



THE ROLE OF TEACHERS AS AGENTS OF TRANSFORMATION IN PAI LEARNING INNOVATION IN THE DIGITAL ERA

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Abstract

The role of teachers as transformation agents is very important in Islamic Religious Education (PAI) learning innovation in the digital era. Challenges such as low digital literacy and limited technological infrastructure require a strategic approach in integrating learning technology. This research aims to identify the role of PAI teachers in developing digital learning innovations, the challenges they face, and the opportunities available. This research uses a descriptive qualitative approach with data collection techniques in the form of in-depth interviews, observation and documentation. The informants consisted of PAI teachers in middle and high schools in Jember Regency. The research results show that PAI teachers have utilized technology such as LMS, interactive applications, and blended learning models to create relevant and interesting learning. The main challenges include a lack of digital literacy training and limited infrastructure, but opportunities such as government training programs are a strategic solution. This research concludes that technology integration can increase students' understanding of religious values while forming an Islamic character that is adaptive to the digital era.

Keywords: PAI teacher, learning innovation, digital era, educational technology, Islamic character.

A. Introduction

Teachers are key in guiding, inspiring, and shaping students into knowledgeable, character-driven individuals ready to face future challenges. As agents of transformation, teachers should be drivers of change and renewal in education and the lives of students. In the digital era, education must be able to adapt well, becoming not only an option but a necessity, so that the resulting generation is able to face the challenges of the times and actively contribute to a world increasingly connected by technology. This era offers great opportunities for the world of education, but also requires collaborative efforts to overcome existing challenges, including from the government, educational institutions, teachers, students, and society as a whole. As conveyed by Yuliana, the

government is responsible for creating policies that promote equitable access to quality education, developing curricula, and providing the necessary resources.¹

In the face of rapid technological and cultural changes, teachers must embrace a proactive role, mastering educational technology, and fostering critical thinking. This not only transfers knowledge but also shapes students' ways of thinking, values, and abilities to adapt to the challenges of an ever-evolving world. As agents of transformation in the digital era, Islamic Religious Education (PAI) teachers are expected to be able to develop themselves, utilize technology wisely, and create learning innovations that are in line with the needs of the times. Developing digital skills is crucial for teachers to adapt to new learning models and effectively integrate technology into their teaching practices. With this approach, Islamic Religious Education (PAI) learning can be more engaging, relevant, and impactful in shaping a resilient Islamic generation to face the digital era. This is because Islamic Religious Education (PAI) plays a strategic role in building the character of the younger generation based on moral, spiritual, and ethical values.

However, the challenges of the digital era have transformed the landscape of learning, including Islamic Religious Education (PAI). Islamic Religious Education (PAI) in the digital era faces various complex challenges but also offers significant opportunities for innovation. Among these challenges is that not all teachers and students have adequate digital literacy. This hinders the use of technologies such as e-learning, learning apps, or social media to support the teaching and learning process. Furthermore, the abundance of unverified religious information on the internet can mislead students. This poses a major challenge in ensuring that Islamic Religious Education values are conveyed correctly and relevantly. Life in cyberspace often gives rise to behavior that conflicts with religious values, such as hate speech, hoaxes, and cyberbullying.²

Based on data from the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) in 2023, only 47% of teachers in Indonesia reported feeling confident in optimally utilizing digital technology in their teaching, including in Islamic Religious Education (PAI). This indicates a gap between the needs of modern learning and teachers' adaptability in utilizing

¹ Titik Yuliana and Siti Maysaroh, "Peran Pemerintah Dan Masyarakat Dalam Penyelenggaraan Pendidikan: Sistematis Reviu," *Adi Karsa : Jurnal Teknologi Komunikasi Pendidikan* 15, no. 1 (May 31, 2024): 91–99, <https://doi.org/10.51169/ADIKARSA.V15I2.93>.

² Nafsyah Rizka Fitria et al., "Peran Moderasi Beragama dalam Mengatasi Bullying dan Cyberbullying," *PROSIDING SEMINAR NASIONAL PENDIDIKAN DAN AGAMA* 5, no. 1 (May 31, 2024): 13–26, <https://doi.org/10.55606/SEMNASPA.V5I1.2030>.

technology as a learning medium. Modern learning demands the use of technology to create a more effective, efficient, and engaging learning process. Consequently, many teachers, especially those unfamiliar with technology, still experience difficulties in operating learning devices and applications.

