At-Ta'lim: Jurnal Pendidikan
10 (2), 2024, 260-271

Available at: https://ejournal.unzah.ac.id/index.php/attalim

Exploring the islamic world with technology: integrating technology in the islamic education curriculum

Hasnia Imroatis Syarifah*, Muhammad Fadil Romadhoni, Mahdy Haidar Taufik
UIN Maulana Malik Ibrahim Malang, Indonesia
e-mail: 220101110003@student.uin-malang.ac.id
*Corresponding Author.

Received: 1 June 2024; Revised: 12 June 2024; Accepted: 30 June 2024

Abstract: The advancement of technology is continuously improving. Technology has been employed by several entities to streamline their operations, including the realm of education. Technology-based curriculum involves integrating hardware and software products into the curriculum to enhance the learning process for students and improve the effectiveness and enjoyment of education. Given that the curriculum is the primary element of education, its advancement in tandem with technology should facilitate the attainment of curriculum objectives, encompassing learning outcomes, instructional approaches, and the provision of educational resources and evaluations. The purpose of this study was to investigate the integration of technology into the curriculum of Islamic Religious Education. Regarding the methodology, the author employed the research library using a qualitative approach, which included a description and analysis of the research findings, as well as other supporting literature from books and scientific journals as writing components. The findings emphasise the importance of integrating technologies into the Islamic Religious Education curriculum, taking into account its relevance and effectiveness in the digital age. Due to its numerous benefits such as increased student involvement and improved accessibility, educational technology holds great potential for enhancing the quality of instruction in Islamic Religious Education.
***Keywords**:* Integration of Technology; Curriculum; Islamic education.

How to Cite: Syarifah, H.I., Romadhoni, M.F., & Taufik, M.H. (2024). Exploring the islamic world with technology: integrating technology in the islamic education curriculum. *At-Ta'lim: Jurnal Pendidikan, 10* (2), 260-271. https://doi.org/10.55210/attalim.v10i2.1742

Introduction

With the passage of time, technology continues to experience significant advancements. Technology has been utilised to facilitate human work in various aspects, including the field of education. The role of technology is to serve as a supporting medium in the field of education, enabling educators to teach students more easily and achieve satisfactory results (Nento & Manto, 2023). The dynamics of globalisation present challenges for the education world to continuously improve and adapt to technological advancements in order to achieve quality education (Nurillahwaty, 2021). In the midst of the onslaught of current technology, the world of education must be able to reform and innovate in line with technological advancements in order to create an effective teaching and learning system (Maritsa et al., 2021). The availability of adequate infrastructure support, such as a stable internet network, is clear evidence that our surrounding environment is very conducive to the use of technology and has the ability to influence the development of all sectors of life, particularly the education sector. Within the education sector, the utilisation of technology is employed as a support in educational media (Fadilah et al., 2021). The development of applications and national networks in technological advancements poses significant challenges in the field of education. A teachers must comprehend this matter (Utami & Saputra, 2019).

There have been many changes and improvements in curriculum implementation in Indonesia, for example Curriculum 13 became Curriculum 13 revised and when Indonesia was affected by the pandemic, it changed back to the emergency curriculum and was refined into the Merdeka Curriculum (Ulinniam et al., 2021). During the transition period towards the Merdeka Curriculum, educational technology plays a crucial role in bringing about a revolution in the teaching and learning process (Masang et al., 2021). The implementation of technology in the curriculum not only has a positive impact on students' learning in the classroom, but also contributes to minimising students' failure in achieving learning objectives. According to Article 8 of Law Number 14 of 2005, it is mandatory for teachers, as the main facilitators in the teaching and learning process, to possess professional expertise in relevant technology fields related to their subjects (Suweta, 2023). Some of the important factors that can influence the use of technology in the curriculum include the availability of technology-enabled facilities, the ability to apply the technology, and the characteristics of the learning environment used (Rahmi & Azrul, 2022).

Technological devices are seen as significant in all human activities. The rapid advancement of technology has significantly transformed human lifestyle, including the use of technology-based learning medium. Therefore, technology can be utilised as a facilitator in the implementation of activities, both in the context of learning and beyond learning. Informationand communication technology in the present global world has become an indispensable tool for advancing education (Sutopo, 2012). Technology serves as a tool that can assist educators in creating better learning modules for their students, thereby making the learning process more effective and efficient (Parikesit et al., 2021).

In fact, based on a study conducted by Choli (2020), it is a fact that not all educators in Indonesia are capable of utilising technology. The research findings indicate that 62.15% of teachers rarely utilise Information and Communication Technology in their teaching, whereas 34.95% of teachers have not enough knowledge of Information and Communication Technology. Additionally, 10.03% of teachers. This is caused by a lack of educator knowledge, age factors, and being still bound to the use of conventional media. The educators' understanding of the importance of utilising technology in learning is still low. The same situation is also experienced by PAI educators who still heavily rely on conventional teaching curricula (Choli, 2020). The rapid advancement of digital era technology has opened the gateway for instant exchange of information and communication, minimising delays, and providing significant opportunities for improving the quality of education. The Internet, as a constantly updated source of information, serves as a perfect roadmap for educational transformation. Technology liberates learning from the constraints of space and time, enabling a more flexible and dynamic teaching and learning process (Kusumawati et al., n.d.).

