

REVITALIZING RELIGIOUS LEARNING IN MADRASAH THROUGH THE USE OF TECHNOLOGY

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Abstract

In today's digital age, the use of information technology (IT) has become commonplace in many aspects of life, including in education. This study deals with the use of IT as a tool for revitalizing religious learning in madrasah with the aim of improving the effectiveness and quality of teaching learning processes. In the context of the madrasah, religious learning is often considered monotonous and less attractive, so the use of IT is expected to enrich teaching methods and expand students' access to diverse learning resources. This research uses literary methods by searching for references in accordance with the context of the research. Research results show that IT has great potential in supporting more interactive and enjoyable learning. Some examples of successful IT implementations include the use of interactive learning applications, social media for learning discussions, the creation of digital content such as educational videos and podcasts, and the implementation of Learning Management System (LMS) to facilitate student progress tracking. However, the study also identified barriers, such as infrastructure constraints, lack of training for teachers, and resistance to change on some sides. To overcome these obstacles, joint efforts between educational institutions, governments, and communities are needed to improve the availability of facilities, as well as conduct a comprehensive teacher training programme in the use of IT. Therefore, with adequate support and mature planning, IT can be a powerful tool in revitalizing religious learning in the madrasah, thereby producing a more dynamic, interactive, and adapted learning process.

Keywords: *Information Technology; Religious Education; Madrasah; Learning Revitalization; Digital Age*

A. Introduction

The digital age has redefined many aspects of life, including how we learn and teach. Technology and education nowadays run side by side, ranging from the use of digital devices in classrooms to the utilization of e-learning platforms for distance learning (Sitopu et al., 2024). The integration of technology into education not only opens the door to innovative teaching methods but also offers great opportunities to improve accessibility and quality of education worldwide (Arif et al., 2024). The easier access to information has changed the way humans learn, work, and interact with each other (Yazdani et al., 2023). However, one of the areas most affected by technological progress is education. Education is no longer limited to conventional classrooms; digital innovation has broadened learning horizons, including in religious education in the madrasah (Guna et al., 2024).

Religious education in the madrasah has an important role in shaping the character, values, and moral identity of students. Effective teaching methods are the key to instilling strong religious values. However, contemporary challenges and the changing needs of the younger generation are driving the expansion of learning strategies, including the use of technology (Zaini et al., 2023). In this context, technology is not just a tool, but a medium that can enrich the process of religious learning, making it more interactive, interesting, and relevant to students (Hairiyanto et al., 2024).

In madrasah, religious education not only focuses on religious knowledge such as the study of sacred texts, the history of religion, and fiction, but also prioritizes the development of character and values of a good life. Through the religion education organized in madrasahs, students are taught to understand and apply religious teachings in everyday life, which includes aspects such as honesty, patience, empathy, and brotherhood (Iqbal et al., 2023). This is very important given that religious education is often the foundation for students in shaping their identities, developing an understanding of ethics, and applying moral principles to their social interactions.

On the other hand, the madrasah is also a place to strengthen social ties between students from different backgrounds. Religious education in the madrasah is not only available to those who want to pursue religious science for academic or spiritual purposes, but also as a tool in realizing tolerance and appreciation of diversity (Tambak et al., 2023). A conducive environment in the madrasah educates students to appreciate differences and treat them with a polite and dialogue attitude, which is highly relevant to today's global demands in which multicultural and multi-religious societies are becoming more prevalent. Therefore, religious education in madrasah becomes very important not only in instilling religious values but also as a supply for living in a harmonious society (Rohman et al., 2023).

However, the likelihood of a changing era presents both opportunities and challenges in the maintenance of religious education. Madrasah, as an educational institution that specifically emphasizes religious learning, is demanded to be more dynamic in adapting technology to complement traditional learning methods. It's

becoming increasingly necessary considering today's younger generation are digital natives who interact with technology on a daily basis (Syamsiyah, 2024).

