Artificial Intelligence's Impact on the Development of Islamic Religious Education Learning at a Public Junior High School of Cilegon, Indonesia

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Abstract: This study was conducted with the aim of knowing the existence of Artificial Intelligence (AI) in improving the quality of learning in Islamic Religious Education subjects. This study used a qualitative approach by using field observations and interviews to collect data. The research shows that educational institutions have felt the impact of technological advances and AI and have used these tools to improve the teaching and learning process. Education professionals recognize that these advancements are very beneficial in making the learning process more efficient and effective. Personalized learning, automated assessments, virtual tutoring, smart content, and presentation translation are some examples of the benefits of AI for education.

Keywords: digital era; information technology; learning process; quality of learning; religious teaching.

1. Introduction

In this modern era, advances in information technology have changed all aspects of people's lives significantly. Technology has become an important part of human life in this ever-growing digital era (Devianto, Y., & Dwiasnati, 2020). Artificial intelligence, which enables machines or software to perform tasks that normally require human intelligence, is one of the most significant technological advances (Zahara, S. L., Azkia, Z. U., & Chusni, 2023). Only humans can perform tasks such as learning and reasoning (Marwantika, 2023). Artificial Intelligence (AI) is a field of computer science that concentrates on solving cognitive problems related to human abilities, such as recognition, learning, and image creation (Jumail 2024). In recent years, several developed countries have seen the use of artificial intelligence in education grow rapidly. Countries such as Australia and Japan are already looking at the use of AI in educational contexts (Wiranto, E. B., & Suwartini, 2022). Artificial intelligence (AI) technology has become an integral part of many areas of life, including education (Dewi, 2024).

In Islamic education, it is important to consider the various positive and negative impacts of the presence of artificial intelligence (Hakim & Azizi, 2023). Chatbots, Augmented Reality (AR), and Virtual Reality (VR), are examples of artificial intelligence (Kurniawan et al., 2023). This technology opens up new learning opportunities. This can also improve the overall quality of learning. When teachers use artificial intelligence, they can create study guides that are more appropriate and unique for each student's learning style, abilities, and interests, including those related to Islamic religious education (Anas, I., & Zakir, 2024).

Character development is greatly influenced by Islamic Religious Education (PAI) and religious principles in an era of increasing digital connectivity (Jannah, 2023). Various aspects of life have experienced significant changes (Sriyanti, 2023). One example is Islamic religious education, which is now accessible to everyone thanks to technological capabilities in the digital era (Aisyah, E. S. N., Hardini, M., & Riadi, 2021). However, everyone has a belief that using technology is good or bad. Understanding and utilizing modern technological advances to improve religious learning in the current era of computers and the internet if we want to integrate technology effectively and efficiently into Islamic religious education is a very crucial thing to do in the current digital era (Mustari, 2023).

GPT chat is a modern technology that allows artificial intelligence to answer various questions. On the other hand, prolonged dependence can cause students to refuse to participate in active learning because they become accustomed to direct answers and do not engage in critical thinking processes. Considering current technological advances, including artificial intelligence (AI), all parties are trying to catch up in the field of technology, including in the field of education. To use artificial intelligence to improve school learning, people need to be creative and bold. For example, Rosiyanti uses Powtoon as a learning medium to increase students' learning motivation and help them understand material about distance in space (space geometry) independently. The material presented by the teacher becomes easier to understand and interesting for students. Improving learning media design not only increases student motivation but also improves the overall quality of education. One of the main problems at Public Junior High School (SMP Negeri) 1 of Cilegon, Banten, which is one of the best schools in the city of Cilegon, is the use of learning media. The school is located in a dense urban environment, and many teachers, especially those from the area, are not comfortable with technology. Our initial observations suggest that educators and education employees are very interested in learning technologies, especially in studying the opportunities and difficulties posed by AI. We are committed to helping our partners in this area, especially by leveraging AI's capabilities to personalize the learning experience through comprehensive data analysis. This allows AI to customize curriculum and instruction to meet students' unique needs.

