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OPPORTUNITIES AND CHALLENGES OF MOOCS AND AI IN STRENGTHENING ISLAMIC RELIGIOUS EDUCATION IN NTB

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ABSTRACT

This study aims to describe the opportunities and challenges of MOOCs (massive open online courses) and AI (artificial intelligence) in strengthening Islamic religious education in West Nusa Tenggara (NTB). This study used a qualitative approach with descriptive analysis. MOOC is an educational tool that offers openness, utilizes the latest technology to provide an interactive online learning experience, and is able to involve many participants in a short time. Artificial intelligence (AI) is a simulation of human intelligence modeled into machines and programmed to think like humans. MOOCs and AI provide great opportunities for strengthening Islamic religious education in NTB. MOOCs allow students to access course material anytime and anywhere, while AI can assist in providing a more independent and adaptive learning experience. So that both of them support students in accelerating learning according to their respective learning styles. MOOCs and AI can also help students carry out independent improvisations both in learning and in other activities. However, there are several challenges that need to be overcome in implementing MOOCs and AI in Islamic religious education in NTB. These challenges include the limited availability of infrastructure and internet access in several areas of NTB, the lack of understanding of technology by educators and students, and the Islamic religious education curriculum, which does not yet accommodate the use of the latest technology. Adequate and quality content is also a challenge in the use of technology such as MOOCs and AI. In addition, the lack of awareness and interest in participation from the community is also an obstacle to the use of MOOCs and AI. In conclusion, MOOCs and AI provide great opportunities for strengthening Islamic religious education in NTB, but the challenges of their use need to be overcome so that their implementation can be carried out effectively and efficiently.

Keyword*: MOOCs; AI; Islamic Religious Education*

INTRODUCTION

The era of the Industrial Revolution 4.0 is now upon us with many new thoughts and discoveries that are developing rapidly, such as artificial intelligence (AI), virtual reality, the Internet of Things (IoT), the Internet of Systems, and machine learning. This development gave rise to many innovations in various fields, one of which was in the field of education. Information such as learning materials, learning media, and assessment instruments can be easily found on the education platform. Dissemination of this information can be done if there are efforts to improve the supporting infrastructure.

The world of education is faced with many problems with learning patterns, especially inappropriate learning methods and strategies. Both students and teachers often have difficulty understanding the material provided, which is not entirely the fault

of the educator or the students themselves. The need for system innovation that can improve the quality of mindset and competence to minimize this incident so as to increase the level of success in achieving educational goals One system that can support this is artificial intelligence (AI), which is a branch of computer science that develops machines with the ability to think and work like humans in areas such as speech recognition, problem solving, learning, and planning. With the support of the AI system, it is hoped that the quality of education can improve significantly.

In Indonesia, the application of AI in education has not yet reached an adequate percentage level. Therefore, there needs to be encouragement to improve the system. The AI theory movement aims to understand the concept of intelligence and create machines that are more useful in education in order to enable students to learn according to their experiences. This will improve the quality of learning and efforts to shape the values and character of students. Education is not only related to the quantitative competence of students but also to the values and character acquired while they are studying. AI is an artificial intelligence machine that is designed to do specific jobs to help people with everyday tasks. The role of AI in education can help individual learning because it is able to search for information and present it quickly, accurately, and interactively.

Humans have experienced great benefits from the development of the industrial revolution, especially in connecting and establishing friendships with other people via the internet. Through independent access to any information they want, people are still expected to comply with manners, ethics, and codes of conduct. This change will affect human life as a whole, including Islamic education. Online learning that is connected to internet services has helped learners who are constrained by distance and time. This shift in paradigm also affects Islamic religious education (Rahmawati, 2018). Apart from using AI technology, the digitalization of the education system can also be achieved through application innovations such as Massive Open Online Courses (MOOCs). MOOCs are online learning innovations that are open, shared, and networked. This principle marked the start of the democratization of knowledge, which provides opportunities for everyone to utilize technology in a productive way.

In the new learning era, students have greater opportunities to explore and develop their knowledge and skills using technology. They can study independently and choose courses with themes and topics that suit their learning goals. Along with technological developments, there are now learning media such as MOOCs that provide this opportunity, where online courses are offered openly by many organizers, both companies and educational institutions.

Learning through MOOCs enables students to gain knowledge and experience from various sources through the comprehensive technical presentation of material through learning media consisting of images, text, audio, and video. MOOCs also provide exams and certificates for learning outcomes. However, MOOCs still have several obstacles, such as the low active participation of students, the difficulty of determining learning time according to the habits of students, and the difficulty of maximizing involvement in online learning and choosing content that is appropriate to learning outcomes. In addition, learning that uses MOOCs in Indonesia has a lot of diversity, one of which is that it imposes a cost burden on the participants, so it seems that it cannot be enjoyed freely by all people even though it is open in nature (Maqbul, 2020).

