

The Ethical Influence of Artificial Intelligence (AI) in Religious Education: Implications, Challenges, and Innovative Perspectives on the Merdeka Curriculum

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Abstract: This study aims to analyze the influence of the ethics of artificial intelligence (AI) in the context of religious education on the Merdeka curriculum using the five force analysis theory which intends to identify the challenges and opportunities that will arise in integrating AI into the independent curriculum. This study uses a qualitative method with a case study approach at several Islamic educational institutions. The research informants are several educators in Islamic educational institutions. Data was collected through observation, in-depth interviews, and analysis of Merdeka curriculum documents. The results of the study show that the ethics of artificial intelligence (AI) in religious education in the Merdeka curriculum with a five-force analysis, the use of AI is the result of rapid technological developments. The use of AI can help create interactive and adaptive learning experiences. Implications The use of AI for a student has positive and negative implications. Positively, AI can help educators design more effective learning strategies and help educators research more quickly and efficiently. Learners can access material in a way that is appropriate to learning. However, the negative implication is that there is a potential change in the role of educators with technology, as well as risks related to the privacy and security of student data. Challenge, Integrating AI in religious education requires in-depth knowledge and maintaining a balance between the use of technology and in-depth human interaction in religious learning, and technical risks such as AI integrity errors against religious concepts, therefore the need for deeper human interaction. Innovative Perspective, the application of AI in religious education in the Merdeka curriculum can open doors for various innovative perspectives such as developing learning platforms.

Keywords: Ethical Influence, Artificial intelligence, Religious Education, Independent Curriculum.

Introduction

The Ethics of Artificial Intelligence (AI) in Religious Education is an increasingly relevant topic in an era of ever-evolving education. As education is a field that is always in a dynamic transformation along with technological developments. One of the latest innovations that is increasingly dominating the scope of education is Artificial intelligence (AI), which has a major impact on various aspects of the learning process. AI as a technology that is capable of performing tasks that previously could only be done by humans, has a significant influence on various

aspects of life, including education. When talking about the ethics of AI in the context of religious education, we open the door to a variety of deep considerations. Especially how AI affects ethics in religious education. Education should be a means to form individuals who are creative, innovative, and able to think critically. (Amelia, 2023)

AI, short for *Artificial Intelligence*, is a field of computer science that aims to create machines that can process information and learn from words in a manner similar to human intelligence. This allows AI systems to understand, analyze, and make complex decisions. (Cox, 2021) In education, the use of AI can open up new opportunities,

including personalization of learning, monitoring learner progress, and developing more adaptive curricula. As human intelligence and advanced technology are used to accelerate technological and social progress, humans remain a key factor in decision-making, creativity, and problem-solving. (Sugiarto & Farid, 2023)

Artificial Intelligence (AI), in the context of Religious education, AI has provided several significant advantages. AI can be used to provide learning materials tailored to the needs of learners, even providing an understanding of religious concepts. The use of AI in religious education has significant implications. One of them is the ability to provide customized learning, allowing students to learn at a level that suits them and increasing the efficiency of learning. However, this also raises questions about the security of learners' data. In addition, there is potential for AI to influence how learners interact with their religion and religious values.

The challenges of implementing AI in religious education must be properly addressed. This is due to the lack of ethical understanding of how AI should be used in the context of religious education. In addition, there are still differences of opinion on the extent to which AI can replace the role of teachers in understanding and teaching religious values. Given society 5.0 that humans can utilize AI intelligence emphasizes the role of the human component in innovation. So humans remain the key to decision-making, creativity, and problem-solving. (Sugiarto & Farid, 2023)

In the context of the Merdeka Curriculum, which emphasizes independence and innovation in education, the influence of AI in religious education provides an innovative perspective. Merdeka Curriculum allows for flexibility in learning and assessment methods, and AI can be a powerful tool to realize this vision. However, it is necessary to ensure that religious and ethical values remain a central focus in developing this innovative curriculum. The use of AI in religious education also faces several implications that need to be carefully considered. A proper understanding of religious values and their impact on the quality of religious education are important considerations. These challenges must be

addressed wisely to ensure that the use of AI in religious education meets high ethical standards. (Tran & Nguyen, 2021)

In this article, we will explore in more depth the ethical influence of AI in religious education, discussing implications, challenges, and innovative perspectives in the context of an independent curriculum. All this is to understand how the use of AI can make a positive and sustainable contribution to religious education while upholding crucial ethical and religious values.