In traditional education, students usually listen to teachers and follow lesson plans. However, artificial intelligence tools such as chatbots, gamification, voice recognition, and AR make learning more interactive and engaging. A study at SMP Negeri 1 Cilegon shows that educators are incorporating artificial intelligence into their learning approaches and seeking resources to improve student learning outcomes. Since educators often use traditional methods such as notes, lectures, and live assessments, which result in one-way communication, the challenge lies with them to adapt to modern technology, especially artificial intelligence. Educational media is still limited to assisting learning, most of which focuses on disseminating information or transferring knowledge from teachers to students. This research looks at how AI affects Islamic education outcomes. Based on findings conducted at SMP Negeri 1 Cilegon, this research explores the positive and negative effects of using AI in the learning process. Islamic education is still underused, and teachers must be proficient in innovative technology in this "Freedom of Learning" era (Yamin, M., & Syahrir, 2020). As a result, teachers can use a variety of technologies to enhance their teaching. More effective Islamic religious education lessons can be created with the help of artificial intelligence (Sulaeman et al., 2024).

2. Research Methods

The effects of AI on Islamic religious education were thoroughly analyzed in this research, which was conducted qualitatively and descriptively. This research uses descriptive qualitative methodology to explain the observed phenomena using existing data. Participant observation, in-depth interviews with relevant stakeholders, and careful note-taking were the primary methods of data collection. To arrive at conclusions, data from written documents and interviews were reduced, presented, and analyzed. Those who know the subject matter are considered informants in this research. Data sources include publications and studies on artificial intelligence, ensuring that the research is valid through credible references from scientific and educational sources. This method aims to produce accurate data that can be a reference for how AI helps teachers adapt to technological advances, enabling educators at SMP Negeri 1 Cilegon to utilize AI to improve their students' abilities. The synthesized data supports the research results and offers a comprehensive understanding of the influence of artificial intelligence, especially in terms of Islamic religious education.

3. Results and Discussion

Artificial intelligence aims to create intelligence in machines by imitating human behavior for machines in the form of computers and other instructions that are usually carried out by humans (Hanila, S., & Alghaffaru, 2023). Enabling computers to have capabilities comparable to humans is the

ultimate goal of artificial intelligence. Many main methodologies can be used in the field of artificial intelligence (Mahmudah, 2023).

a.   Artificial Intelligence and Education

Artificial intelligence can create machines that match or even outperform human thinking and actions. Communication, hearing, seeing, learning, thinking, and problem-solving are all AI tasks. With AI, it can be used to search for several things, such as product recommendations, data analysis, language translation, and graphic art creation (Hasanah, A., & Budiyono, 2024). Here are the statements related to Artificial Intelligence: (a) Acting humanly, this AI system can interact and carry out tasks as humans do. (b) Thinking humanly, AI systems also can process data similar to humans. (c) Thinking rationally, AI systems can make rational and logical decision-making processes. (d) Act rationally. In addition, AI systems can react to situations logically and follow the goals that have been set or want to be achieved (Lukman, L., Agustina, R., & Aisy, 2023).

AI can be classified into: **(a)** Artificial Narrow Intelligence (ANI), these components are designed to carry out specific tasks. (b) Artificial General Intelligence (AGI) has abilities comparable to humans and is very intelligent in completing various tasks. Artificial Super Intelligence (ASI), is predicted to have abilities that surpass humans (Yunita et al., 2023).

In the field of education, there are some benefits taken from AI development, such as:

1) Automated Scoring. To automatically assess and rate online platforms, artificial intelligence is often used. This capability makes it easier for educators to create and manage quizzes and tests in an easier and more effective way.

2) Virtual Tutor (Virtual Teacher). By using machine learning technology, AI tutoring systems can understand teaching methods and strategies by interacting with students and providing students with additional exercises and assignments to understand certain subjects.

3) Smart Content (Smart Material). Smart educational content accelerates and efficiently searches, categorizes, and searches virtually programmed digital content and books. Digital libraries such as schools, universities, and public libraries use this technology.

