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Integrating Technology to Elevate the Pedagogical Skills of Islamic Religious Educators

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ABSTRACT

Purpose of the study: The digital era demands Islamic Religious Education (PAI) teachers not only master religious content but also effectively integrate technology to enhance learning quality. This study aims to explore how technology is incorporated into PAI teacher competency development programs under the North Sumatra Regional Office of the Ministry of Religious Affairs, and to identify associated challenges and opportunities.

Methodology: Using a qualitative approach, data were collected through interviews, observations, and document analysis involving teachers, trainers, and program officials. Thematic analysis was applied to capture experiences and patterns in technology use during training.

Main Findings: Findings indicate that technology integration has positively impacted teachers' pedagogical and digital competencies. Tools like Google Classroom and LMS platforms are increasingly used. However, challenges remain, such as limited infrastructure, uneven digital literacy, and overly theoretical training modules.

Novelty/Originality of this study: The COVID-19 pandemic served as a catalyst for digital adaptation. Yet, sustainable improvement requires more practical, needs-based training strategies, infrastructure support, and collaboration among stakeholders. A localized integration model is proposed to align digital transformation with the contextual needs of Islamic education.

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1. INTRODUCTION

In today's digital era, technological developments have brought significant changes in various aspects of life, including in the world of education. This transformation requires adaptation in learning methods to remain relevant to the needs of the times. No exception in Islamic religious learning, where the integration of technology can increase the effectiveness of delivering material and enrich the learning experience of students [1]-[4]. Islamic Religious Education (PAI) teachers have a central role in conveying religious teachings to the younger generation [5]-[7]. However, amid rapid changes in technology, their role is no longer limited to mastering religious knowledge alone. Islamic Religious Education teachers are expected to be able to adopt technology as a learning tool that can clarify Islamic concepts, make the learning process more interesting, and improve student understanding through a more interactive and contextual approach.

In this context, the use of various digital platforms, such as e-learning, educational applications, and online interactive media, are important elements in supporting Islamic religious learning [8]-[11]. Technology allows teachers to present materials in a more varied way, such as through learning videos, digital simulations, or

online discussion forums, which can enrich conventional methods that have so far relied more on lectures and memorization. However, the integration of technology in Islamic religious learning also presents its own challenges [12], [13]. Not all teachers have adequate digital skills, so a systematic competency improvement program is needed so that they can utilize technology optimally. In addition, the availability of infrastructure, internet access, and the readiness of students to participate in technology-based learning are also determining factors for the success of its implementation.

Although the integration of technology in Islamic religious learning offers various opportunities, its implementation in the field does not always run smoothly. One of the main challenges faced is the limited digital skills among teachers [14]-[16]. Not all Islamic Religious Education (PAI) teachers have sufficient understanding in operating technological devices or using digital platforms for learning. Most teachers are still accustomed to conventional methods, such as lectures and memorization, so it takes time and training to adapt to a technology-based approach. To address this gap, a systematic and sustainable competency improvement program is needed. This program does not only focus on technical training, but also provides an in-depth understanding of how technology can be effectively integrated into Islamic religious learning. Applicative training, such as the use of the Learning Management System (LMS), the creation of Islamic-based multimedia content, or the use of social media as a means of education, will help teachers be more confident in using technology. Thus, teachers are not only facilitators in digital learning, but are also able to develop innovations that are in accordance with the needs of students [17]-[19].

However, the challenge does not only lie in the aspect of teacher competence. The availability of infrastructure is also a crucial factor in the success of implementing technology in learning. Not all schools have adequate devices, such as computers, projectors, or stable internet access. In some areas, especially in rural areas, limited internet networks are the main obstacle that hinders the digital-based learning process. Without good infrastructure support, the use of technology in Islamic religious education will be difficult to implement effectively. In addition, the readiness of students is also a factor that cannot be ignored. Although the current generation is more familiar with technology, not all students have access to digital devices or environments that support online learning [20]-[23]. Economic and social disparities often become obstacles for some students to be able to utilize technology optimally [24], [25]. Therefore, the strategy for integrating technology in Islamic religious education must consider these factors so as not to create gaps in access and quality of learning.