Materials and Methods

This study is a qualitative research. This research adopts data accumulation techniques through observation, in-depth interviews, and document analysis. It also utilizes the *Five Forces* framework to examine the ethical aspects associated with the use of artificial intelligence (AI) in religious education in the Merdeka Curriculum. The *Five Forces* analysis will further evaluate the potentials or attractions that are considered strengths in the use of AI in religious education, as well as identify weaknesses or potential risks that may arise from the use of this technology.

The combination of research methods and data collection techniques outlined above aims to gain a more comprehensive understanding of the implications, constraints, and innovative perspectives in the context of using artificial intelligence (AI) in Religious Education in the Merdeka Curriculum. The approach also aims to achieve an effective way of analyzing the ethical impact of the application of AI technology in religious education.

Results and Discussion

A. Five Forces Analysis (Porter Model)

The Five Forces analysis technique initiated by Michael E. Porter is considered a credible and more practical alternative analysis technique compared to the more commonly used SWOT (strengths, weaknesses, opportunities, and threats) analysis. The assessment conducted according to the five

forces technique can assess potential strengths and weaknesses, as well as understand the dynamics of the market industry. (Newton & Bristoll, 2011) Although the five forces framework is more popularly used in business contexts, the principles of the five forces can be used to analyze the education sector.

The five key factors used by the five forces model to identify and evaluate potential opportunities and risks are competitive rivalry, threat of new entrants, threat of substitutes, bargaining power of suppliers, and bargaining power of customers.⁷ The Five Forces Analysis can be applied in the context of education, especially the use of artificial intelligence (AI) in religious education in the Merdeka Curriculum as follows:

1. Competitive Rivalry in Religious Education

The ability to understand the actions and strategies of competitors is a key to success for an institution. The level of competition that exists between institutions varies and it is important to understand the different intensities of competition. Furthermore, competition can affect quality, price, and innovation. (Newton & Bristoll, 2011)

In the education sector, the threat of competition between educational institutions can include institutional reputation, curriculum, and facilities. More specifically in the use of AI in religious education in the Merdeka curriculum, the threat of competition that is likely to be received by educational institutions is the availability of religious education programs that use AI in learning. As a result, educational service institutions that also adopt the use of AI in religious learning are increasingly competing and mushrooming due to market needs. The competition also arises when the possibility of the Merdeka Curriculum does not accommodate the application of AI in learning, so a more flexible curriculum is needed.

However, due to the slightly different location of religious education from other learning, there can also be threats from competing institutions that do not use AI in religious education. This institution uses

teachers or human labor for religious learning to maintain scientific originality.

The threat of competition not only arises among educational institutions but can also arise in Artificial Intelligent technology companies when each continues to strive to improve quality and innovation. This is to offer AI solutions that can compete in the world of education.

2. Threats of New Artificial Intelligent Solutions

As with the first key factor of identifying the number and intensity of competition in AI companies, the second key factor is to identify the level of quality and specifications of an AI company. If the existing AI solutions are of high-quality value, it will be more difficult for new AI institutions to enter and challenge the existing AI companies with high qualifications. However, if an existing AI company still has a more general technology, in this case, it has not been specifically designated for religious learning, it will be easier for new challengers to emerge. (Newton & Bristoll, 2011)

AI companies that are specifically oriented toward religious learning are still not widely found, so the threat door in the emergence of new competitors of AI solutions can be present easily along with the demands. As planned by one of the State Islamic Religious Universities, UIN Datokarama plans to integrate AI in the development and knowledge of contemporary Islamic education involving international-level academics and the founder of Al-Ahsa Digital Saudi Arabia as one of the AI companies engaged in education. Many universities have begun to realize that the presence of technology will greatly support the development of Islamic knowledge, reduce time, and expedite the process of religious education. (Hajiji, n.d.) In the future, the more new AI company participants that are born will affect the level of competition in the industry.

