

Improving Teacher Competence through Digital Technology-Based Learning

Mainuddin^{1*}, Khozin¹, Abdul Haris¹

¹Universitas Muhammadiyah Malang

*maindinnw84@gmail.com

ABSTRACT: *This research aims to explain teacher competency by utilizing digital technology as a learning tool for Islamic religious education. Contribute to developing innovative teaching and increase teacher competency in facing technological challenges in the digital era. The method used is qualitative with a case study approach at the Sumbawa Islamic Pharmacy Vocational School. Data collection techniques were carried out using interviews, observation and documentation studies. The analysis uses qualitative description. The research found that the Islamic education learning process using e-learning affected student learning outcomes. Learning with a blended-learning system, namely a combination of face-to-face and distance learning or offline and online. In the learning implementation stage, Islamic education teachers have carried out essential settings related to using digital e-learning technology, including needs analysis activities, creating instructional designs, steps of using and developing e-learning, and evaluation.*

Tujuan penelitian ini adalah menjelaskan kompetensi guru dengan memanfaatkan teknologi digital sebagai alat bantu pembelajaran pendidikan agama Islam. Memberikan kontribusi dalam pengembangan pendidikan yang inovatif dan meningkatkan kompetensi guru dalam menghadapi tantangan teknologi di era digital. Metode yang digunakan kualitatif dengan pendekatan studi kasus di SMK Islam

Farmasi Sumbawa. Teknik pengumpulan data dilakukan dengan cara wawancara, observasi dan studi dokumentasi. Adapun analisis menggunakan deskriptif kualitatif. Hasil analisis memperoleh temuan bahwa proses pembelajaran pendidikan Islam dengan e-learning sangat berpengaruh terhadap hasil belajar siswa. Pembelajaran dengan sistem blended-learning, yaitu penggabungan antara pembelajaran tatap muka dan jarak jauh atau campuran antara offline dan online. Dalam tahapan implementasi pembelajaran, guru pendidikan Islam telah melakukan tahapan penting terkait pemanfaatan teknologi digital e-learning yang mencakup kegiatan analisis kebutuhan, membuat rancangan instruksional, tahap penggunaan dan pengembangan e-learning, dan evaluasi.

Keywords: *Teacher Competency, E-Learning Learning, Digital Technology.*

INTRODUCTION

The Internet can be used as a learning tool in education. This learning is in the form of electronic learning or better known as E-learning. They argued that e-learning could be interpreted as teaching and learning material that allows teaching materials to be conveyed to students using the Internet or other computer network media. Islamic education teachers should be able to use and utilize e-learning learning media provided by schools to the needs of students so that the Islamic education material delivered can be well absorbed by students. Learning objectives can be achieved optimally so that students will fulfil their competencies, knowledge, attitudes and skills in Islamic education subjects (Hanum, 2013; Sari & Yuhendri, 2021).

With the fulfilment of these competencies, the quality of schools will increase. It cannot be denied that the development of information and communication technology (ICT) is rushing and on a large scale to all aspects of people's lives so that all activities of the Indonesian people are very close and cannot even be separated from the internet. The results of a survey conducted by the Association of Indonesian Internet Service Providers (APJII) stated that in 2016, the number of Internet users in Indonesia reached 132.7 million. Then it increased by 10.56 million people in 2017 it reached 143.26 million people or equivalent to 54.68% of the total population of Indonesia. This figure will undoubtedly continue to increase in the following

years. This certainly influences every personal and social human activity, including the educational process (Ratnawati & Werdiningsih, 2020; Sihombing et al., 2023).

The utilization of information and communication technology plays a crucial role in enhancing the effectiveness of the educational process, including Islamic Education. The integration of internet-based technology in the learning process can offer diverse materials and facilitate the delivery of Islamic teachings to students (Ramdani et al., 2018; Arifin et al., 2023). However, Islamic education has been perceived as less innovative and less adaptable to technological advancements, often relying on traditional textbooks and resulting in dull knowledge acquisition. Consequently, the learning objectives of Islamic education may not be effectively achieved.