4) Voice Assistant (Voice Assistant). Voice assistants such as Siri and Google Assistant, which are very popular in the education industry, are one of the most widely used artificial intelligence technologies. Students can access Islamic religious education materials, and search for books, articles, and reference information by speaking or mentioning relevant keywords with this assistant.

5) Presentation Translator. Both educators and students can interpret or convey texts in any language they choose. This technology allows users to listen to sentences or speeches in a foreign language translated into their language, allowing them to engage in activities where they listen to various texts or speeches without having to read and translate them (Hasanah, A., & Budiyono, 2024).

b.   Impact of Artificial Intelligence in Islamic Education

Artificial intelligence has significant potential to improve the quality of learning in Islamic education. However, the negative impacts of this technology must be mitigated and carefully monitored (Arkan et al., 2024). Individuals who have inherent knowledge of Islamic teachings and relevant technological skills should be the goal of technology integration. This must be based on the Islamic perspective on artificial intelligence. AI is beneficial for Muslims because it allows them to do many things, such as spreading information about Islam. However, AI can also be a threat because it can become the main source of truth for ordinary people (Mahmudah, 2023). The use of technology has developed into another option to increase the success of Islamic religious education by providing high-quality resources for teachers and students. Ultimately, technology must drive progress in Islamic religious education. Technology can help teachers and students overcome and fix problems related to learning. SMPN 1 Cilegon City has experienced significant progress thanks to the use of artificial intelligence, this technology has increased the effectiveness and efficiency of Islamic education, significantly improving the quality of student learning.

c.   Positive Impact of Artificial Intelligence in Islamic Religious Educational Teaching

With the help of AI, students can access various sources of Islamic learning material from various corners of the world. This technology enables the translation of religious texts into various languages with greater accuracy, thereby expanding the reach of learning. With the help of AI, it is also able to provide recommendations for various materials, not only from books but also from other reference sources. Also, AI encourages independent learning by providing resources and tools that can be used flexibly without being bound by place and time. This is especially useful for students who want to study after school or who live in areas with limited access to formal educational institutions. With AI, students at SMPN 1 Cilegon City can learn independently at home using their own gadgets, so they can use their gadgets for positive and productive things.

Teacher satisfaction from providing information to students and receiving useful feedback to share with colleagues will encourage better responses. During the learning process at SMP Negeri 1 Cilegon, teachers can use artificial intelligence (AI) to help them make faster decisions for their students. AI can help students understand their weaknesses and offer suggestions for improvement or additional assignments tailored to their needs. This allows teachers to be more productive and efficient in teaching, and students and teachers can increase interactions with each other. AI can also assist in developing educational content that is in accordance with the Islamic religious education curriculum. For example, creating interactive learning modules, animated videos, and interesting and informative learning applications. With AI, it can help provide students with concepts for creating products or works related to subjects. Then AI can also increase student creativity at SMPN 1 Cilegon City in the learning process at school.

AI will change traditional teaching and learning methods into more effective and efficient methods if incorporated into educational institutions. This can be achieved by easing the teacher's duties, finding the most appropriate learning methods, determining important learning goals for students, and directing teacher-student interactions during the learning process. Therefore, educators must work closely with parents, which is very important as home educators, to ensure that students receive the best education. Despite the many benefits of advances in technology and AI, improving teacher performance at the institutional level remains difficult. SMP Negeri 1 Cilegon has utilized various AI innovations (Hasanah, A., & Budiyono, 2024).