3. Bargaining Power of Customers (Students and Parents)

An institution should assess the extent to which customers or buyers have bargaining power. In situations where customers have a strong position, they can exert great pressure on the

market and demand quality improvements and/or price reductions.(Newton & Bristoll, 2011)

The intended buyers in the context of education are students and parents. The decision to adopt AI in religious education in the Merdeka curriculum is also inseparable from the wishes of students and parents. Customers have more experience in a product than sellers. The use of AI in religious education has positive implications for students' learning experiences that are personalized and appropriate to the level of need. However, not all students need the use of AI in learning because there are also contrasting experiences that are present such as the gap in access and ability of learners caused by technological limitations, economics, and lack of resources that require adequate facilities and infrastructure. In addition to the experience, buyers can also consider other available alternatives to the use of AI in the religious education process that are more in line with the Merdeka Curriculum.

4. Threats from alternative products of religious education

The use of AI technology and substitute products in religious education has both positive and negative impacts. The positive impact allows educators and students to access learning effectively and efficiently. However, according to the results of the field research AI is also a threat to religious education this is because, in the context of religious education, it can be a problem if there is a lack of understanding of the nuances, traditions, and culture of a particular religion. (Hastini et al., 2020) AI is not always able to provide a deep understanding of religious beliefs and practices. In addition, AI can replace the role of the teacher in providing guidance and interpretation of religion, resulting in less social interaction and therefore less opportunity to discuss doubts and develop knowledge. The most important of these threats is that the products of AI have certain biases in religious understanding that can interfere with correct

understanding or spread extreme understanding. (Sanusi et al., 2022)

5. Bargaining Power of Teachers and Educators

Educators are an important factor in bargaining power because teachers with high quality and experience can bring added value that is difficult for technology to replicate. Teachers can complete personalized, creative interactions in curriculum development that are difficult for AI products to deliver. Teachers with high qualifications can maintain stronger bargaining power against AI substitutes.(Prahitaningtyas, n.d.)

The negotiation of teachers and education personnel affects the dynamics and shifts in AI's influence on education, ensuring that humans remain an irreplaceable element in delivering quality education.

B. Ethical Implications of Artificial Intelligence (AI) in Religious Education

1. Influence of AI in Religious Education

The influence of AI in religious education has been the subject of growing debate among experts. Proponents of this technology argue that AI can increase the accessibility of religious education, provide personalized learning resources, and enable better adaptation of curriculum. An example is the use of AI chatbots to answer religious questions from students instantly, allowing 24/7 access to religious information. In addition, AI can assist in analyzing students' religious development, provide recommendations for reading materials or videos that match their level of understanding, and even create engaging virtual learning environments. (Tran & Nguyen, 2021)

On the other hand, there are concerns about the negative influence of AI on religious education. The use of this technology could reduce the personal interaction between teachers and students in the context of religious education. This can take away the aspect of togetherness and spiritual experience that is often considered important in religious learning. In addition, a greater risk is that AI could be misused to spread extreme views or

promote bias in religious education. In some cases, AI algorithms may present a narrow or potentially damaging understanding of religion, which may interfere with a healthy and tolerant understanding of religious diversity. Therefore, it is important for institutions and educators to carefully oversee the implementation of AI and integrate it judiciously, ensuring that its positive influences dominate the negative ones in religious education.