The main problem that often arises is how the madrasah can integrate technology into the religious learning curriculum without losing the essence and religious values they want to convey (Tambak et al., 2022; Tubagus et al., 2023). This question underpins the importance of research on the use of technology in revitalizing religious learning in the madrasah. Researching this subject becomes crucial to ensuring that religious education not only remains relevant to the developments of the times, but is also effective in fulfilling its educational goals.

Furthermore, the use of technology in religious education cannot be seen by the eye. One of the greatest potential of technology in education is its ability to improve access and personalization of learning (Hairiyanto et al., 2024). Digital tools and online resources now allow students from a variety of backgrounds and geographical locations to access high-quality curricula and previously limited educational materials. Technologies such as e-learning platforms, open and large online courses (MOOCs), and adaptive learning tools develop more inclusive learning environments and meet individual student needs (Musthofa & Agus, 2022). In addition, learning analytics takes data from student interactions with digital material to help educators identify student learning needs and adjust their approach in real-time (Aslan & Shiong, 2023).

On the other hand, technology also supports the development of 21st-century skills such as problem-solving, critical thinking, and collaboration. Through the use of tools such as virtual simulations, educational games, and online collaborative platforms, students can engage in learning situations that simulate the real world and collaborate with peers from all over the world (Sutrisno, 2023). It not only prepares them for an increasingly digital job market, but also inspires creativity and innovation. The integration of technology into education also contributes to more effective teaching, enabling teachers to integrate multimedia and interactive teaching methods that can enhance the learning experience and maintain student attention longer (Iqbal et al., 2023). Through the potential it offers, technology in education not only adds new tools but can also transform the paradigm of learning and teaching for a brighter future.

Various studies have shown that technology can play a role in increasing learning motivation, expanding access to learning materials, and adapting teaching methods to individual needs (Muharrom et al., 2023; Nurhayati et al., 2023). The digitization of learning provides an opportunity to apply more varied and personal methods, which can be very meaningful in the context of religious education (Nurdiana et al., 2023).

However, the integration of technology into religious education also brings challenges. Some of them include restricted access to technology, lack of training for teachers in using learning technology, and concerns about potential content that does not conform to religious values (Rahayu, 2023). Therefore, comprehensive research on how a madrasah can overcome these barriers becomes crucial.

In the Indonesian context, madrasah plays a crucial role in the national education system, especially in providing Islamic education. With an enormous number of madrasahs

scattered throughout the nusantara, the potential for adopting technology in religious learning is huge (Sutrisno, 2023). However, it also means that the challenge is also more complex, given the heterogeneity of the madrasah's condition in terms of facilities, the quality of teachers, and access to resources.

The study aims to address these challenges by identifying effective strategies for revitalizing religious learning in the madrasah through the use of technology. Understanding how technology can improve the quality and effectiveness of religious learning will not only provide insight to educational practitioners, but also open up opportunities for various innovations in learning approaches.

This research is important because the results can help the madrasah in designing and implementing innovative learning strategies, which in turn can help students in gaining a deeper understanding of religion in the context of modern life. Furthermore, the results of this research are expected to be a reference for policymakers in developing appropriate approaches to the integration of technology in religious education, especially in the madrasah.

Amid the pace of technological growth and such social change, the importance of revitalizing religious education through the use of technology is becoming increasingly apparent. We are at a critical point where the opportunity to enrich and modernize religious learning through technology is enormous, and this research aims to navigate such opportunities in the context of madrasah in Indonesia.

B. Method

The research methods carried out in this study are literature. The study involves the collection, analysis, and critical analysis of existing scientific publications, such as academic journals, books, and research reports relevant to the subject being studied. (Campbell, 2014; Boddy, 2016). The aim is to identify the knowledge already acquired on the subject, reveal the gaps in existing literature, and determine the future direction for research (Christensen et al., 2011; Lancaster, 2007). In a qualitative context, the study of literature helps in building a conceptual framework and gives an in-depth context related to the phenomena studied, which will guide further data collection and analysis.