A technology-based curriculum is the integration of technological products into the curriculum, both in terms of hard skills and soft skills, with the aim of facilitating the learning process for students and making education more enjoyable and efficient. Curiculum is the main component of education, and its integration with technology aims to facilitate the achievement of curriculum goals. This integration involves strategies for teaching and learning, provision of learning materials, assessment of learning, and learning objectives. With the presence of technology, educators can optimise their performance in teaching and learning (Lestari, 2022). An integrated curriculum using technology not only enhances learning outcomes but also aids students in developing critical thinking skills. With technology as a useful learning tool, teachers can utilise it to create creative and engaging instructional strategies. With the advancement of the modern world, teachers are no longer the sole source of knowledge for their students. This is due to the availability of technology such as the internet, which can be easily accessed anytime and anywhere. As a result, students can learn anywhere and whenever they want without the need for teacher supervision (Wahyuningtias et al., 2023).

With each introduction of a new curriculum, Indonesia has transformed its education system (Nisa, 2023). In order to embrace and support the progress of the nation, education must be able to adapt to the ever-increasing demands of technology in the modern era (Satriawan et al., 2021). Therefore, every educational institution has the freedom to align its policies with government laws and regulations (kemendikburistek), including all forms of curriculum development, considering that the curriculum is a tool to achieve academic goals. Hence, it is crucial that the curriculum is continuously enhanced and refined to be in line with the latest advancements in knowledge and technology (Saifudin, 2021). Educators must exhibit a discerning and proactive attitude towards technology, ensuring that learners do not succumb to the negative consequences of technological advancements, but rather focus on the positive impacts of technology (Gorsci, 2005).

Islamic education is compulsory at all levels of formal education, in accordance with paragraph 39 (2) of the SPN Law No.2/1989. This shows how Islamic religious education functions strategically to foster students' moral and spiritual values. Islamic religious education is a planned and systematic educational process that helps students know, understand, appreciate, and believe in Islamic teachings through experience, practice, guidance, and practice (Rusnawati, MA, 2022). It is crucial for educators to instill a critical, comprehensive, and creative understanding of the fundamental principles and teachings of Islam in young learners from an early age, using an integrated educational approach. The policy of curriculum development is in line with the government's policy, which also applies to the development of the Islamic Education curriculum. This includes the objectives, content, methods, and evaluation of the curriculum (Choli, 2019).

According to a study conducted by Unik Hanifa Salsabila (2024) et al. titled "Integration of Islamic Religious Education Technology in the Merdeka Curriculum," it is evident that technology plays a crucial role in supporting the achievement of learning outcomes, as learning cannot be separated from the use of technology. The statement is equivalent to the concept of the independent curriculum learning that integrates learning with the mastery of technology (Salsabila et al., 2024). The research discusses the integration of Islamic Religious Education technology into the Merdeka Curriculum, with the author's focus being on the integration of technology into the Islamic Religious Education curriculum. Furthermore, a study conducted by Susi Hartati et al. (2022) titled "Integration of New Technology in Enhancing Islamic Education in Indonesia." The research focus is on Islamic Education, which is distinct from researchers who focus on the curriculum of Islamic Education (Hartati et al., 2022). Based on this background, the author aims to examine the integration of technology in the curriculum of Islamic religious education.

Method

This research use the method of literature review to extract information and construct valid theoretical concepts. Perseverance is required throughout the process, from searching for credible literature sources to conducting in-depth analysis of the obtained data. A strong understanding of philosophical and theoretical studies in the relevant discipline is key to producing valuable and beneficial research (Adlini et al., 2022; Fiantika et al., 2022). This study employs a qualitative approach, involving analysis and description of research findings, as well as a review of various literature sources, including books and scientific journals, to support the writing process. The literature review serves as the foundation for conducting an in-depth analysis of the ideas of educational experts that are relevant to the rapidly evolving dynamics of technology. Subsequently, the insights of these educational experts are implemented in the curriculum of Islamic religious education, which is correlated with technological advancements (Achmadin, 2022).

However, literature analysis is utilised in this research as a tool to obtain relevant and accurate information about the research process, as well as a means to carry out actions that align with the collection of literary sources (Zed, 2017). The author of this research conducted a study on an object

with a high level of naturalness using an analytical descriptive approach based on post-positivist theory. Consequently, the writer, in gathering data, not only collects the obtained data but also comprehends it through the writer's experiential knowledge. This influences the writer's interpretation of the acquired data. However, the author lowered any prejudices in the study by selecting a design that aligns with the research objectives and reducing potential biases. Additionally, data triangulation was employed, which involved combining data from various sources and analysing it systematically to obtain a more comprehensive understanding. This approach allowed the author to produce an objective, credible, and reliable investigation (Somel, 2014). In this qualitative study, the author analyses qualitative data and significant findings to comprehend, clarify, identify hypotheses, and explain a phenomenon (Sugiyono, 2022).

In analyzing the data, the author refers to Matthew B. Miles and A. Michael Huberman. Before starting the analysis, the author collected data through education and technology books, reputable journals both nationally and internationally and several scientific works as references. Then, the author began to filter the data obtained so that it only focused on data that was considered relevant. Furthermore, the author wrote a detailed description related to the findings obtained from the scientific data. In the data presentation stage, the author develops a conceptual model in the form of a narrative to tell the results of the research descriptively. The author also assesses the data obtained to see how appropriate the theory is to the existing findings. This can be ensured by data triangulation, which is a method to increase the credibility and validity of the data obtained to compare it with other information from various scientific sources. In addition, the author also uses assessment assistance from a professor to analyse data interpretation so as to reduce the author's bias in presenting data. In the last section, the author compiles a report that presents the results of the analysis clearly and systematically (Adlini et al., 2022).

