

**The Effectiveness Of The Use Of Learning Technology
In The Management Of Islamic Education
In The Digital Era**

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Abstract: *The importance of learning technology in the context of Islamic education management in the digital era is the main study in this study. Through an in-depth analysis, this study examines the extent to which the use of learning technology has had a positive impact on the effectiveness of Islamic education management in the digital era. This research is a descriptive qualitative research with a literature review. The data collected came from scientific journals related to the use of learning technology. The data obtained was then analyzed by descriptive analysis method. The results of the study show that: (1) the integration of learning technology in the Islamic education curriculum highlights the importance of the use of technology as a tool to increase the effectiveness, efficiency, and relevance of Islamic education in the modern era. (2) Increased student participation and involvement in the application of learning technology shows that technology has great potential to improve student interaction, motivation, and learning outcomes. (3) the role of Islamic religious education teachers in technology-based learning is very important. Teachers not only play the role of teachers, but also as leaders, facilitators, mentors, and role models for students in the use of technology to deepen students' understanding of Islam. (4) the role of educational institutions in optimizing the management system of Islamic education development in the digital era illustrates the importance of adapting to changing times and the use of technology to improve the quality and relevance of Islamic education. Overall, the results of this analysis provide comprehensive insight into the extent of the effectiveness of the use of learning technology in the management of Islamic education in the digital era. The implications of these findings can help the formulation of policies and best practices to maximize the positive potential of learning technologies in the context of Islamic education.*

Keywords: *Islamic Education Management, Education, Digital Era, Learning Technology.*

INTRODUCTION

Islamic education in the digital era faces new challenges that require the use of learning technology to increase the effectiveness of the educational process. The rapidly evolving digital transformation has changed the overall educational landscape, including in Islamic education management. Learning technology in this era has become an important instrument to improve the efficiency, quality, and accessibility of Islamic education. Islamic education in the digital age offers endless opportunities in expanding accessibility, developing innovative learning methods, and will strengthen religious understanding [1]. The use of digital technology can be a powerful tool in bridging educational gaps and strengthening understanding of Islam in an increasingly globally connected society [2][3].

The use of learning technology in the context of Islamic education management includes various things or aspects, ranging from the delivery of subject matter, evaluation, to administrative management. The effectiveness of the use of technology in this context is measured not only by operational efficiency, but also in the context of increased understanding and application of Islamic values in daily life [4]. Salsabila, et al. (2022) stated that if the process of using technology runs smoothly, the benefits felt will be maximized [1]. The application of technological developments in Islamic religious education also requires adjustments so that students and educators can feel the impact of technological developments in learning. In addition, the application of this technology in Islamic religious education must be in accordance with the goals and sharia of Islamic religion and can be used properly in learning Islamic Religious Education [1], [5].

The Islamic religious education curriculum has also emphasized the importance of using technology in the process of learning activities. Technology is needed in realizing students' creativity and skills and to get the latest information in order to find ideas, design and create skill objects as a form of student creativity [6]. For this reason, it should be remembered that the role of technology will not be visible if its use is not in line with the essence of the teaching objectives that have been formulated. Therefore, the purpose of teaching must be used as a reference for the use of technology. When this is ignored, technology is no longer a teaching tool, but rather a barrier to achieving goals effectively and efficiently. The use of technology will be able to improve the quality and reach of education if used wisely for education [7].

The use of information and communication technology in learning will depend on the willingness of teachers to use it in learning and the ability of teachers to use technology as an effective medium and source of learning. Therefore, every teacher must always be willing to face the challenges of information and communication technology that is increasingly advanced and have a commitment to always use information and communication technology in learning [8]. In addition, technology is useful in the learning process of Islamic education to maximize the teaching and learning process and increase students' understanding of what is taught by teachers. The use of technology in Islamic religious education learning will help students understand the material taught by teachers, such as using the internet to communicate with teachers and students, using applications to create internet-based classrooms, and using audio and visual media [9], [10].

The discussion of the concept of analyzing the effectiveness of the use of learning technology in the management of Islamic education is very necessary to

pay attention to a number of aspects. First, how learning technology can be properly integrated into the Islamic education curriculum to be able to support the achievement of educational goals and the character building process. Second, how the application of technology can increase student participation and engagement in the learning process, in line with the principles in Islamic education that encourage activeness and deep understanding. In addition, it is also important to understand the impact of learning technology on the role of teachers and managers of Islamic education. How teachers can become effective learning facilitators by utilizing technology, as well as how education managers can optimize management systems to support the development of Islamic education in the digital era.