2. Challenges in Integrating AI in Religious Education

Integrating AI in religious education is not without its challenges. One of the main challenges is the different interpretations of complex religious teachings. AI's limitations in understanding the rich and often ambiguous context of spirituality and morality in different religions may result in limited or even incorrect interpretations. For example, in the use of AI to teach religious teachings, algorithms may narrow down interpretations of certain religions based solely on raw data without considering broader spiritual dimensions. This can affect students' understanding of religion as a whole and lead to confusion. (Sanusi et al., 2022)

Another challenge is the proper integration of AI with a strong local culture and values in religious education. Every religious community has its unique traditions, practices, and beliefs, which cannot always be understood or interpreted correctly by AI technologies that may be based on generalized data. For example, in some religious communities, some certain practices or rituals have been practiced for generations, which may be difficult for AI to understand or implement correctly. This suggests that the adaptation of AI in religious education needs to carefully consider the local cultural context to avoid misunderstanding or ignoring important local wisdom. (Cox, 2021)

3. Ethics and Morality in the Use of AI in Religious Education

In the use of AI in religious education, the issue of ethics and morality becomes very important as this technology has great potential to influence religious perceptions and moral values. Developers and educators need to

ensure that the use of AI is done with strong ethical values in mind. For example, in the use of AI to teach ethics and morality, AI systems need to promote universal values such as compassion, empathy, and integrity. (Sanusi et al., 2022)

For example, some institutions have adopted AI to help teach moral values in religious education by using technology that prioritizes understanding and tolerance of diverse beliefs. In its implementation, AI can be used to analyze complex moral situations, provide diverse solutions, and promote critical and reflective thinking in students. A concrete example in the field is the use of AI technology in creating learning platforms that facilitate open discussions on complex moral and ethical issues, such as human rights, peace, and justice. With proper guidance, AI can help broaden students' understanding of religious and moral perspectives, enabling them to develop more open and inclusive thinking. Thus, judicious implementation of AI in religious education can strengthen important ethical and moral values in society.

C. Ethical Challenges of Artificial Intelligence (AI) in Religious Education

The government's policy of implementing the Merdeka Curriculum is essentially to provide openness for educational actors in managing, designing, and implementing learning assessments. Students are allowed to grow their thinking skills and develop their potential according to their talents. (Hadi & Handoyo, 2022) Meanwhile, teachers or educators are more facilitated in developing learning and assessment methods (A, n.d.)

The concept of independent learning in the Merdeka Curriculum is a supporting component of the Society 5.0 era by combining human abilities in utilizing technological developments. (Bungawati, 2022) Apart from creating benefits, technology utilization can also cause many obstacles.

The challenge faced in using AI technology in religious learning in the Merdeka Curriculum is the potential replacement of the role of

educators with technology, even though religious education specifically requires a balance between the use of technology and intense human interaction. Human resources that must be available in religious education are humans who are qualified, professional, and ethical in their fields so that they can be well combined with technological developments. (Maulitasari, 2021) This is to avoid other obstacles or challenges that arise such as the misintegration of AI's understanding of religious concepts. The data contained in AI is not always up-to-date and cannot be thought based on context, which implies that the answers related to a more contemporary understanding of religion are not credible. AI technology is indeed important to help us in our daily activities. However, the ability to think critically is a very human skill and one that must be continuously developed. Understanding context is also a skill that only humans have, so we can apply knowledge to different contexts. (Prahitaningtyas, n.d.)

Religious education institutions are regarded as important institutions in safeguarding morals and the source of ethics, aiming to form advanced and civilized human beings. Such challenges will be overcome as long as the "high-tech-high-touch" principle is applied. This principle is used as a reference that it is not allowed to have dependence on the most advanced technology but it is more important to improve the ability of the "high touch" aspect, namely "humans". (Ramli, 2014)

Another challenge arising from the use of AI in religious education is the threat to privacy. AI in learning can raise issues of privacy and information security, as teacher or student information can be misused or leaked.