The constructivist learning theory by Piaget and Vygotsky emphasizes the importance of active interaction between learners and their environment to build deeper understanding. Piaget's theory highlights the importance of experiential learning, where students actively engage with their environment to build cognitive structures.³ In this context, the teacher acts as a facilitator who creates meaningful learning experiences.

On the other hand, Bass's transformational theory is relevant to explain the role of teachers as agents of transformation, where they must be able to motivate students to think creatively and adapt to changing times, including the integration of technology in learning.⁴

Previous research also supports this urgency. Ahmadi's study showed that using digital technology in Islamic Religious Education (PAI) learning can improve students' understanding of religious concepts by up to 35% compared to conventional methods.⁵ However, another study by Rahmawati found that the lack of training and digital literacy for teachers was the main obstacle in implementing technology in Islamic Religious Education learning.⁶ Research by Fuqiang Zhao also indicates that the support of educational institutions plays a significant role in providing technological tools and training for teachers, thus creating more adaptive and innovative learning.⁷

³ Jean Piaget et al., "Implementation of Learning Theory of Constructivism Perspective Jean Piaget (1896-1980) in PAI Learning at SDI Bilal Bin Robah Batulayar Village, Batulayar District," *Edumaspul: Jurnal Pendidikan* 7, no. 2 (October 1, 2023): 5219–29, <https://doi.org/10.33487/EDUMASPUL.V7I2.7163>.

⁴ Nurfatimah Ugha Sugrah, "Implementasi Teori Belajar Konstruktivisme Dalam Pembelajaran Sains," *Humanika: Kajian Ilmiah Mata Kuliah Umum* 19, no. 2 (February 24, 2019): 121–38, <https://doi.org/10.21831/HUM.V19I2.29274>.

⁵ Ummu Mawaddah and Ahmadi, "Pemanfaatan Komputer Dan Internet Dalam Pendidikan Dan Pembelajaran PAI," *PaKMas: Jurnal Pengabdian Kepada Masyarakat* 2, no. 1 (May 31, 2022): 243–48, <https://doi.org/10.54259/PAKMAS.V2I1.881>.

⁶ Achmad Setiawan, Asrowi Asrowi, and Nunuk Suryani, "Urgensi Pemanfaatan Multimedia Pada Pendidikan Agama Islam Jenjang SMK," *Teknodika* 15, no. 2 (September 26, 2017): 1–11, <https://doi.org/10.20961/TEKNODIKA.V15I2.34742>.

⁷ Fuqiang Zhao et al., "Shaping Behaviors Through Institutional Support in British Higher Educational Institutions: Focusing on Employees for Sustainable Technological Change," *Frontiers in Psychology* 11 (December 3, 2020), <https://doi.org/10.3389/FPSYG.2020.584857>.

This study aims to deeply identify the role of teachers in developing innovative Islamic Religious Education (PAI) learning in the digital era. The focus of this study covers three main aspects: the strategies implemented by teachers to integrate digital technology into learning, the challenges they face in the process, and opportunities that can be utilized to improve the quality of PAI learning. This study also aims to provide practical recommendations that can support teachers in maximizing their role as agents of transformation. These recommendations are expected to help teachers: Utilize digital technology optimally in designing relevant and engaging learning experiences for students. Develop creative and adaptive competencies, so they are able to deliver learning that is in line with the needs of the digital era. Navigate challenges such as limited technological infrastructure and lack of digital training through institutional support and collaboration. Thus, this study not only aims to understand the situation and dynamics of PAI learning in the digital era, but also to prepare teachers and educational institutions to create an innovative, adaptive, and sustainable learning ecosystem. This research supports the development of students who not only possess a deep religious understanding but are also able to face the challenges of the 21st century with strong moral, spiritual character, and technological competency.