The integration of technology into Islamic Religious Education (PAI) learning is a crucial need in today's digital era. The use of technology can not only improve learning effectiveness but also encourage innovation in the provision of religious materials. However, the application of technology in the context of religious education still faces a number of complex challenges. One major challenge is the low level of digital literacy among Islamic Religious Education (PAI) teachers. Many teachers are unable to optimize the use of technology in teaching and learning activities due to limited competency, infrastructure, and access to digital devices. Furthermore, the uneven distribution of relevant and sustainable training also hinders improving teachers' digital competence.

The Ministry of Religious Affairs, particularly the North Sumatra Provincial Office of the Ministry of Religious Affairs, has endeavored to organize various training programs to improve the competence of Islamic Religious Education (PAI) teachers. However, the effectiveness of technology integration in these training programs has not been thoroughly evaluated. Much of the training remains theoretical, lacking practical skills for teachers in technology-based learning. To date, studies related to technology integration in Islamic education have generally focused on classroom learning practices. Research on the extent to which Islamic Religious Education (PAI) teacher training has successfully equipped teachers with digital skills remains limited, particularly within the North Sumatra Regional Office of the Ministry of Religious Affairs. This indicates a gap in the literature that needs to be addressed through empirical research.

Therefore, this study aims to explore the extent to which technology integration has been implemented in the Islamic Religious Education (PAI) teacher competency improvement program within the North Sumatra Regional Office of the Ministry of Religious Affairs. It also aims to identify challenges and opportunities within this process, in order to develop more effective training development strategies. By understanding the actual conditions and obstacles, it is hoped that the results of this study can inform the development of more targeted policies and training interventions. Therefore, the main question posed in this study is: What is the level of technology integration in the Islamic Religious Education (PAI) teacher competency improvement program organized by the North Sumatra Regional Office of the Ministry of Religious Affairs, and what are the challenges and opportunities faced in its implementation?

2. RESEARCH METHOD

The qualitative approach was chosen in this study because it aims to understand in depth how technology integration is applied in the Islamic Religious Education (PAI) teacher competency improvement program [26]-[28]. This method allows researchers to explore the experiences, perceptions, and challenges faced

by teachers in adapting technology in learning. Through a qualitative approach, this study not only focuses on numerical data, but also explores the meaning behind the phenomena that occur in the field.

To obtain comprehensive data, several data collection techniques were used, namely interviews, observations, and documentation studies [29]-[31]. Interviews were conducted to obtain direct views from teachers, trainers, and related parties in the competency training program. Through interviews, researchers can explore how teachers' experiences in using technology, the obstacles they face, and the support provided by the North Sumatra Regional Office of the Ministry of Religious Affairs in implementing the program.

In addition to interviews, observations were conducted to see directly how technology is applied in training and learning activities. Through observations, researchers can observe the extent to which the use of technology has been integrated into teaching methods, as well as how the interaction between teachers and technology in the learning process takes place. Observations also help in identifying challenges that may not be explicitly expressed in interviews, such as infrastructure limitations or technical difficulties faced by training participants.

The last technique used is documentation study, which aims to collect relevant secondary data. Documents such as training modules, education policies, program implementation reports, and technology-based learning materials are analyzed to obtain a broader picture of the strategies that have been implemented. Documentation study also functions as triangulation material to validate data obtained from interviews and observations, so that the research results are more accurate and reliable. With the combination of these three techniques, the study can present a more comprehensive analysis of technology integration in improving the competence of Islamic Religious Education teachers. This approach allows researchers to not only understand the extent to which technology has been implemented, but also identify supporting and inhibiting factors in the process. The results of this study are expected to provide more appropriate recommendations for policy makers in developing more effective and sustainable training strategies.