Results and Discussion

Fundamental concepts of educational technology

Technology is an integral part of the wheel of life. The term "technology" originates from the word "teknikhos," which means a strategy by which someone can achieve a goal. Then the word "logos" means science. Thus, technology is a strategy derived from the development of scientific knowledge. When designing technology, it is important to consider how to manage, handle, work with, and transform a problem (Wulandari et al., 2022). Furthermore, technology is a specific technical method, particularly in scientific research, and a desired method of achievement based on knowledge of the exact sciences (Budiyono, 2021). Currently, the use of technology is not only intended for a certain industry, but all sectors of life are required to use technology. Technology is the manifestation of the development and application of tools, machinery, materials, and processes that are designed in such a way as to assist and facilitate human work (Zulham, 2017).

Nana Syaodih S. explains that technology has actually existed for a long time and is still used by humans today, such as the use of stones to crack nuts, poles to pick fruits, and pulleys to draw air from a vacuum space. Historically, humans have been using a type of technology called simple technology (Putra & Darma, 2019). Furthermore, Nasution asserts that technology is a tool for utilising fundamental knowledge to solve problems and achieve specific objectives. On the other hand, Nasution also emphasises that technology is the result of systematic efforts to use or utilise knowledge in order to facilitate and protect humans in the natural environment (Nasution, 2012). Technology means the development and application of various systems or equipment in order to assist humans in solving various sectors of work that are being faced in life (Naibaho Sulaiman, 2017).

According to the International Technology Education Association, as cited by Imroatul Ajizah, educational technology is defined as the use of technology in education with the aim of enhancing the quality of the learning process. Educational technology focuses on the procedures, plans, tools, and methods to enhance learning outcomes in both formal and informal learning environments. During its evolution, the utilisation of educational technology has progressed from the use of relatively simple tools to the present day (Ajizah, 2021). Thanks to technological assistance, the previously tedious

learning process has become more enjoyable, resulting in faster, more accurate, and more efficient learning (Sultan & Mustapa, 2021). The chapter presents an explanation of educational technology, which refers to the theory and practice that can support the learning process and enhance productivity by creating, utilising, and integrating technology. Put simply, educational technology serves as a learning tool that aids in making learning more effective, efficient, and purposeful (Hanifah Salsabila et al., 2020).

Furthermore, educational technology, as summarised by Chaeruman and Briggita, is the study and applied technology that enhances learning and productivity by developing, utilising, and implementing appropriate technological processes and resources (Padmini & Tyagita, 2015). With educational technology, students can facilitate their learning process. In educational technology requires equipment used in learning activities. The tools used in educational technology are used to develop educators' strategies and methods when teaching, because with the use of technology educators expect students to be able to present the material they get from technology-based learning media. However, it should be underlined that the role of the teacher is also still needed in the classroom because the function of the teacher is to develop and facilitate learning not to completely divert the role of the teacher (Salsabila et al., 2024).

Educational technology has a significant role and function, namely:

1) As a tool used to develop science
2) As a means of supporting learning tools
3) As a strategy to improve student learning in the classroom and increase the effectiveness and efficiency of the learning process (Andri, 2017).

Technology in learning

Duffy and Roehler (1989) defined learning as a deliberate effort made by teachers using their professionalism to achieve a curriculum goal, as cited by Haizatul Faizah et al (H. Faizah & Kamal, 2024). With the existence of technology, it is expected to have a significant impact on the approach to learning activities, motivating students and enriching teaching materials with materials and content that are relevant to the current times (Sulaiman et al., 2024). Technology may enhance the quality and accessibility of education when used appropriately and ethically, and it can have a significant impact on the economy. According to experts, the influence of globalisation can bring several developments in education, such as open and two-way learning, multidisciplinary approaches, competitiveness, and productivity (Nuryana, 2019).

Technology serves as a vehicle in the learning process, acting as an intermediary to achieve learning objectives. It is expected that educators and learners be able to effectively utilise technology in education so that technology can support all the needs of educators and learners in learning activities. Educators can benefit from the use of technology, such as providing pre-set questions with their corresponding answers. The demands of educational technology always require humans to adapt educational institutions with technology in order to enhance the standards and quality of education, particularly in the curriculum that encompasses the learning process.

Curriculum is the essence of education that must be constantly and innovatively evaluated, periodically, and dynamically aligned with the direction of the development of time and science and technology. Within the curriculum, the competencies required by society and the users of graduates are dependent. The dynamism of the curriculum is an inevitability (Suryaman, 2020). Currently, the curriculum being used is the independent curriculum, where students are given freedom during the learning process with the aim of making learning more enjoyable. The role of technology in educational institutions is to serve as a kind of innovation in conducting learning activities (Haris Budiman, 2017). The implementation of educational technology in the independent learning curriculum takes the form of collaborative and open problem-solving, guiding students to think innovatively, collaboratively analysing data, and assessing student performance. The presence of technology enables a fresh perspective in the learning process, allowing students to express themselves and innovate in understanding a phenomenon (Salsabila et al., 2024).

The integration of Islamic education learning technology into a curriculum is the process of utilising technology and media to maximise the quality of Islamic religious education learning and the achievements of students. Dear educator, when utilised properly and appropriately, technology can have a significant and efficient impact on learning. This is due to the fact that the majority of educators still

rely on monotonous lecture methods as the primary means of delivering instruction, particularly in the subject of Islamic education. Ridwan explains that there are numerous innovations originating from Islamic Education teachers that are capable of creating a more engaging, enjoyable, and easily comprehensible learning environment for students. Several indicators demonstrate that technology plays a crucial role in the advancement of the education sector, including:

1) Technology has the capability to create a pleasant yet effective learning environment.
2) Technology has the ability to enhance higher-level thinking skills and foster conceptual creativity.
3) Technology has the ability to enhance knowledge and skills.
4) Technology is capable Enhancing the skills of educators and learners.
5) Utilising technology to raise awareness among learners about the importance of technology in all sectors of life (Agustian & Salsabila, 2021).