The argument of this research is that teachers' ability to effectively integrate digital technology and innovative learning strategies can improve the quality of Islamic Religious Education (PAI) learning while preparing students to face the challenges of the 21st century. In the context of the digital era, teachers play a role not only as instructors but also as innovators capable of creating relevant and engaging learning methods for students. The role of teachers as innovators includes the ability to design learning experiences that utilize technology, such as interactive media, learning applications, and other digital platforms, so that students can be actively involved in the learning process.

Furthermore, teachers also act as transformers, motivating students to think critically, creatively, and adapt to changing times. Through this transformational role, teachers can encourage students not only to understand religious concepts but also to internalize religious values in their daily lives. As transformers, teachers are also expected to be able to overcome emerging challenges, such as limited infrastructure, lack of digital literacy, and resistance to change.

Furthermore, this argument is supported by the fact that the integration of technology into learning allows for personalized learning, allowing students to learn at their own pace and style. Thus, Islamic Religious Education (PAI)

learning can be more effective in building students' spiritual and moral understanding, while equipping them with 21st-century skills, such as digital literacy, collaboration, and problem-solving.

Therefore, the role of teachers as innovators and transformers is key to creating Islamic Religious Education (PAI) learning that is relevant to the needs of the times. With this approach, teachers can ensure that students are not only academically prepared, but also morally and technologically prepared to face future challenges.

B. Research Methods

This study uses a qualitative research type with a descriptive analytical approach. According to Bogdan and Taylor in Moleong, qualitative research is defined as a research procedure that produces descriptive data in the form of written or spoken words from people and observable behavior. This approach aims to explore in depth the role of teachers as agents of transformation in Islamic Religious Education (PAI) learning innovation in the digital era, including the strategies used, challenges faced, and available opportunities. This study also seeks to understand the context of digital technology implementation in PAI learning from the teacher's perspective. Informants in this study were PAI teachers who teach at the junior high school (SMP) and senior high school (SMA) levels in Jember Regency. Informants were selected using a purposive sampling technique, namely selecting teachers who have at least five years of teaching experience and have used digital technology in the learning process. In addition, school principals and PAI subject supervisors were also involved to provide institutional perspectives regarding the support and obstacles faced by teachers in developing technology-based learning innovations.

Data collection techniques were carried out through: In-depth interviews: Conducted with Islamic Religious Education teachers, principals, and supervisors to obtain information about experiences, strategies, and challenges in integrating digital technology in learning. Next, Observation: Conducted in class to directly observe the Islamic Religious Education learning process that uses digital technology, such as the use of learning applications or interactive media. And the final data collection technique is documentation: Involving the collection of related documents, such as lesson implementation plans (RPP), digital learning materials, and reports on technology training activities for teachers.⁸

⁸ Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif dan R & D* (Bandung: Alfabeta), 240

Furthermore, the data analysis technique used to analyze the data obtained was using the qualitative data analysis technique of the Miles and Huberman model,⁹ which includes three main stages: Data Reduction: Filtering data relevant to the research focus, such as teachers' innovative strategies and challenges faced in using technology. Data Presentation: Arranging data in the form of a matrix or descriptive narrative to facilitate interpretation and pattern identification. Finally, conclusion drawing: Interpreting and reflecting on the analyzed data to answer research questions and provide practical recommendations.

C. Results and Discussion

The results of this study show several main findings related to the role of teachers in developing Islamic Education learning innovations in the digital era:

Utilizing technology in Islamic Religious Education (PAI) learning, teachers utilize various technologies such as Learning Management Systems (LMS), interactive learning applications, and social media to deliver Islamic Religious Education (PAI) material in a creative and engaging manner. This increases students' interest in understanding religious values..

To improve teachers' digital competencies, Islamic Religious Education (PAI) teachers act as agents of transformation by enhancing their digital competencies through educational technology training, enabling them to integrate digital learning methods with spiritual and religious approaches.

Implementing interactive learning methods, innovations in Islamic Religious Education (PAI) learning involve the use of Islamic-based educational games, instructional videos, and interactive simulations relevant to students' daily lives in the digital age.

By implementing a blended learning model, teachers successfully combine online and offline learning to provide a more flexible learning experience, where religious materials can be accessed anytime and anywhere through digital platforms.