In this context, effectiveness analysis includes not only quantitative aspects such as improved test results or time efficiency, but also qualitative aspects that can reflect a deeper understanding of the values of Islamic education conveyed through technology. Therefore, efforts need to be made to measure the extent to which learning technology can support the achievement of Islamic education goals involving cognitive, affective, and psychomotor aspects. The novelty of this article lies in an integrative discussion of the effectiveness of learning technology in the management of Islamic education in the digital era, which includes the integration of technology in the curriculum, increasing student participation, strengthening the role of teachers as facilitators and guides of digital ethics, and optimizing the management system of Islamic educational institutions to remain relevant to technological developments without ignoring Islamic values.

By delving deeper into the analysis of the effectiveness of the use of learning technology in the management of Islamic education in the digital era, it is hoped that it can provide a more comprehensive understanding of the positive impact produced. Thus, strategic steps can be formulated to further optimize the use of learning technology to improve the quality and relevance of Islamic education in the face of the rapidly growing digital era.

LITERATURE REVIEW

Technology integration Learning in the management of Islamic education has become very important in the digital era. Research shows that the use of technology in education is not only a tool to improve the delivery of material, but also as an instrument to increase the accessibility, efficiency, and relevance of Islamic education [11]. Digital transformation has enabled the expansion of learning opportunities, allowing teachers and students to interact more through multimedia tools and online platforms, making the learning process more dynamic and engaging [12]. In addition, technology facilitates the creation of a more inclusive and efficient learning environment, helping to bridge the gap in traditional education systems [13].

The role of teachers in technology-based learning is very important. Teachers are not only teachers but also facilitators and mentors who guide students in utilizing technology to deepen their understanding of Islamic teachings [12]. This research emphasizes that the involvement of educators in the adoption of digital tools is essential to maximize the benefits of technology in education. Along with the widespread use of digital tools, teachers must develop digital literacy and adapt their teaching methods to meet the evolving needs of students [8], [12]. In addition, the use of technology in Islamic education requires teachers to ensure that the digital resources used are in accordance with Islamic values, so that innovation remains in

line with religious principles.

Educational institutions have a major role in optimizing the use of technology in Islamic education. The role of this institution is not only limited to the provision of technical infrastructure, but also includes the development of policies and strategies to effectively integrate technology in the curriculum [14]. Research shows that successful technology integration in education requires an inclusive approach, involving stakeholders such as educators, students, and parents. Educational institutions must also provide professional development for teachers to improve their technological competence, ensuring they can effectively integrate digital tools in teaching practices [15]. The continuous adaptation of the education management system in response to technological advances will play an important role in improving the quality and accessibility of Islamic education in the digital age.

METHODS

This research is a qualitative research with descriptive analysis techniques [16] with a literature review. The researcher wanted to describe a phenomenon that was ongoing or already occurring. Qualitative research is research that is intended to understand what phenomena the research subject experiences, such as actors, perceptions, motivations, actions, etc. holistically and descriptively in the form of words and language in a specific natural context and by utilizing various scientific methods [17].

The data used in this study are secondary data from research journals and literature. The data collection process is a literature study where this technique is used to process and test the relevance of data. The presentation of data is carried out with the following steps: *the first* is to collect all the information and sources that are relevant to the research, *the second is to* read the information and information in the secondary data source whether it is in accordance with the background of the research problem, *the third* is to cite the information needed in the form of citations and paraphrasing, the fourth is to quote the information needed in the form of citations and paraphrasing, the fourth is to quote the information needed in the form of citations and paraphrasing, *the fourth* is to Take note of important things and pay attention to the pages or information needed for the bibliography. *Fifth*, concluding the results of the analysis, providing views or theoretical opinions on the results that have been obtained.

The data obtained was then analyzed by descriptive analysis method. Fauzi et al. (2022) state that in qualitative descriptive research data analysis, unlike other qualitative approaches, it does not use an existing set of rules that have resulted from the philosophical or epistemological attitudes of the discipline that create a particular qualitative research approach [18]. In contrast, qualitative descriptive research is purely data derived from the code generated from the data during the research. Like other qualitative research approaches, qualitative descriptive studies are generally characterized by simultaneous data collection and data analysis [19], [20].

The analysis method used is to describe the facts of the theoretical study of the research results that have been carried out by previous researchers [21]. This article analyzes the use of learning technology in the management of Islamic education in the digital era.