Islam's view on science and technology

Islam's Views on Science

Islam possesses a unique set of values in the field of science and knowledge. This is well explained in the Qur'an and Hadith, which are the primary sources of Islamic education. The term "Ilmu" has been mentioned in more than 780 verses in the Qur'an alone (S. N. Faizah, 2017). One of these is the first verse revealed to Prophet Muhammad SAW, which is Surah Al-Alaq verses 1-5, which strongly emphasises the importance of reading, as reading is one of the ways to acquire knowledge. God Almighty states:

اِقْرَاْ بِاسْمِ رَبِّكَ الَّذِيْ خَلَقَۚ ﴿١﴾ خَلَقَ الْاِنْسَانَ مِنْ عَلَقٍۚ ﴿٢﴾ اِقْرَاْ وَرَبُّكَ الْاَكْرَمُۙ ﴿٣﴾ الَّذِيْ عَلَّمَ بِالْقَلَمِۙ ﴿٤﴾ عَلَّمَ الْاِنْسَانَ مَا لَمْ يَعْلَمْۗ ﴿٥﴾

It means: "Recite in the name of your Lord, who created you.(1) He created man from a clot of blood.(2) Recite, and your Lord is the Most Honourable. (3) Who teaches (man) with a pen.(4) He taught man what he did not know.(5)" (QS. Al-'Alaq 96: Verses 1-5).

Islam emphasises the need of knowledge with a clear purpose. Knowledge will serve as a foundation for Muslims to carry out their worship and daily lives.The purpose of knowledge is to advance civilization and provide benefits to humanity. Knowledge provides understanding, and in Islam, those who possess knowledge get a high status. God Almighty states:

يٰٓاَيُّهَا الَّذِيْنَ اٰمَنُوْٓا اِذَا قِيْلَ لَكُمْ تَفَسَّحُوْا فِى الْمَجٰلِسِ فَافْسَحُوْا يَفْسَحِ اللّٰهُ لَكُمْۚ وَاِذَا قِيْلَ انْشُزُوْا فَانْشُزُوْا يَرْفَعِ اللّٰهُ الَّذِيْنَ اٰمَنُوْا مِنْكُمْۙ وَالَّذِيْنَ اُوْتُوا الْعِلْمَ دَرَجٰتٍۗ وَاللّٰهُ بِمَا تَعْمَلُوْنَ خَبِيْرٌ

Meaning: "O you who believe! When it is said to you, "Make room in the assemblies," then make room, and Allah will make room for you. And when it is said to you, "Stand up," stand up, and Allah will raise those who believe among you and those who are given knowledge by a few degrees. And Allah knows best what you do." (Al-Mujadilah 58: Verse 11).

According to Al-Ghazali, knowledge is categorised into two types: knowledge that is obligatory to seek and understand. This knowledge is related to the implementation of Islamic religious law, such as knowledge of jurisprudence, hadith, the Qur'an, and many others. The second type of knowledge is mandatory but not necessarily understood, such as medical knowledge, engineering knowledge, and so on (Al-Ghazali, 2016). Islam and science have an inseparable relationship, with the primary sources being the Quran and Hadith.As explained by Jalaluddin Rakhmat in his work titled "Alternative Islam".Jalaluddin Rakhmat explains that Science serves as a distinguishing factor between humans and other creatures. Good knowledge is knowledge enriched with faith. Knowledge must also be developed in order to constantly obtain benefits in the pursuit of Allah's blessings, and knowledge must be developed without causing harm to the environment.

Islam's view on technology

Science and technology are like two sides of a coin that are inseparable in human life (Rohman et al., 2024). Both of them play crucial roles in various aspects of life, aiding humans in comprehending

the world, solving problems more effectively, and enhancing overall quality of life. Science provides a solid foundation in understanding various natural and social phenomena. Through scientific research and discovery, humans can study the workings of the universe, comprehend human behaviour, and develop innovative solutions for many problems. Technology, on the other hand, is a tool that enables the practical application of scientific knowledge. The advancement of technology enables humans to construct sophisticated infrastructure, create tools that facilitate work, and develop communication systems that connect people worldwide. The combination of science and technology yields several benefits for human life (Yani, 2018).

The influence of science and technology has permeated various aspects of life such as education, economy, and culture. Within the context of education, the utilisation of digital technology enables a more interactive and customisable learning process that caters to individual needs (Ariani & Festiyed, 2019). In the field of economics, information technology and communication have created new opportunities for trade and business. Within culture, multimedia technology facilitates the rapid and extensive dissemination of information and culture. The development of time and knowledge has triggered the emergence of several schools of thought and given rise to many terms such as traditionalists, modernists, and reformists. This encourages scholars to constantly update and renew Islamic concepts to ensure their relevance with the progress of time (Manan, 2023). The benefits of integrating technology into the Islamic Education Curriculum are to encourage and facilitate Technology-Based Learning, to preserve the relevance of Islamic values, and to empower human resources in education to master technology in what they do.

