The Transformation of Education in Islamic Civilization: From Classical Scientific Traditions to Modern Education Systems

Dede Fitriani[1], Achmad Maftuh Sujana[2], Raihan Rizky Ramadhan[3], Fina Najha A'ini[4], Sulthan Maulana Al-Muhtadi[5]

[1,2,3,4,5]Universitas Islam Negeri Sultan Maulana Hasanuddin Banten, Serang-Banten, Indonesia
231340149.dede@uinbanten.ac.id

A R T I C L E   I N F O

ABSTRACT

Islamic education has a long history of shaping human civilization through the integration of spiritual, intellectual, and social values. Throughout history, the Islamic education system has undergone a significant transformation from classical scientific traditions centered in mosques, madrasahs, and pesantren, to modern systems that emphasize the balance between religious and scientific knowledge. This transformation involves not only methodological changes but also a reconstruction of Islamic epistemology to address the challenges of modern times, including the digital era and globalization. This study employs a qualitative literature review approach, analyzing contemporary academic works published between 2019-2025. Findings indicate that modern Islamic education emphasizes the integration of knowledge (unity of knowledge), the strengthening of digital literacy, and the development of spiritual character aimed at communal well-being. The transformation of education in Islamic civilization is both a historical necessity and a philosophical evolution that must continue to align with global developments.

1. INTRODUCTION

Islamic civilization is known as one of the world's great civilizations that has made significant contributions to the development of science, philosophy, and education. From the golden age of Islam in the 8th to the 13th centuries AD, the Islamic education system grew rapidly through institutions such as mosques, madrasas, and Bayt al-Hikmah in Baghdad that served as centers for research and translation of Greek, Persian, and Indian scholarly works into Arabic. The classical education system emphasized not only the transmission of religious knowledge, but also the development of rationality and the exploration of empirical science. However, over time, social, political, and economic changes in the Islamic world have had a major impact on the education system. The entry of Western colonialism and modernization in the 19th and 20th centuries led to the dualism of education: between traditional religious education and secular general education. As a result, Islamic education faces serious challenges in maintaining its relevance amid the currents of globalization and technological advancement.

In the 21st century, Islamic education reform efforts are getting stronger. Colleges, madrasas, and Islamic boarding schools are beginning to adapt to modern approaches, integrating science and technology in their curriculum. Islamic education is now faced with the need to produce not only

spiritually pious people, but also individuals who are intellectually capable, adaptive to change, and globally competitive.Recent studies show that the transformation of Islamic education requires a paradigm shift: from the taqlid-rote model to the ijtihad-creative model, from a teacher-centered system to student-centered learning, and from conventional methods to digital integration. In this context, modern Islamic education is not just an attempt at adaptation, but a process of reconstructing values and methodologies rooted in classical heritage but looking to the future.

Education in Islamic civilization has played a central role as the foundation of science, spirituality, and civilization building. Since the early days of the spread of Islam, simple educational institutions such as mosques, suraus, kuttabs, and halaqah have become centers of basic education, where the early generations of Muslims gained an understanding of the Qur'an, hadith, jurisprudence, and Islamic manners. The mosque not only serves as a place of worship, but also as a center of social, cultural, and intellectual community. In the classical period, the development of Islamic education reached an important stage in the history of world civilization, especially through the presence of formal and informal institutions that produced Muslim scholars, scholars, philosophers, scientists and scientists.The golden age of the Islamic world marked how integrative the epistemology of classical Islamic science was: revelation and reason, religion and science, spirituality and rationality combined with an integrative vision of science and life. Institutions such as Bayt al-Hikmah in Baghdad reflect a tradition of multidisciplinary scholarship and cross-cultural dialogue, in which Arabic books are translated, science is studied, and world knowledge is widely developed.