Furthermore, the current generation of students possesses distinct characteristics compared to previous generations, necessitating more innovative and progressive learning approaches and media that cater to their interests. Despite the need for such advancements, the use of e-learning as a medium for Islamic education is still uncommon in schools due to the lack of infrastructure and resources to support it. Additionally, many teachers have yet to fully grasp and utilize the available technology and information provided by schools to develop e-learning as a medium (Widianto, 2021).

In summary, the integration of information and communication technology in Islamic education can greatly enhance the learning experience for students. However, the current state of Islamic education often lacks innovation and fails to capitalize on technological advancements. To address this, there is a pressing need for schools to provide the necessary resources and infrastructure to support e-learning, while also equipping teachers with the skills and knowledge to effectively utilize technology in their teaching practices.

The presence and importance of e-learning in the Islamic education learning process cannot be overlooked, as it aligns with the advancements in technology and information in today's digital era. Moreover, the utilization of e-learning is expected to align with the government's efforts to provide equal access to education for all Indonesian citizens and develop them into skilled and competitive human resources on a global scale (Yaumi & Damopolii, 2019).

The National Education System Law No. 20 of 2003 acknowledges that education and the learning process can extend beyond conventional approaches, allowing for remote learning. This means that education is not limited to traditional classroom settings but can also leverage information and communication technology,

such as the internet and social media, to create an interactive and flexible learning environment. The aim is to engage students actively in learning anytime and anywhere, fostering their thirst for knowledge. Schools in Sumbawa Regency have successfully embraced this approach.

In response to the rapid advancements in technology and information in the era of the fourth industrial revolution, it is crucial to transform the learning process and components of Islamic education into virtual or electronic forms. This transformation addresses the evolving needs of society, where access to the latest information and knowledge is highly valued. It is important to bridge the gap between current realities and educational ideals while upholding the educational values embedded within the process. Electronic learning or e-learning emerges as an alternative for developing Islamic education learning in the era of the fourth industrial revolution (Priyanto, 2020; Syahri, 2018).

METHODS

This research is qualitative research using descriptive analysis techniques with case studies. The approach that the author uses in this research is qualitative to understand the phenomena experienced by the research subjects. Through this review, the researcher tries to describe existing phenomena that are currently occurring (Suharyat, 2022). Data collection techniques in this research are in-depth interviews, observation and documentation. Data analysis The Miles and Huberman data model includes four main steps: data collection, data reduction, data presentation, and data verification (concluding) (Kusumastuti, 2020); (Johan, 2018); (Rusman et al., 2012). The research's data analysis stage was reducing the data by selecting the required data and categorizing it by coding. The reduced data is presented in a brief descriptive description and then concluded in a data display.

FINDINGS AND DISCUSSION

The term e-learning is derived from the combination of "e," which stands for electronic, and "learning," which refers to the process of acquiring knowledge or skills. Therefore, e-learning encompasses learning activities that make use of electronic devices. The definition of e-learning can vary, but generally, it revolves around two main perspectives (Angga et al., 2022): *First*, electronic-based learning: This perspective emphasizes the utilization of information and communication technology, specifically electronic devices. It

encompasses various electronic tools such as films, videos, tapes, overhead projectors, slides, LCD projectors, and more. *Second*, Internet-based learning: This perspective highlights learning that utilizes online internet facilities as its primary medium. It assumes that e-learning must involve internet connectivity, enabling learners to access materials from anywhere and at any time, without limitations of distance and space (Afifah & Umam, 2023; Mantau & Talango, 2023).

These two perspectives are supported by the views of experts in the field. Cisco and Cornellia, for instance, define e-learning as the delivery of content through various electronic media, including the internet, intranet, extranet, satellite broadcasts, audio/video tapes, interactive TV, and CD-ROMs. Similarly, the American Society for Training and Development (ASTD), as cited by Rusman, describes e-learning as a broad range of applications and processes that encompass web-based learning, computer-based learning, virtual classrooms, and digital classrooms. It involves electronic communication, education, and training methods. Overall, the definition of e-learning may vary depending on the context and organization, but it fundamentally involves the use of electronic means for communication, education, and training purposes.

Based on the various perceptions and definitions provided by experts, e-learning can be understood in two broad conceptual meanings: a broader sense and a narrower sense. In a broader sense, e-learning encompasses learning activities that utilize a wide range of electronic media, such as video, television, computers, radio, tape, LCD projectors, telephones, and more. On the other hand, in a narrower sense, e-learning specifically refers to the use of internet facilities as a medium for learning. This narrower sense is often referred to as online learning, online courses, or virtual learning (Sudana & Anggreni, 2021).