Developing character through digital means, Islamic Religious Education (PAI) teachers not only teach religious knowledge but also guide students in developing Islamic character by using applications that encourage good habits, such as prayer reminders and Quran recitation apps.

⁹ Matthew B. Miles dan Michael Huberman, *Analisis Data Kualitatif: Buku Sumber tentang Metode-Metode Baru* (Jakarta: Penerbit Universitas Indonesia (UI-Press), 1992), 17

Teacher-Parent Collaboration: In the digital era, teachers collaborate with parents to ensure that the Islamic values taught in school are also implemented at home through safe and appropriate digital media.

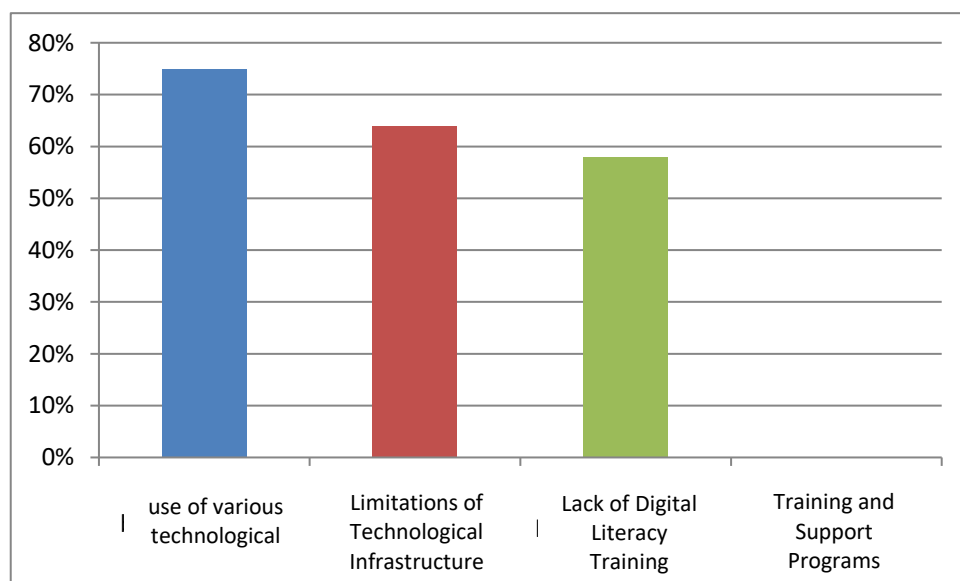
Effectiveness of Digital Transformation, Research reveals that the use of technology enhances the effectiveness of Islamic Religious Education (PAI) learning, as evidenced by students' increased understanding of the material and application of Islamic values in their daily lives.

Teacher Strategies for Integrating Digital Technology, Islamic Religious Education (PAI) teachers use various technology media, such as online learning applications, interactive videos, and collaborative platforms, to increase student engagement. For example, 75% of informants reported using applications such as Google Classroom and Canva to deliver learning materials..

Challenges Faced: The main challenges faced by teachers are limited technology infrastructure in schools (64%) and a lack of digital literacy training (58%). This leads some teachers to feel insecure about optimally utilizing technology. Furthermore, research indicates challenges such as limited internet access in some areas and minimal support facilities. Islamic Religious Education (PAI) teachers overcome these obstacles with creative strategies, such as utilizing simple devices and optimizing face-to-face interactions.

Opportunities: Technology-based training programs from the government and support from educational institutions provide significant opportunities for teachers to improve their digital competencies.

