

Implementation of the MOOC Pintar Training Platform in Improving the Pedagogical Competence of Islamic Religious Education Teachers

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Abstract

This study aims to analyze the implementation of the Massive Open Online Course (MOOC) PINTAR training platform in enhancing the pedagogical competence of Islamic Religious Education (PAI) teachers at MAN 2 Kota Semarang. The research focuses on the planning, implementation, and the supporting and inhibiting factors in the use of the MOOC PINTAR platform. Qualitative study (case study approach) was applied for this research. Data were collected through interviews, observations, and document analysis, and validated using source, technique, and time triangulation. The findings indicate that MOOC PINTAR contributes positively to the development of PAI teachers' pedagogical competence, particularly in lesson planning, the integration of technology into instruction, and learning assessment. Key supporting factors include flexible scheduling, relevant training materials, and institutional support. However, several challenges were also identified, such as limited interaction with instructors, technical barriers, and diverse yet less adaptive evaluation models. The study recommends strengthening technical assistance and digital infrastructure to enhance the effectiveness of MOOC-based training in the context of Islamic education in Indonesia.

Keywords: MOOC PINTAR; Pedagogical Competence; Islamic Education Teachers; Digital Learning

INTRODUCTION

Education plays a fundamental role in shaping competent individuals and advancing civilization. In the context of Islamic education, teachers of Islamic Religious Education (Pendidikan Agama Islam, or PAI) bear the dual responsibility of delivering subject content and instilling ethical and moral values in students (Sarjuni et al., 2023). This dual role demands a high level of pedagogical competence, especially in the digital era where teaching practices must adapt to rapid technological changes.

According to Indonesia's Law No. 20/2003 on the National Education System and Law No. 14/2005 on Teachers and Lecturers, educators are required to possess pedagogical, professional, social, and personal competencies to perform their duties effectively (Fitri, Nursikin, & Amin, 2023). However, in practice, many PAI teachers still face challenges in developing digital pedagogy due to limited training opportunities, inadequate infrastructure, and a lack of institutional support (Diana & Rodhiyana, 2023; Dewi & Rahmawati, 2024).

To address this issue, the Ministry of Religious Affairs launched the Massive Open Online Course (MOOC) platform called PINTAR (Center for Information, Training, and Learning), designed to provide flexible and accessible training for teachers, including PAI teachers, across Indonesia. MOOC PINTAR aims to strengthen pedagogical competence by delivering digital learning resources that can be accessed anytime and anywhere (Zarkasy, Chotimah, & Mahzuna, 2023).

Numerous studies have examined the implementation of MOOCs in various educational settings, such as platforms like Ruangguru and Coursera (Bahaudin, 2020). However, few have focused specifically on the implementation of MOOC PINTAR within the context of Islamic religious education in state

madrasahs. Prior research has highlighted the effectiveness of MOOCs in general teacher training, but the unique challenges faced by PAI teachers—operating under both pedagogical and religious constraints—remain underexplored.

This study aims to fill that gap by analyzing the implementation of MOOC PINTAR at MAN 2 Kota Semarang. Specifically, it investigates how MOOC PINTAR is used to improve the pedagogical competence of PAI teachers, and what supporting and inhibiting factors affect its effectiveness. By addressing these issues, this study contributes to the growing body of research on digital-based professional development for religious education teachers in Indonesia and offers recommendations for enhancing policy and practice in this area.

LITERATURE REVIEW

Pedagogical Competence in Islamic Religious Education (PAI)

Pedagogical competence refers to a teacher's ability to design, manage, and evaluate the learning process effectively. According to Indonesian Law No. 14 of 2005 on Teachers and Lecturers, educators must master four competencies: pedagogical, professional, social, and personal (Fitri, Nursikin, & Amin, 2023). Pedagogical competence includes the ability to understand students' characteristics, organize learning strategies, develop learning materials, and evaluate learning outcomes.

In the context of Islamic Religious Education (PAI), pedagogical competence carries additional responsibilities. PAI teachers are not only expected to deliver cognitive knowledge but also to serve as moral role models and spiritual guides for students. This dual role demands the integration of values-based education within pedagogical practices (Sarjuni et al., 2023). However, the shift toward digital education has created new challenges for PAI teachers, many of whom struggle to adapt their teaching strategies due to limited digital literacy and insufficient training (Diana & Rodhiyana, 2023).

MOOCs and the PINTAR Training Platform

Massive Open Online Courses (MOOCs) have become a prominent model for delivering flexible and accessible training for educators. In Indonesia, several MOOC platforms have been introduced to improve educational services, one of which is Ruangguru (Bahaudin, 2020). Specifically for teachers under the Ministry of Religious Affairs, MOOC PINTAR (Center for Information, Training, and Learning) was developed to provide large-scale online training with relevant pedagogical content.

