.62), Brunei Darussalam (49.91), and the Philippines were the following

three countries on the list (40.94). Indonesia, however, is in sixth place with a score of 38.61. In 2017, Indonesia ranked eighth in ASEAN, according to the Human Development Report's Education Index, with a score of 0.622. Singapore had the highest score of 0.832 points. Malaysia (0.719) was in second place, followed by Brunei Darussalam (0.719). (0.704). Thailand and the Philippines are tied for fourth place with a score of 0.661.

In 2016, the outcomes of research at the elementary level were published. In comparison to the other two subjects, Indonesian children's science skills were the weakest. Only 1% of the 2.29% of children have "excellent" science skills. Only 2.29 percent of students were found to have "excellent" numeracy or math skills. In the field of reading, 6.1 percent of students are deemed to be proficient readers.

The education system in Indonesia is also heavily managed, which contributes to the low quality of education. Madrasah educational institutions have a significant role in the improvement and decline of Indonesia's education ranking. When compared to public schools, Indonesia has a higher number of madrasas. The madrassa has been modernized on the inside, despite the fact that it is still unfinished. Madrasas, by implication, have the same status as other public schools. However, in order to deliver quality educational services to the community, madrasas must organize their facilities and superstructure.

The internal factors that are the problem of madrasah include: first, the condition of teachers is not adequate. The number of private madrassas is much larger than the State madrassas. Situations like this cause problems. Especially regarding teachers, the number of public teachers is relatively smaller than that of private. Many teachers are mismatched and underqualified, especially in private madrassas.

Second, there is a dearth of educational infrastructure and facilities. Despite the fact that madrasas are recognized as equal to and comparable to public schools, they do not receive a fair education budget. Only religious budgets have been used to fund madrassa development so far. The lack of government funding for madrasas has an impact on the educational facilities available. Madrasah construction, renovation, and the acquisition of academic support instruments become quite limited. Finally, third: there is the curriculum. The MI, MTs, and MA must give materials for general subjects that are at least the same as primary, SLTP, and SMU, as well as religious lessons, according to the Minister of Education's Decree, which was affirmed by the Minister of Religious Affairs' Decree. By implication, madrassas are similar to Islamic public schools. (Huda, 2016)

Al Ulya: Jurnal Pendidikan Islam
Fakultas Tarbiyah
Universitas Nahdlatul Ulama Sunan Giri
Vol. 10 No. 2, October 2025, Hlm: 265-288
PISSN: 2540-8127 | EISSN: 2597-6656

Strategies To Overcome The Problems Of Muslims In The Digital Age

Re-formulating the epistemology of Islam.

Epistemology derives from the Greek word meaning "knowledge," and it primarily concerns the exploration of the origins, nature, and limits of human understanding—specifically, the questions: *Where does true knowledge come from, and how can we know it?* (Titus, 1984). In Persian, the equivalent term is *Syinakht Syinasi*, derived from the verb *syinkhtan*, which means "to know" in the sense of "recognizing" or "becoming acquainted with." In Arabic, the closest term is *ma'rifah*, which encompasses meanings such as knowledge, consciousness, awareness, and information. The term is sometimes used to denote particular perception (*idrak juz'i*) and, in other contexts, refers to recollection or recognition (*tadzakkur*). (Yazdi, 2010, p. 82)

Epistemology is also called *the theory of knowledge*. In epistemology, discussed are objects of knowledge, sources and tools for obtaining knowledge, consciousness and methods, the validity of knowledge, and the correctness of knowledge. Epistemology, or the theory of knowledge, discusses in depth all the processes seen in man's efforts to acquire knowledge. Science is knowledge gained through a particular process called the scientific method. This method is what distinguishes science from other fruits of thought. Alternatively, in other words, science is knowledge gained by applying scientific methods. Because science is part of knowledge, that is, knowledge that has specific properties, science can also be called scientific knowledge. For this purpose, so that there is no chaos between the notions of "science" (science) and "knowledge" (knowledge), we use the term "science" for "science. (Jujun Suriasumantri., 2001)

The development of Islamic epistemology is intrinsically linked to the Qur'an and the Hadith of the Prophet Muhammad (peace be upon him), which serve as foundational sources for all branches of knowledge (*'ilm*) within the Islamic tradition. The Qur'an, described as *Hudan li al-Nās* (guidance for mankind) in Surah al-Baqarah (2:185), is regarded as eternally relevant—*likulli zamān wa makān* (for all times and places)—and has become the principal reference for Muslim intellectuals in the formulation of various sciences, including philosophy.

As Ziauddin Sardar notes, Muslim philosophers have consistently viewed the Qur'an and Hadith not only as sources of legal and moral guidance but also as inspiration for metaphysical and ontological inquiry. He writes:

"The very reality of the Qur'an, and the revelation (*wahy*) which made it accessible to a human community, had to be central to the concerns of anyone who sought to philosophize in

the Islamic world. This led to a type of philosophy in which a revealed book is accepted as the supreme source of knowledge, not only of religious law, but also of the very nature of existence, and even the source of existence itself. The prophetic consciousness, which is the recipient of revelation (*al-wahy*), remained of utmost importance for those seeking to understand the nature of reality. How were the ordinary human means of knowing related to such an extraordinary mode of cognition? How was human reason to be situated about an intellect illuminated by revelation?" Accordingly, questions regarding the hermeneutics of sacred texts and the theories of intellect—particularly those that include the reality of prophetic consciousness—have remained central themes in over a millennium of Islamic philosophical thought.