Figure 1
Key Research Findings: Islamic Religious Education
Learning Innovation in the Digital Era



Discussion

These findings indicate that the digital technology integration strategy implemented by Islamic Religious Education (PAI) teachers has led to more interactive and adaptive learning. The use of technology in Islamic Religious Education (PAI) learning is in line with research conducted by Fauzi et al., that the study showed a significant positive correlation between technology use and Islamic Religious Education (PAI) learning outcomes, with a regression coefficient of 0.765 indicating a strong effect. This is further strengthened by Amrullah's findings that digital media, such as e-learning platforms and mobile applications, improve student understanding and engagement with Islamic Religious Education (PAI) materials. The importance of educator readiness to integrate technology into the Islamic Religious Education (PAI) curriculum as well as the need for training and support for teachers is emphasized. Furthermore, according to Saprullah, the use of technology in Islamic Religious Education (PAI) learning, including interactive multimedia, e-learning platforms, mobile applications, virtual reality, and augmented reality, increases student interest and motivation. Furthermore, quality digital teaching materials such as interactive e-books and instructional videos are crucial for effective learning.¹⁰ The results of the analysis show that the development of an Islamic Religious Education curriculum that is adaptive to the development of digital technology involves the use of digital technology in learning such as interactive multimedia, e-learning platforms, mobile applications, virtual reality, and augmented reality to increase students' interest, motivation, and learning experience.

This aligns with Piaget and Vygotsky's constructivist theory, where technology enables active interaction between students and learning materials. Comparison with Previous Research: These results are consistent with Ahmadi's research, which showed a 35% increase in student understanding with technology-based learning methods.¹¹ However, these findings also confirm Rahmawati's findings, which highlighted low digital literacy as a major obstacle. However, the low interest in reading among students could be related to the

¹⁰ M Sirozi et al., "Mengembangkan Kurikulum Pendidikan Agama Islam (PAI) Yang Adaptif Terhadap Perkembangan Teknologi Digital," *Indo-MathEdu Intellectuals Journal* 5, no. 3 (July 10, 2024): 3716–21, <https://doi.org/10.54373/IMEIJ.V5I3.1385>.

¹¹ Mawaddah and Ahmadi, "Pemanfaatan Komputer Dan Internet Dalam Pendidikan Dan Pembelajaran PAI."

development of digital technology, which, if mismanaged, contributes to declining literacy rates.¹²

Implications of Findings: The implications of this research include the need for more intensive and sustainable digital literacy training programs for Islamic Religious Education (PAI) teachers. Furthermore, improving technological infrastructure in schools is also a crucial step to support digital-based learning.

Lessons Learned: This research underscores the importance of collaboration between teachers, educational institutions, and the government in creating a learning ecosystem that supports innovation. Teachers need to be seen as strategic partners in educational transformation in the digital era.

D. Conclusion

D. This study reveals that the role of Islamic Religious Education (PAI) teachers as agents of transformation in learning innovation in the digital era is very significant in improving the quality of religious education. PAI teachers have successfully utilized various technologies, such as Learning Management Systems (LMS), interactive learning applications, and social media, to create engaging and relevant learning methods that meet students' needs. Furthermore, teachers' digital competencies are continuously improved through educational technology training, enabling them to integrate digital approaches with Islamic character building. Blended learning models, the use of interactive methods, and collaboration with parents have been shown to improve students' understanding of religious values and strengthen their implementation of these values in daily life.

Theoretically, the results of this study enrich insights into the application of technology in religious education, particularly in supporting character-based learning in the digital era. Practically, this research provides recommendations to the government and educational institutions to expand technology-based training programs for teachers and ensure the availability of adequate digital infrastructure. Furthermore, schools and parents are encouraged to collaborate more closely to support effective religious learning processes, both inside and outside the classroom, through the use of safe and appropriate digital media.

¹² Muhammad Reza Aulia Almahdi et al., "Menumbuhkan Budaya Literasi Melalui Kecakapan Digital Di Kalangan Mahasiswa Sosiologi Fakultas Ilmu Sosial Dan Humaniora UIN Sunan Kalijaga Yogyakarta," *Jurnal Ilmu Sosial Dan Humaniora (JISH)* 1, no. 1 (July 27, 2022): 83–83, <https://doi.org/10.14421/HUM.V1i1.2516>.

However, this study has limitations, particularly related to the coverage area, which does not fully represent conditions in various regions, particularly those with limited access to technology. Further research is needed with a broader approach, covering diverse regions, and focusing on developing innovative strategies to address infrastructure and digital literacy challenges. Future research could also explore the long-term impact of technology implementation on student character formation and its influence on religious teaching patterns at various levels of education.

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