Technology implementation in the islamic education curriculum

The existence of Islamic education (PAI) is a form of implementation of educational policies that are legally stipulated in Law Number 20 of 2003 concerning the national education system, which has been supplemented with derivative regulations on PAI in schools. PAI is one of the three subjects that must be included in every official educational curriculum in Indonesia, according to the national curriculum (Sutiah, 2018). Effective integration and implementation of technology in the PAI curriculum requires appropriate methods to be applied. Some methods can certainly be used:

Project-Based Learning

You can use the PBL method to incorporate Islamic concepts by using digital projects such as video creation, blogs, or multimedia presentations.. For example, students can create a project on biography using digital presentation tools or collaborate on platforms such as Google Docs or Microsoft Teams for group projects that involve research and report writing.

Flipped classroom

In addition to using project-based learning, writers also provide the Flipped Classroom method. Flipped Classroom is an educational approach that involves showing students instructional videos at home and minimising class time for discussion and hands-on activities. For example, students can learn about the meaning of the Qur'an in class, then study it in class and use an e-learning platform to provide lesson material before class starts. This way, class time can be focused on discussing and reviewing the material.

Use of multimedia in teaching

Use interactive presentation tools such as Prezi or Canva that are equipped with videos, images and graphics to make the subject matter more interesting and easy to understand. Using apps specifically designed for Islamic learning such as Learn Quran Tajwid to teach tajweed or Muslim Kids Series to teach daily prayers (Gusti et al., 2013).

As for some of the benefits we get in integrating technology in teaching and learning activities, namely:

1) Facilitate access to learning resources

Technology makes it easy to access a variety of educational resources, such as e-books, articles, and instructional videos that can be accessed whenever and wherever it is convenient. Additionally, using an e-learning platform enables students to access course materials, discussion boards, and even online courses.

2) Increase learner participation and interaction

In learning media that are fully integrated with digital platforms, there are opportunities such as projects that may be completed in a group setting through online learning. Next, the student body can exchange ideas and communicate effectively.

3) Clarifying the material

Videos, animations, and graphics can help educators stimulate learners to better understand abstract concepts, such as the Prophetic narrative, fiqh law, or also enable understanding of moral concepts..

4) Flexibility of study time

With technology, learners can take lessons from anywhere without needing to be in the same location, which is especially useful in remote areas or during a pandemic. Technology is able to facilitate learners' learning activities according to their abilities, repeating material they have not understood, and progressing faster on material they have mastered.

5) Provision of various educational apps and platforms

There are now many apps specifically designed for religious learning, such as the Qur'an, tajweed, hadith, and even translated fiqh books that learners can use on their smartphones. Many websites and apps provide online courses, learning videos, and teaching materials that are easy to access (Kamsina, 2020).

Challenges and technological solutions in the islamic education curriculum

As we entered the 21st century, technology has rapidly evolved, giving rise to certain challenges that need to be addressed. However, behind the complex challenges lie highly promising opportunities. Due to technological advancements, there have been numerous changes in the way we learn, access information, and interact with the world around us. It is important to know and understand the challenges that will be faced in integrating digital technology into Islamic Religious Education in this context. Furthermore, we must comprehend the proposed solutions in integrating digital technology in Islamic Education. There is a plethora of educational content available in the modern period, but, strict supervision is necessary to prevent the leakage of unaccountable content (Hajri, 2023). Integrating technology into the curriculum indeed offers numerous benefits, but it also faces certain challenges. Below are several primary challenges that need to be addressed:

1) Technological acces gap

The limited equalization of access to technological infrastructure has an impact on educational institutions that do not yet have adequate learning tools such as computers, internet, and multimedia devices. Rural and remote areas often lag behind in terms of technological access compared to urban areas, resulting in an uneven quality of education.

2) Teacher's competence and prepardness

Technology is undergoing rapid and significant changes. Most educators still lack adequate skills in using technology for teaching purposes. The main obstacle lies in the lack of training and continuous education. Some teachers may feel reluctant or anxious about the change in teaching methods from traditional to technology-based (Sholeh & Efendi, 2023).

3) Technical and infrastructure issues

Currently, the internet has almost reached every corner of the world, yet there are still some regions that have slow or unstable internet connections. It can disrupt the online learning process and access to digital materials. Technology devices require continuous care and maintenance, which can create an additional burden for schools or educational institutions. Risk of Distraction and Inappropriate Content. Students may be disrupted by non-educational content or social media when using digital devices, so diminishing their focus on learning. There is a risk that students may access inappropriate content or negative aspects of social media. Supervision and management of content are crucial

4) Cost and resource

Technology integration requires a large investment in hardware, software, and training. This can provide a challenge for schools with limited budgets, as ensuring that technology remains up to date and functions properly requires ongoing funding that may be difficult to fulfill for some educational institutions.

5) Limitations curriculum and digital teaching materials

Developing a curriculum and teaching materials that are suitable for technology requires time and resources. The digital educational content must be pertinent, precise, and aligned with the tenets of

Islam. The digital teaching material must be relevant, accurate, and in accordance with the principles of Islam (Subtianah, 2023). Integrating technology into existing curriculum may require significant adjustments, which may necessitate support from various stakeholders.

Implementing technology in the Islamic Religious Education curriculum indeed presents challenges, but it also offers potential solutions, as follows:

1) Enhancement of technological access

The government and non-profit organisations can provide assistance to schools in the form of technological devices and internet access, and can involve the community in supporting the procurement of technological infrastructure in schools, such as through donations or device lending programmes.

2) Developmentofteachercompetencies

To improve teachers' competencies, the government can organise continuous training so that teachers can continuously improve their technology skills and get used to using technology-based teaching tools and methods. In addition, by consistently engaging in development activities, a mentoring programme can be established where experienced teachers in technology can guide and support their less familiar colleagues.

