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Optimizing MOOCs in Islamic Education Institutions: Digital Learning Tools in Era 5.0

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Abstract: The industrial era 5.0 is a phase of industrial development that focuses on collaboration between humans and technology. This era not only impacts the industrial sector, but also impacts the education sector so that various online learning platforms emerge, one of which is MOOCs (Massive Open Online Course). MOOCs provides various materials needed by students that can be accessed online, anywhere and anytime. Islamic educational institutions can use MOOCs as a means of learning in the industrial era 5.0 which accelerates knowledge and technology. This certainly requires every Islamic educational institution to keep abreast of existing technological developments, and minimize the lag of rapid changes in the times. This research discusses how MOOCs is used as a means of digital learning to improve the quality, accessibility and competitiveness of Islamic educational institutions in the world of education in the 5.0 era. This research uses library research methods by using relevant journals and books as research data sources. The results of this study indicate that MOOCs as a digital learning tool has a major impact on the learning process, one of which is expanding access to learning, being flexible and affordable, and making learning sustainable. However, MOOCs has its own challenges in the learning process such as lack of interaction between teachers and students, technical constraints and low learning completion rate. Therefore, it is important for Islamic education institutions to integrate interactive features such as discussion and Q&A forums, ensure adequate technical support and develop more structured learning modules in order to increase motivation and learning completion rates.

Keywords: Digital Learning Tools, Era 5.0, Islamic Education Institutions, MOOCs.

Introduction

The development of the world of education is entering a very important phase, where an educational institution not only provides quality and optimal services, but also determines the future of the educational institution itself. Especially now that we have entered the era of society 5.0 where society is the center of human activities that collaborate with technology both in terms of AI and IoT, so that what is needed can be accessed through high-speed information, global coverage and very diverse digital media (Agustina et al., 2023). In addition to the speed of information, communication between individuals or groups can be done in real time with the help of technology without meeting in person (long distance) (Mega, 2022). With the existence of increasingly sophisticated technology, it certainly makes it easier for us in our daily activities, including in the field of education.

In education, there are several terms such as e-learning, blended-learning, distance-learning, and web-based learning. This is certainly a sign that technology has entered the field of education, where technology is very helpful in the learning process. In addition, the development of information technology opens up new opportunities in the development of teaching methods and learning tools (Nida & M. Djaswidi Al Hamdani, 2024). As was the case during the pandemic in 2020, although technology has been developing for a long time, at that time every educational institution is required to be able to organize education even in an emergency

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(Dwiputri et al., 2022). So that over time, learning media are increasingly numerous and varied, for example, such as MOOCs.

MOOCs (Massive Open Online Courses) are known as digital learning sites that are carried out online and can be accessed by anyone, anytime and anywhere (Asyhari & Islamia, 2023). MOOCs are present as a means of digital learning for students in the 5.0 era. This is certainly needed in educational institutions as an innovation in learning and as a utilization of existing technology. Law No.20 of 2003 states that education is required to have educational resources to prepare resilient, superior, participatory, and competitive actors of change. One of the educational resources is facilities and infrastructure, MOOCs is a digital learning tool that can support the learning process in Islamic educational institutions.

Islamic educational institutions are often considered to be lagging behind other educational institutions. This is influenced by various internal and external factors such as curriculum, learning methods, teacher quality, and social and economic influences. Of course, this cannot be left any longer, in order to improve the quality of education in Islamic educational institutions. Therefore, in the 5.0 era, educational institutions are certainly required to keep up with the times, improve the quality of learning, the quality of human resources and so on. As the existence of MOOCs, of course, Islamic educational institutions can utilize these digital facilities in the learning process. However, it is also necessary to deepen related to MOOCs how to use, suitability in learning and its impact. Therefore, it is necessary to optimize MOOCs in educational institutions as a means of digital learning in the 5.0 era.

Materials and Methods

This research method uses a type of library research, namely a series of activities related to library data collection. Library studies utilize library sources to obtain research data. In simple terms, this literature study limits its research activities to library collection materials only without requiring field research (Sugiyono, 2008). Researchers use a type of qualitative research with a literature study approach to collect information relevant to the research. The data sources for this research are journals, articles, books, and other references. Data analysis is the process of accessing data, organizing, highlighting, categorizing, and grouping the collected documentation studies. The purpose of data analysis is to reduce data collection into a form that can be understood by systematic description.

In retrieving data, the researcher uses library data in the form of journals and books that are relevant to the research. After obtaining relevant data, journals or books are reviewed by identifying problems, similarities and differences as well as shortcomings and advantages. After being identified, relevant data is combined and compared so as to present new findings in collaborating different thoughts on research problems (Zed, 2017).