DISCUSSION AND RESULTS

Integration of Learning Technology in Islamic Education Curriculum

Islamic religious education as an integral part of the formation of the character of each Muslim, always continues to develop along with the progress of the times. Islamic religious education is one of the materials that aims to improve morals and spiritual values in children. This shows that Islamic religious education has an important role in character development in schools [1], [11], [22]. In today's digital era, the integration of learning technology in the Islamic education curriculum is inevitable. The development of information and communication technology has opened the door to new opportunities in presenting Islamic education materials in a more attractive and effective manner. The integration of this technology is not just the addition of technological devices, but a profound transformation in the learning approach, making the teaching and learning process more relevant to the needs of the digital generation [23].

Learning technology is a complex and integrated process that involves people, procedures, ideas/ideas, tools and organizations, to analyze problems, find ways to solve them, implement, evaluate them and manage problem solvers in situations where learning activities are purposeful and controlled [24]. Learning technology grew out of educational practices and audio-visual communication movements. Learning technology is again seen as equipment technology, which deals with the use of equipment, media and means to achieve educational goals or in other words teaching with audio-visual aids. Learning technology is a combination of three mutually important streams, namely educational media, learning psychology and systems approaches in education [25]. The role of educational technology in learning is that education is expected to be more effective, efficient, and broader, the point is that education must be made so that it does not feel rigid, because education must be fun and easy to apply.

As already mentioned, integrating learning technologies in the curriculum is not only about incorporating the latest hardware and software, but also about exploring the instructive potential of using technology to enrich learners' learning experiences. Therefore, the responsibility lies with teachers to develop innovative teaching methods, including technology as a tool to be able to motivate and empower students. By undergoing this transformation, education not only serves as a means to gather knowledge, but also as a forum for developing 21st-century skills, such as critical thinking, creativity, and collaboration [26], [27]. That way, the education system can play a more dynamic role in producing a generation that is ready to face global challenges and also to gain a competitive advantage at the international level. In essence, a deep understanding of the use of learning technologies and their wise use can be the key to achieving an adaptive and relevant educational vision amid the ongoing currents of globalization and changing times. The transformation of education is a long-term investment in the progress of a nation, and the blend of tradition and innovation will form a strong foundation to achieve that goal [25].

Learning technologies offer the potential to enrich the learning experience, motivate learners, and expand the accessibility of Islamic education. By utilizing various tools and applications, teachers can create a learning environment that is responsive to student development, thus making Islamic learning not only

informative but also inspiring. In this context, technological integration is a progressive strategy to answer the challenges of the times, bridge the generational gap, and maintain the authenticity and relevance of Islamic teachings. The importance of the use of technology in the Islamic education curriculum lies not only in the understanding of religious concepts, but also in the development of critical thinking skills, creativity, and the ability to adapt to changing times [14]. Digital transformation can provide an opportunity to teach Islamic values holistically, integrating religious aspects with daily life in an increasingly connected world.

Through this approach, it is hoped that the educated Muslim generation can become the main actors in the development of a society based on Islamic values. With the integration of learning technology in the Islamic education curriculum, not only the mastery of Islamic teaching materials is realized, but also the formation of strong and resilient characters and personalities to face the complexity of global challenges. In line with the spirit of the Prophet's adaptive and inclusive teaching, this technological integration is a means to convey the message of religious truth in a relevant, profound, and engaging way to the current generation.

Increasing Student Participation and Engagement in the Application of Learning Technology

The transformation of education in the era of rapid technological innovation has become a must to meet the demands of the times. One of the fundamental changes in the world of education is the application of learning technology. This technology not only serves as a tool, but can also be a catalyst to increase student participation and engagement in the teaching-learning process.

Currently, education is in the era of knowledge with a very extraordinary acceleration of knowledge development. The acceleration of knowledge improvement is supported by the application of digital media and technology called the information super highway. The style of learning activities and knowledge must be adjusted to the needs of the age of knowledge. The learning material should provide a more authentic design to overcome challenges where students can collaborate in creating various solutions to solve the lesson problem. Problem-solving leads to questions and answers by students who then seek problem-solving in the context of learning using available information sources [28].