With this understanding, e-learning can be seen as a learning process that utilizes various electronic tools and media, particularly gadgets, computers, laptops, and the internet, to support the learning experience. It can serve as a supplementary, complementary, or even substitute approach to traditional classroom-based learning. E-learning is sometimes referred to as distance learning because it was initially developed to facilitate learning in situations where participants face limitations in terms of time, space, and costs (Anwar, 2023; Bali, 2019).

In the e-learning process, teachers and students are physically separated, and teaching materials are delivered through electronic

media via the internet. Communication between teachers and students can take place through various means such as websites, chats, video conferencing, and more. However, in the context of Indonesia, e-learning implementation often involves a combination of online and face-to-face learning, with face-to-face sessions conducted on a limited basis. This blended learning approach integrates both online and offline components, creating a flexible and dynamic learning environment.

Overall, e-learning provides opportunities for distance learning, facilitates access to knowledge, and allows for flexibility in the learning process, making it an increasingly important approach in education.

Utilization of E-Learning as an Innovation of Islamic Education Learning Media

The implementation of e-learning as a learning medium for Islamic education at the Sumbawa Pharmacy Islamic Vocational School is a combination of both traditional and e-learning approaches, with the majority of the learning process conducted through e-learning platforms. However, there are instances where e-learning is utilized when teachers are unable to physically enter the classroom.

It is important to recognize that the utilization of ICT advancements to support the learning process, particularly in the field of Islamic education, is still not widely adopted in many educational institutions in Indonesia (Abidin et al., 2022). The integration of e-learning as one of the ICT-driven learning tools is still limited, with only a few educational institutions actively using and harnessing the potential of e-learning for Islamic education subjects.

In order to enhance the effectiveness and efficiency of the learning process in Islamic education, there is a need for more institutions to embrace and implement e-learning as a valuable tool. By leveraging e-learning platforms, students can have access to a variety of resources and engage in interactive learning experiences, further enriching their understanding of Islamic teachings. The integration of e-learning in Islamic education can contribute to a more dynamic and engaging learning environment, fostering a deeper appreciation and comprehension of the subject matter.

This situation arises due to the prevailing belief and mindset that Islamic education is a sacred and intricate subject that necessitates face-to-face interaction between teachers and students in every learning activity. The role of the teacher in the learning process is deemed irreplaceable, leading to resistance towards the use of e-learning in any form. However, there are parties who have begun to shift their

perspective by exploring the potential of e-learning as a supportive tool in Islamic education, including the Sumbawa Pharmacy Islamic Vocational School.

During interviews with Islamic education teachers at the Sumbawa Pharmacy Islamic Vocational School, concerns were raised about the potential loss or diminishment of values in education if teachers solely rely on e-learning. It is acknowledged that the role and presence of Islamic education teachers are vital in instilling values and attitudes in students, which cannot be fully replicated by electronic media used in e-learning. Nevertheless, this does not mean that e-learning should be disregarded. Instead, it can be viewed as a solution to address common challenges, such as the need for additional study hours or limited time allocated for Islamic education subjects in educational institutions, despite the extensive scope and depth of the curriculum. Furthermore, e-learning can also cater to the preferences and characteristics of the millennial generation, who are often tech-savvy and inclined towards technology and social media platforms.

CONCLUSION

The use of digital technology implemented at the Sumbawa Islamic Pharmacy Vocational School has a very visible influence on students' Islamic religious education learning outcomes, this shows that there has been a great improvement by utilizing e-learning in learning. PAI learning using e-learning learning media at Sumbawa Islamic Pharmacy Vocational School is carried out in a mixed manner, where part of the learning process uses e-learning and part of it is face to face. This term has become widely known as blended learning. E-learning learning is organized in various ways. *First*, the conventional learning process, with additional learning through computer interactive media via the internet or using computer interactive graphics. *Second*, with mixed methods, that is, most of the learning process is carried out via computer, but still requires face to face meetings for tutorial purposes or discussing teaching materials. *Third*, the overall learning method is only carried out online.

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