The process of data analysis in this study was carried out continuously throughout the research, beginning during data collection and continuing through to interpretation. The researcher sought to understand the patterns, meanings, and relationships behind the participants' experiences, not simply by recording facts, but by interpreting the significance behind what was observed and expressed. As the interviews were conducted, the researcher carefully listened and transcribed the responses of PAI teachers, trainers, and officials. During this stage, initial patterns began to emerge. For instance, many teachers expressed enthusiasm about integrating technology into Islamic education but simultaneously revealed significant obstacles, such as lack of training, unfamiliarity with digital platforms, or poor internet connectivity. These narratives were documented, categorized, and interpreted contextually.

3. RESULTS AND DISCUSSION

3.1 Quo Vadis Utilization of Technology in Islamic Religious Education Teacher Competency Improvement Programs

In today's rapidly evolving digital era, integrating technology into education is no longer optional but a necessity. Islamic Religious Education (PAI) teachers must not only possess a deep understanding of religious teachings but also be capable of incorporating technology into their teaching practices. This raises a fundamental question: *Quo Vadis*—what is the direction of technology utilization in the PAI teacher competency improvement program? Has the integration of technology progressed as expected, or does it still face obstacles that limit its effectiveness?

Enhancing teacher competency is essential to maintaining the quality of Islamic religious education that remains relevant to contemporary developments. Technology offers numerous opportunities for innovation in teaching, from e-learning platforms and interactive applications to the development of Islamic-based multimedia content [1]-[32]-[33]. These tools enable teachers to design learning experiences that are more engaging, interactive, and aligned with students' diverse learning styles in the digital age. However, the critical issue remains: to what extent has technology been truly integrated into training programs, and how effectively is it being applied in actual classroom settings? Addressing these questions is key to ensuring that technology serves as a catalyst for educational transformation rather than a mere supplement to traditional methods.

Although many initiatives have been taken to improve teachers' digital skills, the challenges in the field are still quite large. Limited infrastructure, unequal internet access, and varying levels of digital literacy among teachers are major obstacles to implementing technology [34]. In addition, not all training programs provided have succeeded in equipping teachers with skills that they can apply directly in the classroom. In some cases, technology training is more theoretical than practical, so teachers still have difficulty adapting technology to their learning methods. In this context, reflection on the direction of technology utilization is very important. Have existing programs answered the real needs of Islamic Religious Education teachers in facing the challenges of digitalization? Are there more effective strategies to ensure that technology truly becomes a tool that improves the quality of Islamic religious learning? The answers to these questions depend not only on the readiness of

individual teachers, but also on systemic support from the government, educational institutions, and educational technology providers.

The question of *Quo Vadis* regarding the use of technology to enhance the competence of Islamic Religious Education (PAI) teachers is not merely rhetorical; it serves as a call to critically assess and refine existing strategies. A more comprehensive and practice-oriented approach is essential, incorporating hands-on training, adequate infrastructure, and supportive policies that ensure the sustainable integration of technology in Islamic religious education. With the right measures in place, technology will not be just a passing trend but a transformative tool that brings lasting improvements to the landscape of Islamic education.

The rapid advancement of digital technology has significantly reshaped the education sector, particularly in efforts to enhance teacher competency. As the frontline educators responsible for imparting Islamic teachings in schools, PAI teachers must continuously improve the quality of their instruction. In this context, integrating technology into teacher training and professional development programs is a crucial strategy to equip them with the necessary skills to navigate the evolving demands of modern education. By doing so, PAI teachers will not only remain relevant but also become more effective in delivering meaningful and engaging learning experiences to their students.