3) Management and supervision of technology usage

Utilising content management software to filter and control students' access to inappropriate content, then developing clear guidelines and rules about the use of technology devices during learning to minimise distractions.

4) Funding and resource

Searching for various sources of funding, including government, private, and non-profit organisations, to support educational technology programmes, and then allocating the budget wisely to ensure the sustainability of the technology programme, including device maintenance and updates (Subroto et al., 2023).

Conclusion

The research findings demonstrate the need of integrating technology into the Islamic Religious Education curriculum by ensuring the relevance and effectiveness of religious education in the digital era. The Quran, Hadith, scholarly interpretation, and the history of influential Islamic figures serve as sources of inspiration for the development of knowledge and technology, while adhering to Islamic ethics and values. Technology has the potential to greatly enhance the quality of Islamic Religious Education learning, with various benefits such as increased student engagement, wider accessibility, enrichment of relevant learning materials, and provision of student facilities to better understand their religion and be prepared to face challenges and opportunities in the digital era. The implications and recommendations for policymakers to create a framework that supports the integration of technology in Islamic Religious Education, including budget allocation and infrastructure, highlight the need for strengthened multistakeholder collaboration among the government, educational institutions, private sector, and educational communities to ensure the success and sustainability of integrating technology and the curriculum of Islamic Religious Education.

This study aims to explore the integration of technology in the educational curriculum and assess its impact on teaching effectiveness and student comprehension. The main findings indicate that the utilisation of technology, such as educational applications, interactive media, and online learning platforms, significantly enhances student engagement and deepens their understanding of Islamic subjects. Within the context of learning systems, the integration of technology not only enhances the attractiveness and effectiveness of learning, but also provides broader and diverse access to sources of knowledge. The implications of this research are extensive. From a practical standpoint, educators are advised to be more receptive to the use of technology in the classroom and to undergo relevant training in order to maximise its utilisation. From a policy perspective, educational institutions and policymakers are expected to support the integration of technology into the curriculum by providing adequate infrastructure and necessary resources. Ultimately, the integration of technology into the Islamic Religious Education curriculum offers significant opportunities to enhance the quality of learning and enrich students' experiences. By employing an intelligent and precise approach, along with sufficient support, technology can serve as a crucial catalyst in enhancing the effectiveness and efficiency of Islamic education.

References

Achmadin, B. Z. (2022). Urgensi Historical Thinking Skills Bagi Peserta Didik Dalam Pembelajaran Sejarah Kebudayaan Islam. Muta'allim: Jurnal Pendidikan Agama Islam, 1(2), 96–114. https://doi.org/10.18860/mjpai.v1i2.1125

Adlini, M. N., Dinda, A. H., Yulinda, S., & Chotimah, O. (2022). METODE PENELITIAN KUALITATIF STUDI PUSTAKA. 6(1), 974–980.

Agustian, N., & Salsabila, U. H. (2021). Peran Teknologi Pendidikan dalam Pembelajaran. Islamika, 3(1), 123–133. https://doi.org/10.36088/islamika.v3i1.1047

Ajizah, I. (2021). Urgensi Teknologi Pendidikan : Analisis Kelebihan Dan Kekurangan Teknologi Pendidikan Di Era Revolusi Industri 4.0. Journal of Chemical Information and Modeling, 4(1), 25–36.

Al-Ghazali, A. H. (2016). Al-Ghazali's Adapted Summary of Ihya Ulum al-Din: The Forty Principles of the Religion. (1st ed.). Turath Publishing.

Andri, R. M. (2017). Peran dan Fungsi Teknologi Dalam Peningkatan Kualitas Pembelajaran. Jurnal Ilmiah Research Sains, 3(1), 122–129.

Ariani, R., & Festiyed. (2019). Analisis Landasan Ilmu Pengetahuan dan Teknologi Pendidikan dalam Pengembangan Multimedia Interaktif Program Pasca Sarjana Pendidikan Fisika , FMIPA Universitas Negeri Padang. Jurnal Penelitian Pembelajaran Fisika, 5(2), 155–162.

Budiyono, A. (2021). Konsep Kurikulum Terintegrasi. Ilmuna: Jurnal Studi Pendidikan Agama Islam, 3(1), 66–84. https://doi.org/10.54437/ilmuna.v3i1.253

Choli, I. (2019). Hakikat Pengembangan Kurikulum Pendidikan Islam. Al-Risalah, 10(2), 100–127. https://doi.org/10.34005/alrisalah.v10i2.407

Choli, I. (2020). Pendidikan Agama Islam Dan Industri 4.0. Tahdzib Al-Akhlaq: Jurnal Pendidikan Islam, 3(2), 20–40. https://doi.org/10.34005/tahdzib.v3i2.891

Fadilah, N., Setyosari, P., & Susilaningsih, S. (2021). Motivasi Belajar Mahasiswa Teknologi Pendidikan dalam Pembelajaran Online. JKTP: Jurnal Kajian Teknologi Pendidikan, 4(1), 90–97. https://doi.org/10.17977/um038v4i12021p090

Faizah, H., & Kamal, R. (2024). Belajar Dan Pembelajaran. Jurnal Basicedu, 8(1), 3(2), 524–532.

Faizah, S. N. (2017). Hakikat Belajar dan Pembelajaran. At-Thullab: Jurnal Pendidikan Guru Madrasah Ibtidaiyah Volume, 1(2).