Then Mrs. Rekadestiany, also a PAI teacher, said to students and teachers at SMPN 1 Cilegon City that the presence of AI could improve the quality of learning. With enthusiasm, he said, "AI opens up many new opportunities in the world of education, especially for Islamic Religious Education subjects." Mrs. Rekadestiany explained that AI can personalize learning, where the presence of AI can provide content, products or services tailored to user needs, and then enable students to learn according to their respective learning styles and cognitive speed. "With AI, we can create a more adaptive learning experience. For example, students who have difficulty understanding certain concepts can get additional explanations, while those who already understand can continue to the next material," he said. Apart from that, he emphasized the potential of AI in enriching learning resources. "AI can help us access and organize a variety of digital resources on Islam, from classical texts to modern interpretations, making learning more comprehensive," he added. Mrs. Rekadestiany also highlighted the benefits of AI in assessment and feedback. "With AI, we can provide faster and more specific assessments to students and provide feedback after learning quickly, too," she explained. This technology not only identifies students' strengths and weaknesses but also offers recommendations for effective teaching methods. With the help of teachers, students understand their weaknesses and can improve their abilities. With these advances, schools can improve their quality and compete with other educational institutions, with benefits for teachers and students. Therefore, utilizing artificial intelligence (AI) and technological advances is very important for this institution because it is very beneficial for SMP Negeri 1 Cilegon. Mrs. Rekadestiany also expressed her views on the benefits of AI in encouraging students' independent learning. With enthusiasm, he said, "In learning PAI, the existence of AI opens up great opportunities for students to become more independent in learning, because they are able to use it freely." According to Mrs. Rekadestiany, AI can provide flexible learning resources for students. "With AI, students can explore learning material at their own pace and interests.

For example, they can use AI-based applications to study recitation or Islamic history outside school hours," he explained. Artificial intelligence (AI) helps students at SMP Negeri 1 Cilegon monitor and manage their learning progress and helps them become more independent in the future. Artificial intelligence technology monitors students' affective, psychomotor and cognitive functions as well as their daily behavior and habits. Like humans, AI has both good and bad potential. AI helps Muslims by providing information about Islam, but it can also be a threat because it is seen as an accurate source of truth, especially for those who are just learning about the religion (Hasanah, A., & Budiyono, 2024).

Therefore, in Islam, any technology is considered based on how a person uses it. It is important to consider whether artificial intelligence will be used for good and benefit, or vice versa, which could ultimately lead to arrogance and misguidance. Artificial intelligence has the potential to improve learning and teaching and change the world of education in a direction that benefits teachers and students. In Islamic religious education, artificial intelligence generally functions to increase the intelligence of educators and support them in carrying out effective, efficient, and high-quality learning. The use of artificial intelligence can accelerate progress in education, especially in Islamic religious education, if used wisely by its users (Zufiroh, L., & Basri, 2023). AI can help students become more independent. AI can help educators focus more on providing understanding with the right keywords. All technology used by teachers remains centered on the essence of teaching, namely forming student character. AI can also help students monitor and organize their learning and prepare them for successful lives and future careers.

4. Conclusion

Artificial intelligence (AI) has been used by teachers at Public Junior High School (SMP Negeri) 1 of Cilegon, Banten, Indonesia, in their lesson plans. This allows students to answer teacher questions more efficiently and makes the teaching and learning process easier. AI significantly facilitates education in the contemporary environment, improving the quality of education. Educators have used technological and AI advances such as Smart Content, Voice Assistants, and Virtual AI Mentors to improve student responsiveness, HR management, and learning outcomes. To raise teaching standards and help students acquire critical technology skills for the future, educators must keep up with and capitalize on advances in technology and artificial intelligence. At SMP Negeri 1 Cilegon, the use of artificial intelligence (AI) has been implemented by teachers in their lesson plans. This allows students to respond to teacher questions more effectively and efficiently and makes the teaching and learning process easier. Implementing AI substantially facilitates the educational process in the modern environment, which impacts improving the quality of education. Various technological and AI advances, such as AI Virtual Mentors, Voice Assistants, Smart Content, and others, have been used by educators to improve learning responsiveness, human resource management, and higher learning outcomes. Educators need to keep up with and utilize advances in technology and artificial intelligence to raise teaching standards and assist students in developing critical technology skills for the future. The integration of AI in Islamic education also offers great potential to improve the quality of learning but requires careful management and monitoring to minimize negative impacts and ensure a deep understanding of Islamic values.

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