The North Sumatra Regional Office of the Ministry of Religious Affairs has an important role in initiating and managing the program to improve the competence of Islamic religious teachers. The integration of technology in this program not only aims to improve teachers' digital skills, but also to enrich the learning methods they use. Technology enables a more innovative approach to teaching Islamic concepts, either through the use of e-learning platforms, education-based applications, or interactive media that support digital-based learning.

Figure 1. Information and Communication Technology competency improvement program for Islamic Religious Education teachers in the Sumatra region in the city of Medan Source: [35]

However, the implementation of technology in improving teacher competence does not always run without challenges. One of the main obstacles faced is the disparity in teachers' digital abilities. Not all PAI teachers have sufficient skills in using technology effectively in teaching. In addition, the availability of infrastructure, such as stable internet access and adequate technological devices, is also a determining factor in the success of technology integration in training programs.

To overcome these obstacles, the North Sumatra Regional Office of the Ministry of Religious Affairs needs to design a more systematic strategy in teacher training. Technology-based training programs must be more applicable and in accordance with the needs in the field. For example, training should not only focus on introducing technology, but also on how the technology can be applied effectively in the learning process. In addition, synergy between the government, educational institutions, and the teacher community is also needed to create an educational ecosystem that supports digital transformation in Islamic religious learning.

3.2 COVID-19 Pandemic: Momentum for Islamic Religious Education (PAI) Teachers to Utilize Technology

The COVID-19 pandemic has become an important momentum for Islamic Religious Education (PAI) teachers under the auspices of the Ministry of Religious Affairs in the North Sumatra region to develop skills in utilizing technology in learning. The conditions of social restrictions and distance learning imposed during the pandemic forced educators to adapt quickly to various digital platforms, ranging from video conferencing applications to the use of Learning Management Systems (LMS).

This transformation not only encourages increased teacher competence in the digital field, but also expands access to learning for students. With technology, teaching materials can be reached more widely, allowing students to learn anytime and anywhere. In addition, interactions that were previously limited in the classroom are now developing in the form of online discussions and more dynamic project-based assignments. In my opinion, the integration of technology in PAI learning is a very positive step. Before the pandemic, we used more lecture and discussion methods in class. However, after attending various trainings organized by the Ministry of Religious Affairs, I started to utilize various digital platforms such as Google Classroom, Zoom, and other interactive applications. This is very helpful in increasing student engagement (Interview with MS, on February 20, 2025).

Over time, the experience during the pandemic has provided valuable lessons that the integration of technology in religious learning is not just an emergency solution, but a necessity that can improve the quality of education as a whole. The adaptations that have been made by Islamic Religious Education teachers in North Sumatra are an important foundation for future learning innovations, where digital approaches can continue to be developed to support the effectiveness and meaningfulness of Islamic religious teaching. The main challenge is the limited internet access for some students, especially those living in rural areas. In addition, not all teachers have adequate technological skills from the start. But with the training and mentoring program from the Ministry of Religion, we can adapt gradually (Interview with KT, on February 20, 2025).

Awareness of the importance of technology in the world of education is increasing, along with the demands that the learning process continue to take place effectively even without face-to-face meetings. Islamic Religious Education teachers who previously relied more on conventional methods in teaching are starting to explore various new strategies based on technology, such as the use of interactive media, learning videos, and the use of online discussion forums. Technology helps me explain abstract concepts in Islam more concretely. For example, when discussing the Hajj pilgrimage, I can use animated videos or virtual tours of Mecca, so that students can more easily understand the order and meaning of each ritual (Interview with BG, on February 21, 2025).

This technology integration not only helps improve understanding, but also builds a more interactive and memorable learning experience. Students are no longer just passive listeners, but can explore every aspect of the Hajj pilgrimage in more depth. Thus, technology becomes a bridge that connects theory and experience, making religious learning more alive and meaningful.