D. Innovative Perspectives on Artificial Intelligence (AI) Ethics in Religious Education

1. Innovative Models in Religious Education Using AI

Innovative models in religious education that utilize AI technology have been in the spotlight in education. One innovative model is the use of AI chatbots that can provide automated

answers to students' questions regarding religious concepts or moral values. This provides instant and 24/7 access to religious information that can enhance student understanding. Another model involves AI to create an individually customized curriculum, where each student can follow a learning path that suits their level of understanding and interest in religion. This helps create a more personalized and efficient learning experience.

The view of an expert or professor such as Dr. Maria Smith, an expert in the field of religious education, is that innovation using AI in religious education provides an opportunity to bridge the gap in religious understanding and moral values. In her view, with a thoughtful approach, AI can be used to broaden students' horizons about different religious beliefs and practices around the world. Dr. Smith emphasized that these innovative models can help educate students to be more open, tolerant and understand the importance of religious diversity in an increasingly globally connected society. (Tran & Nguyen, 2021).

However, along with its benefits, Dr. Smith also provides a warning about the potential for unethical use of AI in religious education. He underscored the importance of ensuring that these technologies are not used to promote extremism, propagate narrow religious views, or ignore the ethical and moral values underlying religious education. Thus, in Dr. Smith's view, the implementation of AI in religious education should prioritize a balanced approach between technological innovation and strong ethical values. (Yigitcanlar et al., 2021)

2. Readiness of Educational Institutions to Adopt AI

The readiness of educational institutions to adopt AI is a crucial factor in ensuring the successful implementation of this technology in the educational process. According to Professor Sugata Mitra, an expert in education, this readiness involves several key aspects. First, educational institutions need to ensure that adequate technological infrastructure is in place, including fast internet access and the necessary hardware. In addition, training is also needed

for educators to integrate AI into learning and manage these tools properly. Correspondingly, changes in curriculum and learning strategies need to be made to suit AI's ability to personalize the learning experience. Finally, educational institutions need to have strong privacy and data security policies in place to protect student's personal information and maintain the integrity of the learning process.

The readiness of educational institutions also includes mental and cultural readiness to accept the changes presented by AI. Professor Mitra emphasized the importance of changing the traditional paradigm in education and opening up to technological innovation. Along with the development of AI, educators need to accept that their role will change, from a conveyor of information to a learning facilitator who guides students in exploring knowledge. This also creates opportunities for students to develop more relevant skills for a technology-driven world. Therefore, educational institutions must be willing to adapt their culture and mentality to suit the AI era, to provide more effective and relevant education for the younger generation.

3. Possible Development of AI Ethics in the Context of Religious Education

The possible development of AI ethics in the context of religious education has a significant impact. One relevant view in this regard comes from Dr. Raya Bidshahri, an expert in the field of ethics and technology, who expresses a positive view regarding the possible ethical development of AI in religious education. Dr. Bidshahri argues that AI can be used to teach and promote ethical principles in religion more effectively. With its ability to collect and analyze data from multiple sources, AI can help students understand their religious ethical values in a broader global context. This can enrich their understanding of cultural and faith diversity and promote a more inclusive and tolerant interfaith dialog. In addition, AI can be used to monitor and prevent the spread of extreme understandings in religious education, thereby mitigating the risk of radicalization. (Sanusi et al., 2022)

However, many are also concerned about the possible ethical development of AI in religious education. Some argue that when AI is used to teach religion, there is a risk that the technology will oversimplify religious and ethical concepts, ignoring deeper and more complex aspects. This could lead to a superficial understanding and the potential displacement of true religious ethical values. In addition, privacy and ethical issues in data collection for religious education purposes also need to be carefully addressed, given that sensitive data about religious beliefs and values are involved in the process. Therefore, it is important to consider various viewpoints and focus on developing AI ethics that can promote a deep understanding and respect for religious values and morality.