Results and Discussion

Results

The concept of society 5.0 is a refinement of the previous generation, namely era 1.0 in which humans were still in the era of hunting and knowing writing, era 2.0 humans began to know how to grow crops, era 3.0 humans began to recognize industry and use machines for daily activities, and era 4.0 humans began to recognize computer technology to the internet and use it for daily life, then era society 5.0 created by Japan with the concept of "Must humanize humans with technology" which means that in the era of society 5.0 humans coexist with technology. The era of society 5.0 has an impact on all sectors of life, not to mention the education sector, where online learning platforms have emerged that can be accessed easily anywhere and anytime, one of which is MOOCs (Massive Open Online Courses) which MOOCs appeared in 2008 by Dave Cormier from the University of Prince Edward Island, Canada. MOOCS is one of the learning methods designed to reach many participants online without limitations and number of accesses. The main characteristics of MOOCs are first, Massive

which means MOOCs can accommodate up to hundreds of thousands of participants in one course, this is related to the digital infrastructure that allows unlimited scale. Second, Open this course is open to anyone without any specific requirements such as graduation or age restrictions, so anyone who has internet access and a computer or mobile device can register and take this course. Third, Online learning conducted by MOOCs is online, both in delivering material, assignments and interacting with participants. Fourth, Courses each course is designed with specific learning objectives, in the course includes teaching materials, quizzes, and assignments that must be completed by participants.

In MOOCs learning, there are several processes that include learning materials, interaction, self-directed learning, and evaluation and certification. Learning materials in MOOCs are usually presented in the form of videos, presentation slides, readings and interactive modules, so that participants can access anytime and anywhere according to their convenience. However, there are also MOOCs that use a level-up method, for example, if participants have watched the material or done the tasks that have been provided then the next material can only be seen, and vice versa if the participant has not completed the material or task cannot continue the next material. There are also MOOCs models with videos or materials that cannot be accessed forever, but can only be viewed once or only a few times, so all the provisions or regulations of each MOOCs service provider are different. The next process in MOOCs is interaction, although it is massive, MOOCs encourages interaction between participants through online discussion forums, interactions can be done face-to-face through online platforms or discussions via chat. Self-directed learning in this process participants are encouraged to learn independently, participants can choose learning resources that suit their needs. The last is evaluation and certification, in this process participants must complete the course in order to take an exam or quiz to get a certificate as a form of their achievement.

MOOCs are very helpful in the learning process in the 5.0 era, where MOOCs offer accessibility (providing opportunities for anyone to access regardless of educational background and geographic location), flexibility (participants can learn at their own pace, and can arrange learning time according to the situation and conditions of each participant), and skills enhancement (MOOCs offer courses that are relevant to current industry needs, helping to improve participants' skills and career opportunities). With the convenience obtained, MOOCs are certainly very relevant to the current era of society 5.0, where everything is easy because it uses technology so that it can facilitate and become its own innovation in the learning process. MOOCs have been widely used in educational institutions as a means of digital learning, this aims to improve the quality of learning by developing skills through existing technology.

Discussion

The industrial revolution era 4.0 and society 5.0 are not too much different. The era of society 5.0 is more directed to use and maximize the use of technology in the era of the industrial revolution 4.0 (Ariyanto et al., 2021). In the 5.0 era, technology has entered the education sector, where the term online learning (in the network) has emerged, which is a translation of the term online, which means that it can be connected to a computer network. Online learning is one of the fun learning strategies for students because they can listen to material through smartphones, laptops or computers, so learning is not only reading through books (Argaheni, 2020). Online learning utilizes multimedia technologies such as video, virtual classes, animated online text, voicemail, email, conference calls, and online video streaming. One example of online learning is carried out massively and the number of participants is not limited. With online learning, students have flexibility of learning time (can learn anywhere and anytime). Learners and teachers can interact some as in the classroom through several applications such as video conference, telephone or live chat, zoom, google meet or whatsapp group (Dewi, 2020).

One of the technology-based learning is Massive Open Online Courses (MOOCs) has become a trend for government and non-government

educational institutions to open access to education and disseminate knowledge for all humanity (education for all) in order to learn lifelong (lifelong learning). However, the existence of MOOCs is not necessarily considered as a solution to learning problems, such as boredom and boredom in learning. Therefore, teachers as educators are required to be able to utilize technology that supports learning and must be creative in packaging learning in the Society 5.0 era so that the use of technology can be positively oriented as well as fun for students. When learning is done in a fun way, students will more easily capture the essence of learning itself, without feeling their position is learning. Thus, the education and learning process cannot be separated from the use of technology today as a characteristic of the Society 5.0 era (Ramadhan, 2024).

The urgency of developing MOOCs that focus on digital literacy for academic purposes. The development of digital literacy through MOOCs is an appropriate step because when taking courses in MOOCs makes generation Z learners accustomed to learning through digital platforms. Given that gen Z learners specifically have the lowest ability to create original, recycled, or remixed works into new creations by using various sources from the digital world responsibly. This is in line with Rahmadi and Hayati's research that the courses that should be developed first in MOOCs are directed at improving digital literacy in learning through various digital learning resources by creating original, recycled, or remixed works into new creations responsibly (Rahmadi & Hayati, 2020). MOOCs have many benefits that help learners better adapt to future changes, discover new values, and generate innovations, optimize the effective sharing of online resources and flexibly implement key service scheduling mechanisms in MOOCs, achieve more reliable analysis and prediction of learners' preferences and needs, recommend applicable learning resources and efficient learning methods in a timely manner, help learners establish positive and efficient learning behaviors in the shortest possible time, encourage learners to discover and solve problems by themselves, and explore innovative capabilities of active learning and reflective learning (Wei et al., 2024)(Xia & Qi, 2024).