3.3 The Role of the North Sumatra Regional Office of the Ministry of Religious Affairs in Improving the Technological Competence of Islamic Religious Teachers

The rapid advancement of information and communication technology (ICT) has significantly transformed the educational landscape, including Islamic Religious Education (PAI) learning. In response to the digital era, PAI teachers and supervisors are required to enhance their ICT competencies to optimize the learning process in schools. Recognizing the crucial role of technology in religious education, the Ministry of Religious Affairs of the Republic of Indonesia has initiated various competency development programs for PAI teachers, one of which includes specialized ICT training.

As a concrete step toward improving teachers' technological proficiency, the Directorate of Islamic Religious Education organized an ICT Competency Improvement Program for PAI Teachers and Supervisors at the Junior High School Level for the Sumatra region. This program, held at the Grand Mercure Hotel in Medan from August 19-21, 2019, aimed to equip teachers with the skills to effectively utilize various digital platforms as engaging and innovative learning media. A total of 50 participants, including PAI teachers and supervisors from multiple provinces—such as North Sumatra, Aceh, West Sumatra, Riau, Riau Islands, and South Sumatra—enthusiastically took part in the training sessions. Their active participation reflected a strong awareness of the importance of technological mastery as an integral part of professional competence.

During the event, the Director of Islamic Religious Education, Rohmat Mulyana Sapdi, underscored the necessity of enhancing PAI teachers' capacities in line with technological advancements. He highlighted that ICT proficiency is a key factor in ensuring effective and engaging Islamic religious learning. Additionally, he emphasized that teachers must utilize technology wisely, ensuring that students benefit from its positive aspects while being protected from its potential risks. As an example, he pointed to the ICT-based learning model developed by ESQ (Emotional Spiritual Quotient), which successfully presents Islamic-themed content in an engaging and inspiring manner. This model serves as a valuable reference for PAI teachers in designing creative and innovative teaching methods, encouraging them to adopt and adapt proven technology-based learning strategies.

The Head of the PAKIS Division of the North Sumatra Provincial Ministry of Religious Affairs Office, H. Fakhri, also expressed strong support for this initiative. He affirmed that enhancing ICT competencies among PAI teachers is a strategic move to elevate the quality of Islamic religious education [36]. He further emphasized that PAI teachers must continuously adapt to the evolving educational landscape to remain relevant and competitive in the increasingly digital-based learning environment. According to him, Islamic Religious

Education teachers should embody four key competencies: pedagogical, personality, professionalism, and spiritual leadership. As leaders in the learning process, they are responsible for guiding students toward the positive and productive use of technology. Thus, ICT mastery is not merely a technical requirement but a fundamental aspect of a religious educator's professional development. By integrating technology effectively, Islamic Religious Education can move beyond traditional teaching methods, creating a more dynamic, interactive, and impactful learning experience. Through continuous training and support, PAI teachers can ensure that Islamic education remains relevant and resonates with the needs of students in the digital era.

This activity presents competent speakers in the field of ICT and technology-based learning, including Syaekhuddin, Akhmad Riza Pahlevi, Mushonef, Ida Farida, Mulkeis, and Hasan Basri [36]. The material presented covers various important aspects in the use of technology for Islamic Religious Education learning, including:

a) Ministry of Religious Affairs Policy in Improving Islamic Religious Education Quality - Providing insight into the direction of government policy in supporting the integration of technology in Islamic religious education.
b) Creation of ICT-Based Learning Media - Teaching teachers how to develop interactive teaching materials using educational software and applications.
c) Utilization of Social Media in Learning - Providing strategies for utilizing platforms such as YouTube, Instagram, and WhatsApp as supporting media for Islamic religious learning.
d) Use of Technology for Assessment - Introducing teachers to a digital-based assessment system to increase the effectiveness of evaluating student learning outcomes.
e) Online-Based Teaching and Learning - Providing an understanding of online learning methods and the use of the Learning Management System (LMS) platform.
f) Conference Call-Based Learning Simulation - Training teachers in managing virtual classes using long-distance communication technology.