The importance of student participation and involvement in learning cannot be separated from efforts to create a learning environment that is dynamic, relevant, and stimulates student interest. In this context, learning technology will provide an incredible opportunity to build a more engaging and interactive learning experience. By utilizing digital technology as a tool in learning, teachers have the opportunity to create an engaging and interactive learning experience for students. Digital technology provides opportunities to use different types of learning resources such as videos, images, and interactive applications, which support students' understanding of the subject matter. By exploring the potential of digital technology, the learning process is expected to become more adaptive, efficient, and responsive to the learning needs of different students [26].

The use of learning technology will expand students' knowledge and motivate them to learn how to use technology. The use of technology in learning activities is expected to increase student active participation. Technological developments along with the phenomenon of globalization have resulted in the acceleration of information exchange and dissemination. At the very least, the integration of

technology in learning shows adaptation to current scientific advances. The use of technology-based learning media is not an easy challenge. In using this media, it is necessary to pay attention to several techniques to ensure that its use is optimal and in accordance with the learning objectives. In this context, the view of Rusman et al. (2015) emphasizes the importance of preparation for educators in organizing technology-based education. They need to develop a positive attitude towards technology, understand the educational potential in technology, and be able to integrate it effectively into the curriculum. In addition, skills in managing the use of technology in the classroom, assessing the effectiveness of its use, and having the technical competence to utilize it are also a must for educators [26].

Learning technology has provided a scientific foundation for educational theory and practice. It has transformed passive classrooms into active and interactive classrooms, with audio-visuals, graphics and models, smart classrooms, and e-learning spaces drastically motivating and increasing students' attention levels. Increasing the maximum form of student involvement, participation, and interactivity (Darmansyah, 2018). Then the development of multimedia, online platforms, and educational applications also changed the way teachers convey and receive information. Student participation is no longer limited to classroom activities, but can engage students in exploration, collaboration, and independent learning. The use of learning technology allows for personalized learning, where each student can learn at their own pace and style.

Increasing student participation and engagement in the application of learning technology delves deeper into how technology can be an effective tool in improving student interaction, motivation, and learning outcomes. By understanding the aspects that affect student participation and engagement in technology-based learning, educators can identify strategies and best practices to improve the overall student learning experience, including the following:

First, the use of interactive learning platforms. One way to increase student participation and engagement is to use interactive learning platforms. For example, the use of e-learning platforms that provide various features such as discussion forums, online quizzes, and project collaborations can encourage active participation of learners in the learning process.

Second, the application of project-based and collaborative learning models. Learning models such as project-based and collaborative learning can increase student engagement in learning activities. Through challenging projects and collaboration with classmates, learners can be more actively involved in the learning process and develop social and problem-solving skills.

Third, provide open and constructive feedback. Providing open and constructive feedback can increase learners' participation and engagement in learning. Teachers can use technology to provide feedback directly through online platforms, as well as encourage students to provide feedback and reflection on their performance.

Fourth, the development of metacognition skills and the ability to learn independently. Technology can also be used to develop students' metacognition skills and self-learning abilities. Through the use of a variety of learning tools and apps, learners can learn to manage time, manage resources, and evaluate their own progress in learning.

Thus, increasing student participation and involvement in the application of learning technology has great potential to improve the quality of learning and overall

student learning outcomes. By paying attention to the principles involved in the use of technology in learning, educational institutions and teachers can create a more meaningful, relevant, and effective learning experience for all students.

The Role of Islamic Religious Education Teachers in Technology-Based Learning

Teachers are the determinants of success in learning, therefore in the development of digital technology teachers must have adequate skills. This is related to the professional competence of teachers as educators, where teacher competence affects student learning achievement. Teachers must also be ready to face changes that occur in the future. In addition to the skills that teachers must have in the development of digital technology, namely the delivery of interesting teaching will make students understand learning better. Therefore, it is necessary to have these learning strategies and methods, so that in teaching teachers must think about what strategies are conveyed, so that learning is effective. However, this does not mean that technological advances replace the role of teachers in the teaching process, but create new opportunities for teachers to engage students in the critical thinking activities they experience [29].

For this reason, in the use of learning technology, readiness from educators and students is needed, the reason for the need for this readiness is because educators and students will face a transition from those who have not previously used technology to the use of learning technology, so it is hoped that the use of technology can be carried out optimally. If the process of using technology runs smoothly, the benefits will be maximized. The application of technological developments in Islamic religious education also requires adjustments so that students and educators can feel the impact of technological developments in learning [30].