Fiantika, F. R., Wasil, M., Jumiyati, S., Honesti, L., Wahyuni, S., Mouw, E., Jonata, J., Mashudi, I., Hasanah, N., Maharani, A., Ambarwati, K., Noflidaputri, R., Nuryami, N., & Waris, L. (2022). METODOLOGI PENELITIAN KUALITATIF (Y. Novita (ed.); 1st ed.). PT. Global Eksekutif Teknologi.

Gorsci, P. C. (2005). Multicultural Education and The Internet (2nd ed.). McGraw-Hill Higher Education Companies.

Gusti, I., Agung, N., Putra, D., Tegeh, M., Komang, I., Jurusan, S., Pendidikan, T., & Pendidikan, I. (2013). Pengembangan Video Pembelajaran: Integrasi Teknologi Dalam Pembelajaran Ipa. Jurnal Edutech Undiksha, 1(2).

Hajri, M. F. (2023). Pendidikan Islam di Era Digital: Tantangan dan Peluang pada Abad 21. Al-Mikraj: Jurnal Studi Islam Dan Humaniora, 4(1), h. 36.

Hanifah Salsabila, U., Irna Sari, L., Haibati Lathif, K., Puji Lestari, A., & Ayuning, A. (2020). Peran Teknologi Dalam Pembelajaran Di Masa Pandemi Covid-19. Al-Mutharahah: Jurnal Penelitian Dan Kajian Sosial Keagamaan, 17(2), 188–198. https://doi.org/10.46781/al-mutharahah.v17i2.138

Haris Budiman. (2017). Peran Teknologi Informasi Dan Komunikasi Dalam Pendidikan. Al-Tadzkiyyah: Jurnal Pendidikan Islam, 8(1), 31–43.

Hartati, S., Fernandi, M. F., & Pramudya, E. (2022). Jurnal pendidikan islam. 159–178.

Kamsina, K. (2020). Integrasi Teknologi Dalam Pembelajaran Implementasi Pembelajaran Ilmu Teknologi Dan Masyarakat. Edueksos : Jurnal Pendidikan Sosial & Ekonomi, 9(2), 67–79. https://doi.org/10.24235/edueksos.v9i2.7103

Kusumawati, K., Studi, P., Informatika, M., & Teknik, F. (n.d.). Pemanfaatan teknologi informasi dalam pendidikan. 5(1), 7–14.

Lestari, S. (2022). Pengembangan Kurikulum Pendidikan Berbasis Teknologi. Jurnal Pendidikan Dan Konseling, 4, 1349–1358.

Manan, A. (2023). Pendidikan Islam Dan Perkembangan Teknologi : Menggagas Harmoni Dalam Era Digital. Jurnal Pendidikan Dan Kebudayaan, 5(1), 56–73.

Maritsa, A., Hanifah Salsabila, U., Wafiq, M., Rahma Anindya, P., & Azhar Ma'shum, M. (2021). Pengaruh Teknologi Dalam Dunia Pendidikan. Al-Mutharahah: Jurnal Penelitian Dan Kajian Sosial Keagamaan, 18(2), 91–100. https://doi.org/10.46781/al-mutharahah.v18i2.303

Masang, H. R., Fani, M., & Allo, M. R. (2021). PERAN TEKNLOGI PENDIDIKAN DALAM IMPLEMENTASI KURIKULUM MERDEKA BELAJAR. Seminar Nasional Teknologi Pendidikan UKI Toraja, 55–63.

Naibaho Sulaiman, R. (2017). Peranan dan Perencanaan Teknologi Informasi dalam Perusahaan. Warta Edisi:52, April, 45.

Nasution. (2012). Teknologi Pendidikan (1st ed.). Bumi Aksara.

Nento, F., & Manto, R. (2023). Peran Teknologi dalam Dunia Pendidikan. E-Tech, 11(01), 5. https://doi.org/10.1007/XXXXXX-XX-0000-00

Nisa, K. (2023). Implementasi Kurikulum Merdeka Dalam Proses Pembelajaran Bahasa Berbasis Teknologi Informasi Dan Komunikasi Tingkat Sma Di Kota Padang. Jurnal Pendidikan (Teori Dan Praktik), 7(2), 94–99. https://doi.org/10.26740/jp.v7n2.p94-99

Nurillahwaty, E. (2021). Peran Teknologi dalam Dunia Pendidikan. Jurnal Keislaman Dan Ilmu Pendidikan, 3(1), 123–133.

Nuryana, Z. (2019). Pemanfaatan Teknologi Informasi Dalam Pendidikan Islam. Jurnal Tamaddun, 12(1), 7–14. https://doi.org/10.59134/jlmt.v5i1.311

Padmini, K. H., & Tyagita, B. P. A. (2015). Teknologi Pendidikan Sebagai Pembelajaran Kompetitif Untuk Meningkatkan Prestasi Siswa: Studi Kasus Di Salah Satu SMA Di Salatiga. Prosiding Seminar Nasional Pendidikan, November, 60.

Parikesit, H., Adha, M. M., Hartino, A. T., & ... (2021). Implementasi Teknologi Dalam Pembelajaran Daring Di Tengah Masa Pandemik Covid-19. Jurnal Pendidikan …, 9(2), 545–554.

Putra, I., & Darma, K. G. (2019). Pendidikan berbasis teknologi informasi. Bali: Rakorda Disdikpora Bali, 224–232.

Rahmi, U., & Azrul, A. (2022). Desain dan Implementasi Blended Learning Integrasi Teknologi dan Pedagogi (A. Prabawati (ed.); 1st ed.). CV. Andi Offset.