With these materials, participants are expected to be able to implement ICT-based learning in their respective schools. In the closing session, the Head of the PAI Sub-Directorate at SMP, Agus Sholeh, emphasized the importance of following up on this activity. He stated that participants would be monitored to ensure that the knowledge gained was truly applied in daily learning at school. Integration of technology in improving the competence of PAI teachers is a strategic step in responding to the challenges of education in the digital era. ICT training activities organized by the Ministry of Religion provide opportunities for PAI teachers and supervisors to develop their skills in utilizing technology as an effective learning tool. Although there are various challenges in its implementation, the commitment of the government, educational institutions, and PAI teachers themselves is a key factor in ensuring the success of this program. With optimal utilization of technology, it is hoped that Islamic religious learning in schools can be more innovative, interactive, and relevant to the needs of students in the modern era.

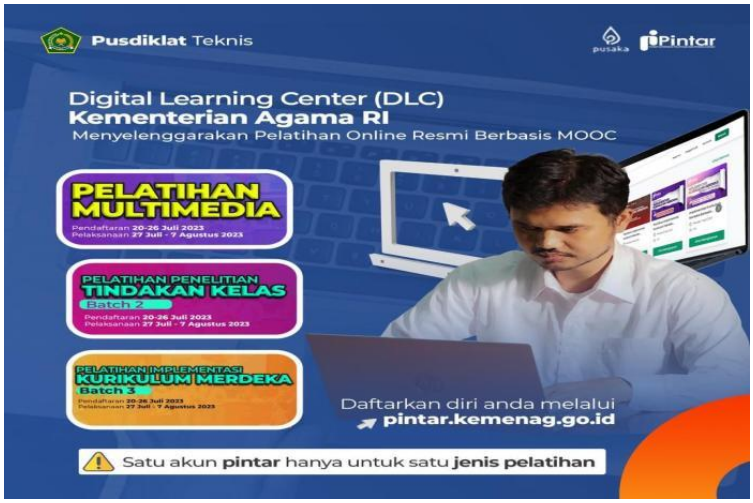

Figure 2. Multimedia Training by the Center for Technical Training of Education and Religious Personnel
Source: [37]

The Ministry of Religion through the Center for Technical Personnel Education and Religious Education is again holding three certified online trainings organized through the Smart MOOC platform. This training includes Multimedia Training, Classroom Action Research Training (batch 2), and Independent Curriculum Implementation Training (batch 3). The Head of the Technical Personnel Education and Training Center, Mastuki, explained that the main objective of this training is to improve the competence of madrasah

teachers throughout Indonesia. However, due to the open and widely accessible nature of MOOC, this training can also be attended by religious teachers in schools, lecturers, students, parents of students, and the general public who are interested in developing their insights in the field of education. The high enthusiasm of the public for this online training is the main reason for opening three types of training simultaneously.

Table 1. The Relevance of Technology Integration in the Islamic Religious Teacher Competency Improvement Program

Aspects	Relevance to Technology Integration	Impact on Teacher Competence
Learning Methods	Technology enables the use of interactive media such as video, animation, and e-learning in teaching Islamic Religious Education.	Increase the variety of teaching methods and student involvement in learning.
Evaluation and Assessment	Use of digital platforms for online exams and project-based assignments.	Make it easier for teachers to conduct more objective and efficient assessments.
Teacher Training and Development	Technology-based training programs such as webinars, online courses, and LMS (Learning Management System).	Improve teachers' digital and pedagogical skills sustainably.
Access to Learning Resources	The internet provides various digital references such as journals, e-books, and videos of religious lectures.	Expand teachers' insights and learning resources without being limited to printed books.
Interaction with Students	Use of online discussion forums and educational communication applications.	Improve student communication and involvement in Islamic Religious Education learning.
Dissemination of Religious Values	Social media and digital preaching platforms can be used to convey religious material widely.	Teachers can be more active in spreading Islamic values through digital media.
Challenges and Obstacles	Limited infrastructure and uneven digital literacy.	There needs to be intensive training and technical support so that teachers can optimize technology in learning.