Literary research method is a research approach that is carried out by collecting, identifying, compiling, and analyzing various data found in literature, such as books, journals, or articles that relate to a problem and purpose of research. This approach is used to present a general overview of the related stages of research presented in the flow chart. One of the advantages of the literary research method is its ability to find other research references from various reliable sources (Gliner et al., 2011; Bahn & Weatherill, 2013).

More clearly, literary research in its implementation uses several methods, one of which is keyword search. This is an effective approach because it makes it easy for researchers to find catalogues, indexes, and reliable sources that are relevant to their research topic. Literature study research methods are useful in collecting, reading, and

recording, as well as managing research material from a number of books, magazines, and other sources relevant to the problems and purposes of research (Mayer, 2015).

C. Finding and Discussion

Traditional to Modern Learning Theory

Traditionally, religious learning has characteristics that are rooted in values, educational systems, and teaching methods that have been outdated in a society (Erwan et al., 2023). This concept is often associated with educational institutions such as gymnastics in Indonesia, madrasas in various parts of the Islamic world, or Sunday schools in a Christian context. In many traditions, traditional religious learning prioritizes the preservation and understanding of sacred texts, such as the Qur'an, Hadiths, Scriptures, and others, with the understanding that the sacred text is the primary source of teaching (Sarmila et al., 2023). The most commonly used teaching methods are lectures and demonstrations, in which the teacher or teacher submits the material orally while the students listen, repeat, and memorize the material with little opportunity for discussion or criticism (Styawati et al., 2020).

In this context, teaching authority is highly respected and the relationship between teacher and student tends to be hierarchical. The emphasis on the teacher as heir and guardian of tradition requires the student to give high respect and obey the teaching given (Manoppo et al., 2022). The process of transmission of knowledge in traditional religious learning is often more focused on reinforcing and upholding existing religious values, rituals, and teachings. The use of classical or liturgical language, which is rarely used in everyday conversation, is also part of this learning process, where learning is seen as part of a deeper understanding of religion (Sucipto et al., 2023). Therefore, the process of religious learning is traditionally aimed not only at purely intellectual knowledge, but also the cultivation of profound spiritual and moral discipline to its disciples.

Thus, the traditional learning approach is often understood as a method that focuses on understanding and preserving sacred religious texts with little or no application of the real life context of today's society (Irawan et al., 2015). For example, learning Islamic education in schools often does not touch the issues of public life in a real way and is impressed with internal thinking without paying attention to moral, ethical, and moral issues that occur in society as a whole. This method emphasizes the importance of direct teaching from teacher to student with the aim of preserving existing religious teachings and memorizing sacred texts, without much room for discussion or criticism of the material taught. When education technology is modern, learning also adapts to the changing times (Guna et al., 2024). Modern learning with the use of technology has changed the educational landscape in a significant way. Technology in education, often referred to as e-learning or digital learning, utilizes devices such as computers, tablets, and smartphones to access learning materials that are accessible anytime and anywhere. It creates a more flexible and accessible learning environment for more people, regardless of geographical or physical constraints. In addition, interactive features of digital media such

as video, simulation, and educational games offer a more exciting and dynamic way for students to understand the concepts given (Astuti et al., 2023).

Furthermore, the use of technology in learning enables the personalization of education. The learning system can be arranged and adjusted according to the rate and style of learning of each individual, which is difficult to do in a traditional class setting (Nickerson & Zodhiates, 2013). Online learning platforms are often equipped with automated assessment that allows students and teachers to real-time see learning progress. Features such as adaptive learning that use algorithms to adjust material difficulties based on student responses, strengthening learning experiences that fit each individual's specific needs (Teräs et al., 2020).