Reviving the Islamization of science.

The hegemony of Western civilization, which is dominated by a scientific worldview, has harmed other societies, especially in epistemology. Perhaps "Westernization of science" is the most appropriate term to describe this condition. If this is understood well, then the term Islamization of contemporary science is not only a reasonable and acceptable term, but a project that carries a conceptual imperative. Therefore, Islamization cannot fully understand the substance of Islamization; they do not relate it to the epistemological problems that plague the Islamic world and the challenges that are its source. (Armas, 2005, p. 9),

The Islamization of science was popular in the 80sproclaimed over two decades earlier by Syed Muhammad Naquib al Attas. The study of the substance of the Islamization of contemporary science will be more precise if we refer to the concepts he put forward based on a deep understanding of the Western worldview and civilization and its epistemology.

Syed Muhammad Naquib al-Attas distinguishes between the *Islamization of science* and the *Westernization of science*, arguing that modern science is not entirely objective but instead embedded within cultural, religious, and philosophical assumptions shaped by Western civilization. He contends that the Islamization of science is a necessary epistemological project to liberate Muslim thought from the secular and materialist worldview inherent in Western scientific paradigms. However, Islamization is not a superficial act of rebranding science; rather, it entails a profound reorientation of knowledge grounded in Islamic metaphysics and ethics. This task requires scholars to possess a deep understanding of the Islamic worldview (*ru'yat al-Islam li al-wujud*) while maintaining critical awareness of Western intellectual traditions. Only then can a coherent synthesis be formed that aligns scientific inquiry with tawhidic principles.(S. M. N. Al-Attas, 1995)

Ismail Raji al-Faruqi outlines a systematic and foundational approach to the Islamization of science through several key steps: (1) attaining mastery and proficiency in modern scientific disciplines; (2) acquiring a comprehensive understanding of the Islamic intellectual heritage; (3) assessing the relevance of Islamic teachings to every field of contemporary science; (4) initiating a creative synthesis between classical Islamic knowledge and modern scientific advancements; and (5) guiding the trajectory of Islamic thought by divine principles.

The Islamization of science, according to al-Faruqi, is not an isolated process but rather a component of a broader project, the Islamization of knowledge. This broader framework encompasses all dimensions of human development: personal and collective, intellectual and practical, educational and organizational, and even sociopolitical governance. Through the holistic integration of Islamic values into the production and application of knowledge, Muslims are called to act justly and ethically, striving for reform, well-being, and prosperity in this world. Ultimately, such efforts aim to attain *riḍā Allāh*, the pleasure of God.(Al-Faruqi, 1981)

Digital-Based Learning Method in Islamic Education

To cultivate a generation of Muslims with a constructive mindset, ethical integrity, and intellectual adaptability, the Islamic religious education curriculum, especially at the higher education level, must transcend mere integration of digital tools. It requires a comprehensive rethinking of epistemological foundations and pedagogical methods to align with the demands of the digital era. Scholars argue for curriculum reforms grounded in *maqāṣid al-sharī'ah*, integrating interdisciplinary content, digital literacy, critical thinking, and ethical reasoning to ensure the relevance and vitality of Islamic education in a globalized, information-driven society. (Nur Latifah & Tamam, 2024). Ultimately, the convergence of epistemology, the Islamization of knowledge, and digital innovation within the framework of *maqāṣid al-sharī'ah* underscores that technological advancement should serve not only as a means of efficiency and access but also as a vehicle for realizing the higher objectives of Islamic education, namely, the preservation of faith, intellect, morality, and human welfare.

Empirical studies demonstrate that the strategic application of blended learning, flipped classrooms, and gamification in Islamic education enhances student engagement and understanding. However, barriers remain, such as teachers' digital literacy gaps and insufficient infrastructure (Hakim & W, 2025)For instance, Rizal et al. (2024) found that digital-based

modules on Duha prayer significantly improved primary students' skills and learning motivation (Hamdi et al., 2024) Therefore, implementing effective curriculum transformation requires multi-stakeholder collaboration across scholars, practitioners, policymakers, and religious authorities. Only through such a coordinated strategy—one that balances tradition and innovation—can Islamic education remain spiritually grounded, intellectually robust, and digitally competent in the twenty-first century. (Assa'idi, 2021)

CONCLUSION

The transformation brought by digital technology and the Fourth Industrial Revolution has deeply influenced every aspect of modern life, including religious practice, education, and intellectual culture. For the Muslim world, these shifts present a dual challenge: on the one hand, the promise of innovation and global participation through digital tools; on the other, the crisis of epistemological stagnation rooted in historical closures of *ijtihad* and the decline of rational inquiry.

This paper has shown that the current State of Islamic education remains hampered by outdated pedagogical methods, insufficient digital integration, and an overemphasis on normative-dogmatic instruction. At the same time, radical movements and the proliferation of unethical content have found fertile ground in the unregulated digital space, undermining Islamic values and social cohesion. Nevertheless, within this context lies a profound opportunity: to reimagine Islamic knowledge and education in ways that are both faithful to its revelatory foundations and responsive to contemporary realities.

Efforts must now focus on reformulating Islamic epistemology, revitalizing the Islamization of science, and adopting digital-based learning models that foster critical thinking, creativity, and ethical awareness. This integrative approach is necessary not only to address internal educational deficiencies but also to prepare Muslim societies to contribute meaningfully to the global knowledge economy. Ultimately, embracing these transformations with intellectual integrity and spiritual depth is essential for ensuring Islam's continued relevance and vitality in the digital age.

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