However, in the following periods, socio-political realities and interactions with external forces posed great challenges to the traditional Islamic education system. The entry of colonialism, global modernization, the pressure of secular education policies, and the advancement of science and technology have given rise to the need to adjust the Islamic education system to remain relevant. In Indonesia, traditional Islamic educational institutions such as pesantren, madrasas, and dayah have tried to adapt to various transformations from curriculum shifts, integration of general science and religion, and modernization of learning methods.This kind of transformation is seen as an attempt to bridge the historical-spiritual legacy of Islamic education with the demands of the modern era-globalization, digitalization, the need for science and technology literacy, as well as contemporary moral and social challenges. This reform also reflects the awareness that Islamic education must produce people of faith who are capable, critical, and adaptive to global developments.

Within that framework, this article aims: first, to trace the main characteristics of the classical Islamic education system of epistemology, its institutions, and its contribution to civilization; second, identify the factors driving the transformation towards a modern Islamic education system; third, describing the form of transformation in the contemporary context, especially in Indonesia; Fourth, evaluate the philosophical, social, and practical implications of the transformation in facing the challenges of the digital era and globalization. Thus, this article serves not only as a historical-conceptual study, but also as a critical reflection on the present and future of Islamic education.With this perspective, the transformation of Islamic education from the classical scientific tradition to the modern system can be understood not as a disconnection, but as a continuity and adaptation: maintaining basic spiritual and moral values, while opening up space for science, technology, and the needs of the 21st century.

2. METHODS

This research uses a qualitative approach with the library research method. This approach was chosen because the focus of the study lies in the analysis of the concepts, history, and transformation

of Islamic education from the classical to the modern period. Data is obtained from various written sources such as books, scientific journal articles, and other scientific works relevant to the research topic.Data analysis is carried out in a descriptive-analytical manner, namely by describing the development of the Islamic education system in its historical trajectory and interpreting the changes that have occurred from philosophical, epistemological, and practical aspects. The research process involves the stages of data collection, data reduction, data presentation, and drawing conclusions.This method aims to produce an in-depth understanding of how Islamic education undergoes a transformation process from the classical scientific tradition to a modern education system that is more open to science, technology, and global challenges.

3. RESULTS AND DISCUSSION

3.1. Classical Islamic Education: Foundations of Science and Spirituality

Islamic education in classical times played an important role in shaping world civilization. Institutions such as *kuttabs*, *mosques*, and *madrassas* became multidisciplinary learning centers that not only taught religious science, but also medicine, astronomy, mathematics, and philosophy. This approach shows that classical Islamic epistemology is integrative and holistic, rejecting the dichotomy between religious science and rational scienceGreat scholars such as Al-Farabi, Ibn Sina, and Al-Ghazali emphasized that the search for knowledge is part of worship and an effort to get closer to Allah. In Al-Ghazali's view, useful knowledge (*'ilm al-nafi'*) is the knowledge that directs people to the good of this world and the hereafter. Meanwhile, Ibn Khaldun in *Muqaddimah* emphasizes the importance of contextual and social experience-based learning. This classical education system has several key characteristics: (1) Integration of Science and Religion: There is no separation between science and spirituality. (2) Teacher-Based Learning (Mursyid): The process of knowledge transfer is carried out through moral exemplification and personal relationships between teachers and students. (3)Intellectual Independence: Students are encouraged to think critically and do *ijtihad*. (4) Transcendental Purpose: Education is directed to achieve happiness in this world and the hereafter (*sa'adah*). This educational model became the main foundation for the emergence of scientific centers such as *Bayt al-Hikmah* in Baghdad, *Al-Qarawiyyin University* in Morocco, and *Al-Azhar* in Egypt, which later inspired the modern university system in Europe.

The transformation of Islamic education began to accelerate during the period of colonialism and modernization in the 19th century. The intervention of the Western education system has led to the emergence of educational dualism between the traditional system (madrasahs, pesantren) and the secular system (public schools). The modernization of Islamic education in the early 20th century was marked by the efforts of reformers such as Muhammad Abduh, Jamaluddin al-Afghani, and Ahmad Dahlan, who sought to restore the spirit of rationality and openness in education. Abduh emphasized that Islam is not in conflict with modern science; Instead, the two must synergize in building a civilized society.