The use of technology also paves the way for wider collaboration and global interaction. In a global context, students can participate in virtual classes involving participants from different parts of the world, enriching learning experiences with different perspectives and cultures (Escueta et al., 2017). Online collaboration tools, such as discussion forums, chat rooms, and video conferencing facilitate interaction between students and teachers, strengthen learning networks as well as communication and collaboration skills (Widjaja & Aslan, 2022). Thus, technology is not only a tool to simplify the learning process, but also as a bridge that connects knowledge and cultures from all over the world, broadening students' horizons and understanding of global diversity.

Technology in Education

Education 4.0's vision is closely linked to the implementation of the Fourth Industrial Revolution that integrates digital, physical, and biological technologies in various sectors, including education (Arif et al., 2024). Education 4.0 aims to produce individuals who not only have strong academic abilities but also the competences required in a knowledge-based and high-tech economy (Putra & Aslan, 2020). It includes skills such as critical thinking, complex problem-solving, creativity, and adaptability. The curriculum is designed to be more flexible and interactive, integrating technologies such as artificial intelligence, machine learning, and data analysis to support a more personal and responsive learning process to the needs of each student (Yazdani et al., 2023).

In education 4.0, the role of teachers has also evolved from information providers to facilitators and mentors who help students in designing their own learning paths. With advanced educational technology, teachers can provide more timely and relevant feedback, helping students to develop deep thinking skills and apply knowledge in real-world scenarios (Zaini et al., 2023). It creates a more collaborative and innovative learning environment, where students are invited to explore knowledge, conduct experiments, and participate in challenging projects that prepare them for the needs of the future workplace (Iqbal et al., 2023).

Furthermore, global learning has also become a major focus of the Education 4.0 vision. With the use of communication technology, students and teachers have the opportunity to collaborate and interact not only with fellow nationals but also with practitioners and experts from all over the world. It expands cross-cultural understanding

and enriches the learning process with a variety of perspectives and experiences (Tambak et al., 2023). Education 4.0 not only leads to local innovation but also pursues global solutions, preparing students to be informed and responsible citizens of the world (Dito & Pujiastuti, 2021).

The use of technology in education has given rise to innovations that improve learning effectiveness and provide wider access to educational materials. One of the most prominent examples is the use of e-learning platforms (Nusantara, 2018). Platforms like Coursera, Udemy, and Khan Academy offer thousands of online courses covering a wide range of topics, from mathematics to arts and humanities. Through these platforms, students can learn at their own pace, with video learning, quizzes, and customized tasks to facilitate in-depth understanding of a topic. Interactive features and automated evaluation allow students to get feedback in real-time, which is important in the learning process (Yamin & Syahrir, 2020).

Social media, which is often seen only as a means of communication and entertainment, actually also has great potential in education. Platforms like YouTube provide access to a variety of educational videos that include short lessons to deeper lessons from popular educational content providers like Crash Course or TED-Ed. Moreover, Facebook groups or online forums like Reddit provide space for students and teachers to discuss, exchange information, and collaborate on projects or research (Safitri et al., 2023). Thus, social media not only extends the reach of learning but also enriches learning experiences by providing space for exchange of thoughts and collaboration.

Learning applications and online platforms have become vital tools in offering more personalized and flexible learning. Applications like Duolingo and Babbel, for example, use adaptive learning techniques to help users learn new languages in a fun but effective way (Kahar et al., 2021). Meanwhile, applications like Quizlet allow students to create and share sets of flashcards and other learning tools, facilitating group learning and self-revision. Management learning platforms like Google Classroom and Microsoft Teams facilitate the distribution of lesson materials, task collection, and communication between teachers and students, integrating the learning process into one efficient and well-organized system. Education technology like this not only improves access to education but also promotes more interactive and attractive learning methods for students around the world (Cahyani et al., 2021).