Rohman, A., Masduki, A., & Rezza, D. (2024). Literasi Digital: Revitalisasi Inovasi Teknologi. Information Systems and Management, 3(1), 1–4.

Rusnawati, MA. (2022). Dasar dan Prinsip Pengembangan Kurikulum Pendidikan Agama Islam. JURNAL AZKIA : Jurnal Aktualisasi Pendidikan Islam, 16(1), 273–291. https://doi.org/10.58645/jurnalazkia.v16i1.34

Saifudin, A. (2021). Peran Ilmu Pengetahuan Dan Teknologi Dalam Pengembangan Kurikulum Pendidikan. INTIZAM: Jurnal Manajemen Pendidikan Islam, 5(1), 85–101.

Salsabila, U. H., Rifki, M., Oktavianda, T., Annisa, & Abid, D. F. (2024). Integrasi Teknologi Pendidikan Agama Islam Dalam Kurikulum Merdeka. IHSAN: Jurnal Pendidikan Islam, 2(1), 136–147.

Satriawan, W., Santika, I. D., & Naim, A. (2021). Guru Penggerak dan Transformasi Sekolah dalam Kerangka Inkuiri Apresiatif. Al-Idarah: Jurnal Kependidikan Islam Volume, 11(1), 1–12.

Sholeh, M. I., & Efendi, N. (2023). INTEGRASI TEKNOLOGI DALAM MANAJEMEN PENDIDIKAN ISLAM: MENINGKATKAN KINERJA GURU DI ERA DIGITAL Muh. Jurnal Tinta, 5(1), 104–106. https://doi.org/10.24042/atjpi.v8i1.2095

Somel, A. (2014). Post-Pozitivist Paradigmalar. Beykoz Akademi Dergisi, 2(2), 33–45.

Subroto, D. E., Supriandi, Wirawan, R., & Rukmana, A. Y. (2023). Implementasi Teknologi dalam Pembelajaran di Era Digital: Tantangan dan Peluang bagi Dunia Pendidikan di Indonesia. Jurnal Pendidikan West Science, 1(07), 473–480. https://doi.org/10.58812/jpdws.v1i07.542

Subtianah, S. (2023). Transformasi Pembelajaran Melalui Integrasi Teknologi Pendidikan di Era Digital. Seminalu, 1(1), 390–399.

Sugiyono. (2022). Metode Penelitian Kualitatif, Kuantitatif, dan R&D (Sutopo (ed.); 2nd ed.). Alfabeta.

Sulaiman, M., Rukhmana, T., Haddar, G. Al, Muhammadiyah, S., Penuh, S., No, J. R. E. M., Penuh, P. S., Penuh, K. S., & Sungai, K. (2024). Analisis Penerapan Teknologi dalam Pembelajaran Pendidikan Agama Islam. 06(02), 14626–14631.

Sultan, M. F., & Mustapa, H. (2021). Pemanfaatan Teknologi dalam Membangun Sistem Layanan Surat Keperluan Desa Berbasis Mobile. Proceedings, 1(66), 157–165.

Suryaman, M. (2020). Orientasi Pengembangan Kurikulum Merdeka Belajar. 13–28.

Sutiah. (2018). Pengembangan Model Pembelajaran Pendidikan Agama Islam (1st ed.). Nizamia Learning Center.

Sutopo, A. H. (2012). Teknologi Informasi dan Komunikasi dalam Pendidikan (1st ed.). Graha Ilmu.

Suweta, I. M. (2023). Sinergi Teknologi dalam Kurikulum Pembelajaran yang Positif (Studi pada Sekolah Harapan Mulia Bali). 3(4), 425–438.

Ulinniam, Hidayat, Ujang Cepi Barlian, & Yosal Iriantara. (2021). Penerapan Kurikulum 2013 Revisi di Masa Pandemi pada SMK IBS Tathmainul Quluub Indramayu. Jurnal Pendidikan Indonesia, 2(1), 118–126. https://doi.org/10.36418/japendi.v2i1.74

Utami, I. S., & Saputra, A. (2019). Perubahan Moral Peserta Didik Melalui Lingkungan Sekolah. Jurnal Pendidikan Kewarganegaraan, 6(2), 95. https://doi.org/10.32493/jpkn.v6i2.y2019.p95-104

Wahyuningtias, T., Azzahra, N. A., Sodik, M. J., & Muizzah, U. (2023). Eksplorasi Penerapan Kurikulum Berbasis Teknologi bagi Siswa MI Nurul Huda Kabupaten Kediri. Asian Journal of Early Childhood and Elementary Education, 1(1), 99–110. https://doi.org/10.58578/ajecee.v1i1.2025

Wulandari, I. A. G., I Made Putra Aryana, & I Gede Eka Surya Kanta. (2022). Peran Teknologi dalam Pembelajaran Pendidikan Agama Hindu. JAPAM (Jurnal Pendidikan Agama), 2(02), 138–147. https://doi.org/10.25078/japam.v2i02.1448

Yani, A. (2018). Utilization of Technology in the Health of Community Health. PROMOTIF: Jurnal Kesehatan Masyarakat, 8(1), 97. https://doi.org/10.31934/promotif.v8i1.235

Zed, M. (2017). Metode Penelitian Kepustakaan (Y. P. O. Indonesia (ed.); 1st ed.).

Zulham. (2017). Penerapan Teknologi Informasi Menentukan Keberhasilan Dunia Perusahaan Industri. Jurnal Warta, 53(9), 1689–1699.