Islamic religious education at all levels, from elementary to higher, must be able to overcome challenges and opportunities in the era of globalization and digitalization.

Currently, the world of education is experiencing increasingly fierce competition with the existence of modern technology-based education services, which offer speed and accuracy of service as well as the development of big data that connects different branches of knowledge. Therefore, actors in Islamic Religious Education must be wise and prudent in dealing with this matter by keeping abreast of developments in information technology and taking the greatest advantage to improve Islamic Religious Education in the future. This cannot be avoided or even rejected, but must be addressed properly.

As educators, they must be able to utilize AI and MOOCs for the benefit of mankind, especially in Islamic Religious Education, so that they can compete in a global world while still adhering to the Qur'an and Sunnah and maintaining the quality of PAI learning in accordance with educational standards in the aspects of attitudes and values, knowledge, and skills. AI and MOOCs need to optimize their functions and facilities to support learning achievements in accordance with applicable standards. Students are entitled to and have the opportunity to improve their competence through various kinds of information on the internet. Through AI and MOOCs, students are expected to be able to develop the various skills and knowledge needed.

METHOD

In this conceptual article, the author uses the literature review analysis method as a technique for writing articles. The documents that have been selected are then analyzed by the researcher to find the essence of each of these articles. After that, the essence of the articles is combined into a unified whole in the form of articles. Thus, the literature review analysis method is used to create articles by combining important information from the selected articles.

RESULTS AND DISCUSSION

Opportunities and Challenges of MOOCs for Strengthening Islamic Religious Education in NTB

At present, the problem of learning Islamic religious education is not only a matter of educational curriculum but also a technical problem. The lack of information on religious learning through the internet is one of the influencing factors. The lack of availability of interesting religious learning materials, the human resource factor, and the technical ability to translate learning materials into digital form For this reason, a media liaison is needed between educators and students with places of learning outside through Massive Open Online Courses (MOOCs) media. MOOCs are online learning innovations that are designed to be open, share, connect, or network with one another. This principle marked the start of the democratization of knowledge, which creates opportunities for everyone to make productive use of technology.

According to Sumarsono (2021), in MOOCs, there are four letters that have their own meanings. First, Massive, which has the principle of infinite scalability, This means that the number of MOOC participants is not limited as long as the server capacity can properly accommodate their information data and has an algorithm that can handle the complexity of the system well. Second, "open, which means membership in MOOCs is open to the public and complies with the applicable code of ethics and norms, Membership can be free or paid, depending on the facility's program. Third, online MOOCs provide facilities to support face-to-face learning. All lecture materials, reading materials, assignments, practicums, and exam questions are uploaded into the MOOC

system. The material is delivered synchronously and asynchronously so that it provides an opportunity for participants who want to ask questions directly to the teacher or study independently. Fourth, MOOCs are a complete form of course, starting with class arrangements, presented material, reading materials, learning rules, practicum, assignments, exams, and assessments. The main objective of this course is to improve the communication of course participants so that it is easier for teachers to monitor student progress while they are participating in online learning.

Learning opportunities using MOOCs are very wide open in an effort to improve the quality of learning by providing access to knowledge and experience to students who can easily access learning resources supported by technological features such as interaction, collaboration, self-reflection, and evaluation systems (Sumarsono, 2021). Open access to these learning resources is expected by teachers to facilitate students use of the existing media. However, according to Maqbul (2020), MOOC platforms based on religious education are still lacking. Even though there are already several MOOC platforms that have to be paid for, educators and students cannot access them freely.

According to Rokhim and Rusdiyah (2021), in general, MOOCs offer courses in general sciences and provide course services free of charge. However, because there is still a lack of MOOC platforms in the field of Islamic religious education, this is a challenge for developers or online course service providers. Developers can work with educators to develop content that will later be uploaded to the online course. Content development by educators also needs to pay attention to content because there is good content to be delivered through online media and some that is not.

Based on the MOOC communication approach model, it is divided into two categories, namely cMOOCs and xMOOCs. The communication approach used by cMOOCs is connectivism, which links communication between students. Whereas xMOOCs are a course method with a more structured behaviorist approach. According to Khojir et al. (2022), each MOOC model has characteristics that provide broad opportunities to improve the quality of learning through open learning with ease of use. MOOCs are supported by technological features such as interaction, collaboration, self-reflection, and evaluation systems for accessing learning resources based on knowledge and experience.

After developing the content, the issues that need to be highlighted are the process of disseminating MOOCs and providing facilities for accessing the online course. What needs to be considered is the availability of adequate internet access and gadgets. Both of these are challenges to using MOOCs for learning. According to data from the Central Bureau of Statistics published in 2023, 59% of NTB residents aged 5 and over have accessed the internet (Machdi, 2023). Based on this data, it proves that more than 50% of the challenges for accessing MOOCs have been overcome; all that remains are platform providers in the field of Islamic religious education, which still do not exist.