Application of Technology in Religious Learning in Madrasah

Technology has played a key role in enriching learning materials by providing instant access to extensive and diverse resources (Siskandar, 2020). With the Internet, up-to-date information on almost every subject is accessible to students and teachers from all over the world. This enables continuous refreshment of learning content and integration of relevant learning resources with the latest developments (Abubakari, 2021). In addition, digital tools such as virtual simulation applications, such as PhET Interactive Simulations, provide students with an opportunity to conduct experiments and observe scientific phenomena that may be difficult or impossible to simulate in a conventional classroom.

Virtual reality (VR) and augmented reality (AR) offer the same potential, enriching the learning material by providing an immersive learning environment that allows students to explore complex concepts in depth (Aslan & Setiawan, 2019).

In addition, technology can facilitate student-focused learning by adapting content to individual needs and abilities. Intelligent algorithms in adaptive learning systems are able to adjust the difficulty level and type of material given based on student learning performance, so that each student can learn at a pace that suits them. The presence of big data and analytics in education also allows teachers and educators to identify trends and patterns in learning, which helps in optimizing learning materials and teaching methods. Thus, technology not only improves the quality and accessibility of learning materials but also the personalization of learning experiences (Santosa & Jazuli, 2022).

Thus, technology has become an important catalyst in enriching and personalizing learning materials. Advances in learning technology provide students with an opportunity to go beyond teacher-centric learning and rigid curricula and move to more dynamic, interactive, and student-centred learning models. With a variety of tools and resources, technology supports a deeper, more enjoyable, and more effective learning process, opening the door to a more inclusive and adaptive educational experience that is ready to face the challenges of the future.

Challenges and Obstacles

One of the main obstacles faced by madrasas in the implementation of technology is the restrictions on infrastructure and internet access (Rizaldi et al., 2021). In many cases, facilities in madrasas, especially those located in remote areas, are often insufficient to support the use of advanced technology. Lack of hardware such as computers, projectors, or tablet devices are often a barrier. Besides, unstable or even unavailable internet connectivity becomes a major obstacle. This impedes the ability of the madrasah to access rich online resources, such as interactive courses and digital learning materials that can greatly improve the quality of education (Megawati et al., 2023).

This barrier not only affects the quality and effectiveness of the learning process, but also limits the ability of the madrasah to follow an updated curriculum and use innovative teaching methodologies. Although governments and various organizations have tried to improve this infrastructure through various programmes, there are still many unavailable madrasas (Sutrisno, 2023). Budget constraints are often the main obstacle to renewal of this infrastructure. As a result, students in the madrasas may not get the full benefit of technology-enriched teaching, which can broaden their understanding and open up more educational and professional opportunities in the future (Zuhri et al., 2020).

Furthermore, the readiness of teachers to use technology is one of the key factors in integrating technology into learning. Although technology has the potential to enrich learning material, its effectiveness depends heavily on the ability and readiness of teachers to use it in the teaching learning process (Siminto et al., 2024). Many teachers may feel not trained enough or lack the confidence to use digital tools and resources effectively. This may be due to a lack of professional training specifically aimed at developing the digital

competence of teachers. Besides, changes in curricula that require the use of technology can also be a challenge for teachers who are familiar with traditional teaching methods. Without adequate support, sustained professional development, and access to the right resources, teachers may find it difficult to leverage technology in improving the quality of learning (Aslan et al., 2020).

To address this challenge, it is important for educational institutions to provide adequate training and resources for teachers. Professional training programmes designed to develop digital skills of teachers and introduce them to the latest educational tools can be very useful (Mahsusi et al., 2023). Support from educational institutions in the form of access to technological equipment, technical assistance, and sufficient time for exploration and collaboration with peers can help teachers become more comfortable and competent in using technology. Thus, teachers will be better prepared to integrate technology into their learning, creating more interactive, engaging, and effective learning experiences for students. Through a coordinated approach between improving infrastructure, teacher training, and curriculum development, educational institutions and teachers can jointly harness the power of technology to enrich learning processes (Iqbal et al., 2023).