The benefits obtained from this training are not only felt by the participants who take part, but also by their students [38]-[40]. With a better understanding of multimedia, classroom action research, and the implementation of the Independent Curriculum, educators and parents can innovate in the world of education in accordance with the times. Therefore, Mastuki invites all stakeholders in the field of education to make the most of this opportunity. One of the main advantages of this training is its flexibility [41]. Participants do not need to leave their main tasks, because the training can be accessed online with an independent learning method (asynchronous). This allows participants to adjust their study schedule to their free time, either in the afternoon or evening.

In addition, participants who successfully pass the passing grade will receive an official certificate from Pusdiklat, which is legal and formal, as proof of their competence. Registration for the training is open from July 20 to 26, while the implementation takes place from July 27 to August 7, 2023. With this program, it is hoped that educators and the community can be better prepared to face the challenges of the modern world of education by utilizing technology and more innovative learning methods. On Monday, May 27, 2024, the Medan Religious Education and Training Center officially opened the Multimedia Learning Distance Training (PJJ) for Madrasah Supervisors within the Ministry of Religion of North Sumatra Province. This activity was attended by 30 participants from various regions in the province and took place online from May 27 to June 4, 2024. This training aims to improve the quality of learning in madrasas by utilizing multimedia technology, so that supervisors can guide teachers in integrating digital media into the learning process [41].

In his remarks, the Head of the Medan Religious Education and Training Center, Muhammad Halomoan, expressed his hope that this training could equip madrasa supervisors with skills in using various online media platforms as a more innovative and effective learning tool. He also emphasized the importance of the participants' seriousness in following the entire series of activities until the end of the training, so that the benefits can be applied optimally in their respective madrasa environments. This PJJ Multimedia Learning Training is part of the Medan Religious Education and Training Center’s efforts to improve the quality of education and training in madrasas. Through this program, it is hoped that madrasa supervisors will not only be able to understand the concept of using multimedia in learning, but also be able to apply it directly to support increasing the effectiveness of the teaching and learning process in the classroom.

With optimal technology integration, it is expected that Islamic Religious Education teachers can be more innovative in delivering learning materials, so that they can improve students' understanding of Islamic

values [42]. Technology-based competency improvement programs can also provide wider access for teachers to continue learning and developing their skills independently. Therefore, the sustainability of this program is key to ensuring that the integration of technology in Islamic religious education is not just a temporary trend, but becomes part of a long-term strategy in improving the quality of education in North Sumatra.

4. CONCLUSION

Based on the findings of this study, it can be concluded that the integration of technology in the Islamic Religious Education (PAI) teacher competency improvement program under the North Sumatra Regional Office of the Ministry of Religious Affairs has had a positive impact on enhancing teachers' pedagogical and digital competencies. Technology use has enabled more interactive and innovative learning methods, supporting teachers in delivering religious content more effectively and contextually. However, the implementation of technology in teacher training still faces several challenges, including limited access to infrastructure, uneven distribution of technological devices, and varying levels of digital literacy among teachers. These obstacles indicate a gap between policy intentions and field realities, highlighting the need for more adaptive and inclusive strategies. To address these challenges, the study proposes several strategic directions: improving infrastructure, providing continuous and context-based training, establishing mentoring and evaluation systems, enhancing digital literacy with differentiated approaches, and fostering collaboration among stakeholders. These strategies are essential not only to optimize technology use but also to ensure equitable access and sustainable integration in Islamic religious education. The findings of this research also point to the potential development of a context-sensitive model of technology integration in Islamic education—one that takes into account local conditions, teacher readiness, and the unique nature of religious instruction. Such a model can serve as a theoretical framework for future studies and policy formulation aimed at digital transformation in religious education settings.

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