Communication in learning is very important to build relationships and interactions between educators and students. However, the existence of MOOCs results in a lack of communication between educators and students. According to Pambudi and Wibawa (2020), students don't have enough time to communicate with the teacher, which can cause them to not understand the material they get.

Opportunities and Challenges of Artificial Intelligence (AI) in Strengthening Islamic Religious Education in NTB

The era of Industrial Revolution 4.0 was colored by artificial intelligence (AI). AI can be used to train abilities and hone the potential that exists in each individual. These individuals must also be provided with an understanding of why they need to be proficient in using AI. This is because their proficiency in using artificial intelligence is what allows them to survive in the midst of advances in technology and knowledge. By understanding the use and benefits of AI, we can increase the value of each individual. Especially for workers or employees, they will be seen as capable of competing in the era of the Industrial Revolution 4.0.

The role of AI in increasing the quality of education in Indonesia, especially in NTB, is very broad. According to Zakaria et al. (2023), one of the main roles of AI in education is its ability to make learning experiences more personalized and adapted to individuals. In addition, AI can also help evaluate students more quickly and efficiently. The potential for using artificial intelligence (AI) in Islamic religious learning is enormous. Here are some examples:

a. Learning Chatbots

AI can be used to create learning chatbots that can interact with users and provide answers to questions asked. Chatbots like these can help students learn about Islamic concepts and overcome difficulties in understanding them.

b. Development of educational content

AI can assist in the development of more interactive and easy-to-understand Islamic educational content. By using AI, teachers and content developers can create animated videos, simulations, and learning materials that are more interesting and interactive. According to Supriadi et al. (2022), with smart content learning, learning will create self-directed, motivational, adaptive, resource-free, and technology-embedded characters so that teaching and learning are in accordance with smart quality standards.

c. Learning data analysis

AI can assist in the development of more interactive and easy-to-understand Islamic educational content. By using AI, teachers and content developers can create animated videos, simulations, and learning materials that are more interesting and interactive. According to Supriadi et al. (2022), with smart content learning, learning will create self-directed, motivational, adaptive, resource-free, and technology-embedded characters so that teaching and learning are in accordance with smart quality standards.

d. Quran Memorization Application

AI can be used to develop Al-Quran memorization applications. Such applications can help students memorize and understand the Quran more easily, as well as monitor their progress continuously.

e. Online content filtering

AI can be used to filter online content that is against Islamic values. By monitoring and filtering online content, AI can help parents and teachers protect students from content that is not in accordance with Islamic religious teachings.

Overall, the use of AI in learning Islamic religion can help students understand difficult concepts and improve their overall learning experience. Artificial intelligence (AI) can be used in a number of ways to help study Islamic history. Some examples are:

a. Translation

In order to access Islamic history from various sources and languages, AI can assist in the translation and interpretation of Islamic historical documents into languages that are easier to understand.

b. Historical simulation

AI can be used to create simulations of Islamic history that allow users to see how Islamic history develops and changes in different scenarios. This can help users understand historical events better.

However, keep in mind that artificial intelligence cannot replace human understanding and interpretation in understanding Islamic history. Therefore, the role of artificial intelligence is only as a tool to assist in the research and understanding of Islamic history. The challenge of using AI to help students learn lies in their values and character. The sophistication of AI in helping students solve learning problems will make students passive because they will feel made easier by having AI help them. This web network and online base make it easier but create new problems, such as the absence of conventional meetings, which will lead to a high probability of a reduction in learning adab and Islamic values between educators and students (Wiswanti and Belaga, 2020). According to Mulianingsih et al. (2020), educators, parents, and the government also hold full control over students so that they use the application media wisely and professionally. Supervision and coaching need to be done so that they are not misused.

Previously, several cases had occurred where information technology-based learning media actually exacerbated students' bad habits. Therefore, guidance and supervision are needed to prevent fraud, such as plagiarism or copyright infringement. Previous cases show that there is a lot of duplicate data, so the use of IT-based technology or artificial intelligence (AI) cannot fully guarantee students' good habits in adapting to technology. Therefore, it is important to provide basic values and character education to balance the progress of the education system. This can be in line with several subjects that emphasize character education, such as Islamic religious education.

CONCLUSION

MOOCs can help expand access to Islamic religious education and provide opportunities for people to acquire knowledge more easily and effectively. Meanwhile, AI can also be used to accelerate and improve the quality of Islamic religious teaching and learning. Although there are many benefits to be gained from using MOOCs and AI in Islamic religious education, there are still some challenges that must be overcome, such as limited infrastructure and the lack of availability of quality learning materials in local languages. In addition, it is also necessary to pay attention to the development of students' character and moral values when utilizing this technology. MOOCs and AI have great potential to strengthen Islamic religious education in NTB. However, challenges in

its implementation need to be addressed properly so that this technology can provide maximum benefits for the development of Islamic religious education in NTB.

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