Revitalization Strategy

Teacher training for the use of technology

Teacher training for the use of technology is an important step in ensuring the effective integration of technology into education. Training programmes specifically designed to equip teachers with the skills and knowledge required in using modern technology tools are important factors in improving the quality of teaching (Irvani et al., 2020). This training should cover various aspects, from hardware operations, the use of educational software, to online teaching strategies and digital learning design. By having a strong understanding of how technology can be applied in an educational context, teachers can enrich student learning experiences through interactive methods that stimulate student creativity and participation (Sutisna et al., 2020).

In addition to providing basic training, it is also essential to provide opportunities for sustainable professional development for teachers. This includes access to workshops, seminars, online courses, and a professional learning community. These resources can help teachers stay up to date with the latest technological advances and innovative teaching practices (Purnasari & Sadewo, 2020). Increased network of consultant support that teachers can access when facing technical or methodological challenges in the application of technology can also strengthen their readiness to implement innovative learning strategies. In addition, teachers should be encouraged to share best practices and collaborate with their peers, thus creating a dynamic and supportive learning environment to mutually enhance skills in the use of technology. (N. Nurhayati et al., 2023; S. Nurhayati et al., 2020).

In the context of modern education, the training of teachers in the use of technology is no longer an option but a necessity. To respond to technological advances and prepare students to face an increasingly digital world, teachers must be given the

resources and support needed to be effective facilitators. Through comprehensive training and sustained professional development, teachers will become more confident and innovative in integrating technology into learning, thus being able to create a more interactive classroom environment and prepare students for success in the 21st century. (Syahroni et al., 2020).

Creation of digital learning content that matches the matrasah curriculum

The creation of digital learning content that matches the matrasah curriculum requires a planned approach that ensures that the material is not only relevant to the curricula implemented, but also attractive and easily accessible to students. The first step in this process is to conduct a comprehensive analysis of the applicable matrasah curriculum, by understanding the basic competences that students must in each subject (Shobirin et al., 2023). Based on this understanding, content developers can design learning materials that integrate Islamic values according to curriculum needs, while leveraging a variety of digital technologies such as interactive video, e-books, and online quizzes to make learning more interesting and interactive. The main focus should be on creating content that is not only informative but also motivates students to participate actively in their learning process (Putra et al., 2020).

In addition to compliance with the curriculum, it is also important to consider the learning needs and preferences of madrasah students when designing digital content. This includes adjusting the difficulty level of the material, providing additional learning resources for more complex topics, and ensuring that such content is accessible through a variety of devices. A personalized and adaptive approach to content creation can help meet the individual learning needs of students, enrich their learning experience, and motivate them to better learning outcomes. Choosing the right tools and platforms for digital learning is also crucial, so that content can be easily shared and accessed by both teachers and students (Selsabila & Pramudiani, 2022).

The creation of digital learning content that matches the matrasah curriculum must take into account the material relevance with the curricula followed as well as the needs and preferences of students. Active involvement through the use of a variety of digital technologies allows materials to be presented in more innovative and interactive formats, increasing student learning interests (Taufiqurrahman et al., 2022). Thus, it is important for content developers to work closely with educators in understanding curriculum and student needs, integrating Islamic values into content, and choosing tools and platforms that support learning effectiveness.

E. Conclusion

The revitalization of religious learning in the madrasah through the use of technology is a strategic step to improve the quality of Islamic religious education as well as adapting to the developments of the times. Through these innovations, the madrasah can leverage a variety of technological equipment such as laptops, LCD projectors, and

other multimedia devices to make learning materials more attractive and interactive, which can ultimately enhance students' understanding and involvement in the teaching learning process. The use of e-learning, blogs, multimedia resources centers, digital comics, video conferences, and audiovisual technology are some examples of the use of technology that can be adopted in the madrasah to support more effective and efficient religious learning.

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