Basically, technology has a very important role for all lines of life, including Islamic religious education. With the development of the times, Islam must also participate in realizing progress in terms of teaching through existing technology, so that learning becomes maximum. Therefore, it is necessary to understand the importance of learning technology and knowing the essence of educational technology and the purpose of its application in Islamic religious education. In order for Islam to develop and not be easily underestimated by people who hate Islam, of course, in its application it must also be followed by provisions such as Islamic sharia which uphold Islamic values in order to get good in terms of worldly life, especially good in the hereafter [4].

The positive impact of the use of technology in Islamic education is strongly felt by educators, students, or the general public. In addition to the positive impact of technology in Islamic education, the negative impact must always exist in everything including technology in education. The role of the internet in technology is very important, in addition to that in the use of the internet for free can cause many things that educators do not want to do to find students on the internet can happen. Some examples of the negative impact of the development of educational technology on students who are mostly young and still unstable in thinking and easily receiving information [15], [31], [32], including:

First, the frequent access of students to the internet makes them aware of the positive and negative sides of the internet world, the use of the internet for things that are not right is something that educators or parents of students are very afraid of. Second, the effect of opium on the internet with its algorithm, namely the search homepage, will adjust to what is often searched for, especially on social media, this

can have a positive or negative impact. The algorithm in search suggestions is a system that is created over a long period of time, to change the search suggestions and home pages on social media if it is filled with bad things, it takes time to fix the algorithm. Third, False information is a problem that is very feared by all users of technology in education, false information in education, will have a great effect on the world of education because they feel that the information is considered sufficient for the basis of their argument without validating the information is true or false.

Therefore, the role of Islamic religious education teachers in technology-based learning is very important. Teachers are responsible for selecting and using technology that is appropriate to the context of Islamic religious learning. This includes the use of apps, e-learning platforms, multimedia, and other digital resources that can enrich learners' learning experiences. In addition, teachers also have a role in designing and developing learning content that is in accordance with Islamic principles. This includes the preparation of teaching materials, interactive activities, and assessments that can promote an in-depth understanding of Islamic teachings through technology.

Another important role, Islamic religious education teachers must also involve coaching and coaching students in the ethical and responsible use of technology. Educators or teachers need to provide direction and understanding of how technology can be used to deepen understanding of Islam, expand Islamic insights, and maintain morality in its use. In addition, Islamic religious education teachers also have a role as role models and role models for students in using technology wisely in their daily lives. By demonstrating positive and productive use of technology, teachers can inspire and guide students to become intelligent and responsible individuals in the face of modern technological challenges.

Thus, the main role of Islamic religious education teachers in technology-based learning is not only limited to delivering subject matter, but also involves character development, technological competency development, and setting a positive example for students. With a good understanding and implementation of this role, educators or teachers can become effective agents of change in advancing Islamic religious education in this digital era.

The Role of Educational Institutions in Optimizing the Management System for Islamic Education Development in the Digital Era

Islamic education has a central role in shaping the character and spirituality of Muslims. In this rapidly evolving digital era, new challenges and opportunities have emerged for Islamic educational institutions to optimize management systems to ensure quality education and relevance to the needs of the times. To overcome these challenges, cooperation between Islamic educational institutions, the government, and the private sector is needed to improve technological accessibility and strengthen digital infrastructure. In addition, it is also necessary to strengthen the technological competence and religious expertise of educators in order to integrate technology properly in Islamic teaching [4].

As the main vehicle for the distribution of religious knowledge and values, Islamic educational institutions have a great responsibility in adapting to the changing times. In this context, the use of digital technology is not only an option, but also a need to improve the efficiency, accessibility, and quality of Islamic education. Digital technology can be a powerful tool in expanding accessibility, improving learning methods, and strengthening religious understanding. However,

strict content supervision and efforts are needed to address accessibility gaps and digital gaps so that Islamic education in the digital era can develop properly. By utilizing digital technology effectively and sustainably, Islamic education can become more inclusive, innovative, and relevant in the face of the challenges and opportunities of the 21st century [14].

The main role of educational institutions in optimizing the management system for the development of Islamic education in the digital era includes several important aspects. First, educational institutions are responsible for designing and implementing management systems that are responsive to all learning needs in the digital age. These include: the integration of technology in learning, the management of student data, and the monitoring of academic progress. Second, educational institutions have an important role in developing technological skills and competencies for educators and administrative staff. Information technology-related training and coaching is key to ensuring that educators are able to effectively apply technology in the learning process.