In Indonesia, KH. Ahmad Dahlan and Hasyim Asy'ari took a strategic step by establishing an educational institution that combines the curriculum of religion and general science. This is the forerunner of the emergence of modern madrassas and adaptive Islamic boarding schools in the global era. However, the main challenge in modernizing Islamic education is to maintain the authenticity of Islamic values in the midst of secularization, educational capitalization, and digital technological advances. Modernization should not be interpreted as westernization, but as an effort *to tajdid* (renewal) to learning methods and systems while still being based on Islamic values.

3.2. Transformation Towards Modern Islamic Education

The transformation of modern Islamic education can be seen through three main dimensions: epistemological, methodological, and institutional. The epistemology of modern Islamic education seeks to restore the concept of *wahdat al-'ilm* (unity of knowledge). According to Al-Attas (1995), the crisis of modern education arises because of the separation between science and moral values. Therefore, Islamic education needs to integrate rational science with revelation in order to produce civilized human beings (*ordinary people*). This approach is now embodied in the integrative curriculum at various Indonesian Islamic universities, such as UIN, which combines the faculties of religion and science in one integrated knowledge system.Learning methods are shifting from traditional memorization-based patterns to participatory, creative, and technology-based approaches. The *student-centered learning system*, *blended learning*, and *digital pedagogy* are the main strategies of Islamic education in the 4.0 era. Based on the results of research by Hatija et al. (2025), the integration of technology in madrassas has increased the effectiveness of learning, especially in combining religious and scientific materials through digital media. Islamic educational institutions now play the role of social transformation agents. Modern Islamic boarding schools, such as Gontor and Daar El-Qolam, have implemented an education system that emphasizes discipline, leadership, and international language skills. On the other hand, Islamic universities in Indonesia are beginning to emphasize multidisciplinary research that bridges Islamic studies with science, economics, and technology. This shows that Islamic education is no longer exclusive, but inclusive and global.

In the digital era, Islamic education faces new challenges: technological disruption, artificial intelligence, and a change in the learning culture of the digital native generation. This challenge is actually an opportunity to strengthen the adaptive and progressive identity of Islamic science. The integration of Islamic values with digital technology has become the focus of contemporary research. Anam (2023) found that the use of digital technology in Islamic education strengthens learning motivation and expands access to global knowledge sources. Furthermore, global Islamic education is now directed to form "digital ethics", media ethics based on Islamic spirituality that emphasizes manners, honesty, and social responsibility. This is in line with the vision of Islamic education as a means of building a civilization based on universal human values. The transformation of Islamic education cannot be seen as a contradiction between the past and the present, but rather as an epistemological continuity. Classical intellectual heritage became the foundation, while modern innovation became an instrument of adaptation. In other words, modern Islamic education is the result of a creative dialogue between tradition (*turats*) and modernity (*hadatsah*). The synergy between the two will produce an education system that not only produces people of faith and piety, but also intelligent, innovative, and globally competitive.

4. CONCLUSION

The transformation of education in Islamic civilization is an ongoing historical and philosophical process, which shows the close relationship between the classical scientific tradition and the modern education system. Classical Islamic education forms an epistemological foundation that brings together revelation, reason, and empirical experience, giving birth to a holistic learning system oriented towards the formation of morals and science.In the modern era, Islamic education has undergone a paradigm reconstruction through the integration of religious science and science, modernization of learning methodologies, and adaptation to digital technology. This effort is not just to imitate the Western system, but a form of *tajdid* (renewal) of Islamic values so that they remain relevant in the midst of changing times. In the digital era and globalization, Islamic education is faced with challenges as well as great opportunities to affirm its role as an education system that balances

spirituality, rationality, and technological advancement. This transformation confirms that Islamic education must continue to move from tradition to innovation, from memorization to creativity, and from exclusivity to global openness.Thus, modern Islamic education is the result of a synthesis between *turats* (classical intellectual heritage) and *hadatsah* (modernity), which gives birth to an education system with spiritual, scientific, and oriented characteristics for the benefit of the ummah.

5. REFERENCES

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