

Curriculum and Methodology Innovation in Digital-based Islamic Religious Education

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ABSTRACT

The rapid advancement of digital technology in the era of Industrial Revolution 5.0 has transformed educational practices, including Islamic Religious Education (PAI). However, PAI in Madrasah Aliyah still faces challenges, such as conventional curricula, limited contextualization of Islamic values in digital realities, and insufficient pedagogical transformation despite the adoption of technology. This study aims to analyze curriculum and methodological innovations in digital-based PAI and evaluate their implications for the learning process. Using a qualitative approach, data were collected through classroom observations, interviews with teachers and students, and document analysis of digital curriculum practices. The findings reveal that integrating digital technology enhances the delivery of instructional content, broadens access to learning resources, and fosters student-centered engagement. Two innovative models—Traditional MOOCs and Gamified MOOCs—were identified as effective practices. Traditional MOOCs provide structured and in-depth reinforcement of religious knowledge, while Gamified MOOCs increase student motivation and retention through interactive and challenge-based approaches. The combination of these models contributes to more dynamic, adaptive, and participatory learning environments. Moreover, digital-based innovations strengthen students' ability to contextualize Islamic teachings within their daily digital experiences while encouraging responsible digital citizenship. This study concludes that curriculum and methodological transformation in digital-based PAI is essential for enhancing both the relevance and effectiveness of religious education in the digital age. The results provide practical recommendations for madrasahs, educators, and policymakers to design adaptive and innovative PAI curricula that harmonize Islamic values with technological development.

Keywords: Islamic Religious Education, curriculum innovation, digital learning, MOOCs, Madrasah Aliyah

1 Introduction

The development of digital technology in the era of the Industrial Revolution 5.0 has had a significant impact on the education system, including the development of the Islamic Religious Education (PAI) curriculum (Syarnubi et al., 2023). Religious education faces considerable challenges, such as the declining interest of students in religious subjects, which are often perceived as rigid and less relevant to modern life (Masruri et al., 2024). These challenges demand curriculum innovations that address contemporary needs while harmonizing Islamic values with the digital context that is deeply embedded in students' everyday lives (Moslimany et al., 2024). The PAI curriculum needs to be redesigned to be more adaptive, flexible, and technology-based, so that learning is not merely informative but also transformative.

Although digital platforms have been widely used in education, the presence of technology does not automatically transform teaching methods or paradigms (Bonfield et al., 2020). Many learning practices simply transfer conventional materials into digital formats without changing the pedagogical approach. As a result, digital learning does not significantly improve the quality of education. The use of digital

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platforms must be accompanied by a transformation in teaching methods, evaluation strategies, and a shift toward student-centered learning (Kerimbayev et al., 2023).

The implementation of the PAI curriculum in Madrasah Aliyah plays a strategic role in shaping students' character and personality in accordance with Islamic teachings (Musthova & Khalim, 2024). However, in practice, many madrasahs still apply a curriculum with a textual and normative approach, lacking emphasis on contextual and practical aspects. Learning that should connect religious values with students' real-life experiences in the digital world is often not well-developed. Therefore, Madrasah Aliyah needs to develop curriculum implementation strategies that integrate Islamic values with the needs of the digital era, such as through technology-based religious projects, online interactive discussions, or digital simulations of Islamic lifestyles.

Innovation in the curriculum and digital-based PAI teaching methodologies is crucial to be implemented in Madrasah Aliyah. This innovation is not limited to replacing learning media, but also includes transforming the curriculum content, teaching approaches, and evaluation methods to be more relevant in the digital age. Teachers are not only expected to operate technology but also to understand how to design meaningful learning that touches students' spiritual aspects through digital approaches. Moreover, student engagement in active and creative learning through digital media can enhance their understanding of Islamic teachings in a deeper and more applicable way in their daily lives.