In addition, Islamic educational institutions are also responsible for creating an inclusive and progress-oriented learning environment. This involves implementing policies that support the use of technology in learning, as well as adjusting curriculum and teaching methods to the latest developments in information technology. Curriculum development is an urgent matter that must reflect an action that results in problem solving in order to meet the objectives of curriculum development. Not only is it the embodiment of every idea that arises, but it must also reflect actions that result in problem-solving in order to meet the needs of the community according to the competencies needed [27]. [33].

In the 21st century, which is colored by the advancement of digital technology, the role of technology in the transformation of Islamic education is becoming increasingly important and relevant. Digital technology has changed the way we learn, interact, and access information. In the context of Islamic education, digital technology has enormous potential to transform and enrich the experience of learning the Islamic religion. The development of digital technology makes Islamic education accessible, interactive, and inclusive. Online platforms, mobile apps, and social media enable global access to Islamic educational resources, allowing individuals from different parts of the world to access and deepen religious understanding. In addition, digital technology allows for more interactive learning methods, such as videos, animations, and simulations, which can help students better understand Islamic concepts [27].

The following are specific practical steps for the use of learning technology in the management of Islamic Education in the digital era in the form of diagram.

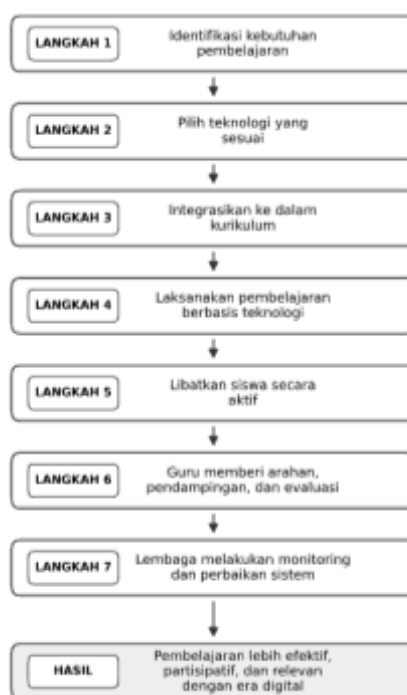


Figure 1. Practical steps for the use of learning technology in the management of Islamic Education in the digital era

Therefore, Islamic educational institutions have a role to involve relevant stakeholders, such as parents, the community, and the government, in efforts to develop Islamic education in the digital era. Collaboration between various parties is the key to creating a progressive education ecosystem. By understanding the key role of educational institutions in optimizing the management system for Islamic education development in the digital era, education managers can build a strong foundation to improve the quality and relevance of Islamic education amid the ever-growing flow of technological change.

CONCLUSION

The conclusion of the effectiveness of the use of learning technology in the management of Islamic education in the digital era is as follows: first, the integration of learning technology in the Islamic education curriculum is an important step to improve the quality and relevance of Islamic education in the modern era. However, it is important to remember that the use of technology must be wise, in accordance with the values and principles of the Islamic religion, and always accompanied by strong moral and ethical guidance to students. With the right approach, the use of technology can be a powerful tool to advance Islamic education towards a brighter future. Second, the application of learning technology can be an effective tool to increase student participation and involvement in the learning process. A variety of interactive features, such as simulations, games, and online discussions, can encourage learners' engagement in the learning process and deepen their understanding of the material. However, it is important to remember that the use of technology must be accompanied by the right approach and adequate support from educators or teachers and educational institutions to ensure that the

benefits of technology can be felt to the maximum by all students. Third, the role of Islamic religious education teachers in technology-based learning is very important. Teachers play a role in designing and developing learning materials that are in accordance with Islamic principles and student needs. By using technology, teachers can create material that is engaging, interactive, and relevant to the current context. Teachers also play the role of not only teachers, but also leaders, facilitators, mentors, and models for students in the use of technology to deepen their understanding of Islam. By understanding and carrying out this role well, teachers can become effective agents of change in advancing Islamic education in this digital era. Fourth, sharia education managers have a key role in optimizing the management system. Islamic educational institutions are responsible for designing, managing, and monitoring efficient and adaptive systems in order to meet the demands of Islamic education in the digital age. It is important for Islamic educational institutions to empower educators by improving the necessary technological competencies. Professional training and coaching for teachers in the use of learning technology is very important to further improve the quality of learning.

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AUTHOR'S CONTRIBUTION

All authors contribute equally to the publication of this paper, and all authors read and agree to this paper, and all authors declare no conflict of interest.

CONFLICT OF INTEREST

All authors state that there is no conflict of interest.

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