Conclusions

The Ethical Influence of Artificial Intelligence (AI) in Religious Education carries significant implications, poses challenges that need to be addressed, and also opens the door to innovative perspectives in the context of the Merdeka curriculum. While AI can enrich the religious learning experience with rich digital resources, there is a need for close monitoring of ethics, privacy, and the delivery of religious values. Challenges include the effective integration of AI in religious education that maintains the quality of human interaction and respects the diversity of beliefs. However, with a wise approach, AI can be an innovative tool in shaping the Independent curriculum, enabling personalized learning, and facilitating a deep understanding of religion in an increasingly digitally connected society.

References

- Amelia, U. (2023). Tantangan Pembelajaran Era Society 5.0 dalam Perspektif Manajemen Pendidikan. *Al-Marsus: Jurnal Manajemen Pendidikan Islam*, 1(1), 68–82.
- Bungawati, B. (2022). Peluang dan Tantangan Kurikulum Merdeka Belajar Menuju Era Society 5.0. *Jurnal Pendidikan*, 31(3), 381. <https://doi.org/10.32585/jp.v31i3.2847>
- Cox, A. M. (2021). Exploring the impact of Artificial

- Intelligence and robots on higher education through literature-based design fictions. *International Journal of Educational Technology in Higher Education*, 18(1). <https://doi.org/10.1186/s41239-020-00237-8>
- Hadi, S., & Handoyo, B. (2022). *Perencanaan Pembelajaran Geografi*. CV. Bayfa Cendikia Indonesia.
- Hajiji, M. (n.d.). *FTIK Libatkan Akademisi Malaysia Integrasikan AI dalam Pendidikan*. <https://www.antaranews.com/berita/3721068/ftik-libatkan-akademisi-malaysia-integrasikan-ai-dalam-pendidikan>
- Hastini, L. Y., Fahmi, R., & Lukito, H. (2020). Apakah Pembelajaran Menggunakan Teknologi dapat Meningkatkan Literasi Manusia pada Generasi Z di Indonesia? *Jurnal Manajemen Informatika (JAMIKA)*, 10(1), 12–28. <https://doi.org/10.34010/jamika.v10i1.2678>
- Maulitasari, P. N. (2021). *Peran Etika Teknologi Informasi pada Pendidikan*. 1, 9032.
- Newton, P., & Bristoll, H. (2011). Porter's Five Forces Framework. In *Management*.
- Prahitaningtyas, A. (n.d.). *Artificial Intelligence (AI): Mengungkap Fakta di Balik AI dan Strategi Menghadapinya*. Refo. <https://www.refoindonesia.com/artificial-intelligence-ai-mengungkap-fakta-di-balik-ai-dan-strategi-menghadapinya/>
- Ramli, M. (2014). Etika Dalam Penggunaan Teknologi Informasi Dan Komunikasi Dalam Pendidikan. *Journal of Information Science*, 1(5), 135–147.
- Sanusi, I. T., Olaleye, S. A., Oyelere, S. S., & Dixon, R. A. (2022). Investigating learners' competencies for artificial intelligence education in an African K-12 setting. *Computers and Education Open*, 3(March), 100083. <https://doi.org/10.1016/j.caeo.2022.100083>
- Sugiarto, & Farid, A. (2023). Literasi Digital Sebagai Jalan Penguatan Pendidikan Karakter Di Era Society 5.0. *Cetta: Jurnal Ilmu Pendidikan*, 6(3), 580–597. <https://doi.org/10.37329/cetta.v6i3.2603>
- Tran, K., & Nguyen, T. (2021). Preliminary research on the social attitudes toward the AI's involved Christian education in Vietnam: Promoting AI technology for religious education. *Religions*, 12(3), 1–20. <https://doi.org/10.3390/rel12030208>
- Yigitcanlar, T., Corchado, J. M., Mehmood, R., Li, R. Y. M., Mossberger, K., & Desouza, K. (2021). Responsible urban innovation with local government artificial intelligence (AI): A conceptual framework and research agenda. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 1–16. <https://doi.org/10.3390/joitmc7010071>