Teachers as educators are also required to develop skills in teaching, Islamic educational institutions can provide technology-based facilities and infrastructure to support innovative teaching as a digital education transformation. This is done so that educators do not have the understanding that learning is the transmission of knowledge to students which causes students to become passive, less creative and productive in developing their potential. Starting from educators can create fun learning through existing technology. By implementing MOOCs in Islamic educational institutions, the likelihood of learners' understanding is high. This is in line with research conducted by Hellstren et al who use MOOCs in presenting various topics using examples and applications in everyday life. Mathematical descriptions are only used when there is intuitive understanding based on application. This approach lowers barriers and reduces frustration among learners (Hellstern et al., 2024). Another research conducted by this MOOC successfully improved the ability of state civil apparatus in Banten Province, because the learning process after using MOOC showed progress in terms of knowledge and competence (Muhammad Arif Rahman et al., 2023). So it can be concluded that learning through MOOCs can improve understanding, because the material is easy and neatly packaged so that it understands students.

Therefore, educators can create products in the form of videos, animated presentations such as MOOCs so that classroom learning is varied and certainly does not bore students. MOOCs have an online setting that requires interactive participation and large-scale openness through the website. In addition to traditional courses such as videos, readings, and problem solving, MOOCs provide interactive user forums, quizzes that help build communities for learners by providing e-learning content over the Internet that almost everyone wants to participate in Digital learning practices are fully transferred to Islamic educational institutions in line with the development of education era 5.0 (Agustina et al., 2023). But of course, in applying MOOCs in Islamic educational

institutions, of course, it does not run smoothly, there are obstacles as revealed by Syafitri et al. faced when developing MOOCs-assisted digital teaching materials to increase student learning motivation in this material is the effort and energy expended during the video take process which must be in a soundproof room or in a calm state so that outside sounds do not enter the video, besides that it also requires good lighting (bright) so that the video recording results are clear. The next obstacle is the design stage, in this stage several times the supporting images included in the material have some difficulties. Then the video editing must be in accordance with the slides displayed, as well as the management of the MOOCs website which must always be attractive and can be accessed without any obstacles (Syafitri et al., 2024). In addition, the completion in MOOCs also has obstacles in completing the learning, for example in completing materials, assignments and so on, therefore tracking students is needed. In this way, they can easily detect learners who exhibit behaviors that may cause them to fail or drop out of the course in such situations, so actions are needed to avoid increasing failure in completing MOOCs (Vázquez Mendoza et al., 2024).

To optimize MOOCs in Islamic educational institutions as a means of digital learning in the 5.0 era, namely by integrating interactive discussion and question and answer forums in supporting learning, where students and teachers can interact effectively. So that this forum can facilitate deeper understanding, and help learners in completing assignments. Furthermore, ensuring technical support, in Islamic educational institutions there needs to be documented standards and processes for handling technical issues so that students and teachers focus on learning without interruption. In addition, the development of structured digital learning modules is also important to support learning and improve student learning outcomes.

Conclusion

This research discusses the role and challenges of using MOOCs (Massive Open Online Courses) in Islamic educational institutions in the industrial era 5.0. In this era, the collaboration between humans and technology encourages educational institutions to adopt digital learning platforms to improve accessibility and flexibility of learning. MOOCs have proven to be beneficial in expanding access to learning, but still face challenges such as lack of direct interaction between teachers and students, technical constraints, and low completion rates. To be more effective, educational institutions need to add interactive features, adequate technical support, and structured learning modules. MOOCs offer an opportunity for Islamic educational institutions to thrive in the high-tech era. Optimization of this platform can support sustainable and competitive education. With the integration of interactive features and improved learning modules, educational institutions can maximize the benefits of MOOCs for learners and achieve better educational outcomes that are relevant to the needs of the Society 5.0 era.

Conflict of Interest: The author declares that there is no conflict of interest in this research entitled "Optimizing MOOCs in Islamic Education Institutions: as a Means of Digital Learning in Era 5.0". This article is based on independent research without the involvement of third parties who have a particular interest in the results of this research. All data and analysis presented in this article are based on relevant and credible academic sources, without influence from commercial institutions or entities that may affect the interpretation of the research results. The authors also emphasize that all stages of the research, from data collection to conclusion formulation, were conducted objectively and in accordance with the principles of academic ethics. There was no external funding or financial support from parties that could lead to potential bias in the presentation or interpretation of the research results.

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