Based on the above background, this study aims to analyze how curriculum and methodological innovations in digital-based Islamic Religious Education are implemented in Madrasah Aliyah and how they impact the learning process and outcomes. The results of this research are expected to contribute to the development of an adaptive and innovative PAI curriculum and provide practical recommendations for madrasahs, educators, and Islamic education policymakers in integrating technology effectively and with high educational value.

1.1 Problem Statement

Islamic Religious Education (PAI), particularly in Madrasah Aliyah, continues to face various challenges. Many madrasahs have not yet been able to fully utilize technology to improve the quality of PAI learning, whether in terms of curriculum, teaching methods, or student engagement. The use of digital platforms is often merely symbolic, without being accompanied by a shift in paradigm and pedagogical approach that aligns with the characteristics of effective learning. The existing PAI curriculum tends to remain conventional, lacks contextual relevance, and has not yet fully integrated Islamic values with the digital realities of students' lives. These issues highlight a gap between the potential of digital technology and the current practice of PAI instruction. Therefore, an in-depth study is needed to explore how curriculum and methodological innovations in digital-based PAI can be effectively designed and implemented in the Madrasah Aliyah environment.

2 Methodology

This study employs a qualitative approach. Data were collected through digital classroom observations, interviews with teachers and students, and analysis of digital curriculum documents. The aim is to evaluate the implementation of the curriculum and methodological innovations based on digital technology.

3 Discussion

The findings of this study indicate that the integration of digital technology into Islamic Religious Education (PAI) learning has made a positive contribution to the teaching and learning process in Madrasah Aliyah. The use of technology enriches the delivery of instructional content, enabling teachers to utilize various forms of digital media such as videos, simulations, interactive quizzes, and online discussion forums. This creates a more dynamic and engaging learning experience for students, while also increasing their motivation to understand Islamic values within the context of the digital realities they encounter in their daily lives (Muthrofin et al., 2023).

One significant finding is that access to learning materials has become broader and more flexible. Through the use of digital platforms, students are no longer confined to classroom hours or textbooks alone. They can access PAI materials anytime and anywhere, whether through websites, applications,

or social media. This ease of access allows for more personalized and self-directed learning, as students can adjust the pace of their learning according to their individual needs and interests (Jeong, 2022).

One innovation identified in this study is the implementation of MOOCs (Massive Open Online Courses) as a model for PAI learning. Two approaches were analyzed: Traditional MOOCs and Gamified MOOCs (Shah et al., 2025). Traditional MOOCs are available on global platforms such as EdX or Coursera, offering religious content in the form of digital lectures, reading materials, and online assessments. Meanwhile, Gamified MOOCs incorporate game elements into learning, as seen in local apps like Ruangguru. These platforms include animated videos, score-based quizzes, and daily challenges that enhance student enthusiasm for learning.

The implementation of both MOOC approaches demonstrates that a combination of high-quality content and interactive design can significantly transform the landscape of PAI learning (Adeyele, 2024). Traditional MOOCs are more suitable for in-depth and academic content reinforcement, while Gamified MOOCs are effective in building student engagement and retention. If applied proportionally and contextually by teachers, these two methods can serve as innovative solutions to address the needs of religious education in the digital era, while also promoting a more adaptive, participatory, and sustainable learning culture.

4 Conclusion

Based on the research findings, it can be concluded that the integration of digital technology into Islamic Religious Education (PAI) learning in Madrasah Aliyah is a strategic step in addressing the challenges of education in the digital era. The use of digital platforms has been proven to enrich teaching methods, expand access to learning materials, and enhance student participation and engagement. Effective practices were found in the implementation of MOOC-based learning models, both in the form of Traditional MOOCs through platforms such as EdX and Gamified MOOCs through applications like Ruangguru. These two approaches offer different yet complementary positive impacts. Traditional MOOCs are effective for systematically and academically deepening the material, while Gamified MOOCs are more effective in fostering learning motivation through fun, challenge-based approaches. Another positive impact is the increased ability of students to understand Islamic teachings in a contextual and practical manner, as well as the development of awareness regarding the ethical and responsible use of digital media.

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