MOOC PINTAR is designed to support teachers in improving their instructional practices by offering a variety of modules that can be accessed asynchronously. These include topics such as classroom action research, educational evaluation, and digital learning strategies. Studies have shown that MOOC PINTAR offers practical benefits for teachers, such as flexibility and relevance of content, while also facing challenges such as technical limitations and limited instructor interaction (Zarkasy, Chotimah, & Mahzuna, 2023).

Sumarsono (2021) emphasized the growing role of MOOCs in enhancing Islamic education, highlighting how digital platforms can bridge gaps in teacher competence by providing scalable and values-integrated training content. These findings are consistent with the needs of PAI teachers, who require contextually appropriate and spiritually aligned professional development programs.

Prior Research and Research Gap

Various studies have examined the implementation of MOOCs in general education settings and their potential for improving teacher competence. Bahaudin (2020) analyzed the application of MOOCs in the Ruangguru platform and found that online courses significantly contributed to enhancing educational services. Similarly, Dewi and Rahmawati (2024) explored the global impact of MOOCs, identifying key challenges such as digital infrastructure gaps and inconsistent user readiness.

However, research on MOOC PINTAR in the context of Islamic religious education, especially at state madrasahs, remains limited. Zarkasy et al. (2023) provided an overview of MOOC PINTAR's implementation but did not explore in depth the specific pedagogical outcomes among PAI teachers. Most

existing literature lacks detailed analysis of how MOOC PINTAR contributes to the improvement of pedagogical competence at the institutional level.

This study addresses that gap by investigating the application of MOOC PINTAR at MAN 2 Kota Semarang, focusing on its effectiveness in enhancing the pedagogical competence of PAI teachers. The study also examines the supporting and inhibiting factors in its implementation, offering a grounded perspective on how digital training platforms can contribute to professional development in Islamic education.

RESEARCH METHOD

Research Design

This study employed a qualitative approach with a descriptive case study design. The purpose of this design was to explore in depth the implementation of the MOOC PINTAR training platform in enhancing the pedagogical competence of Islamic Religious Education (PAI) teachers. A qualitative case study enables researchers to understand a specific phenomenon within its real-life context, particularly in educational settings.

Research Site and Participants

The research was conducted at MAN 2 Kota Semarang, a public Islamic senior high school in Central Java, Indonesia. The participants consisted of 13 PAI teachers who had completed the MOOC PINTAR training, covering subjects such as Islamic Cultural History (SKI), Fiqh, Qur'an and Hadith, and Aqidah Akhlak. In addition, one vice principal for curriculum affairs (Waka Kurikulum) was included as a supporting informant. Participants were selected based on their active involvement in the training and their willingness to participate in the study.

Data Collection Techniques

Data were collected through three primary techniques: semi-structured interviews, direct observation, and document analysis. Interviews were conducted with selected PAI teachers to gather information on their experiences, challenges, and perceived outcomes of the MOOC PINTAR training. Observations were carried out during training activities to identify patterns of participation and application of training materials. Documentation, such as training certificates, learning materials, and post-training lesson plans, was used to support the triangulation of data. The data collection was carried out between January 14–18, 2025.

Data Validation

To ensure data validity, the study employed source, technique, and time triangulation. Source triangulation involved comparing information obtained from different participants. Technique triangulation referred to the use of multiple data collection methods, while time triangulation ensured consistency of findings across different observation sessions. These triangulation strategies helped improve the credibility and reliability of the research findings.

Data Analysis Procedure

The data analysis followed the interactive model of Miles and Huberman (1994), which includes three main steps: data reduction, data display, and conclusion drawing. In the data reduction phase, the researchers selected and organized relevant data according to the research focus. Data were then displayed in descriptive formats such as narrative summaries and tables. The final step involved interpreting the meaning of the data and drawing conclusions that address the research questions.

FINDINGS AND DISCUSSION

Implementation and Pedagogical Impact of MOOC PINTAR

The MOOC PINTAR platform was implemented at MAN 2 Kota Semarang as part of a national initiative by the Ministry of Religious Affairs to improve teacher competence through flexible, large-scale digital training. The participating teachers accessed training materials independently, completing modules on pedagogical planning, instructional strategies, and digital integration.

Data collected through interviews, observations, and document analysis revealed a positive impact on several aspects of pedagogical competence. In terms of lesson planning, teachers expressed increased confidence and clarity. One teacher stated, *"After completing the training, I could prepare learning objectives and teaching steps more systematically."* This indicates that MOOC PINTAR supported structured instructional design, a core element of pedagogical competence.

The training also enhanced teachers' ability to select and apply appropriate instructional strategies. A participant explained, *"I learned how to vary methods, not just lecturing, but using videos and interactive media."* This reflects an evolution in instructional practice towards student-centered learning, aligning with the expectations of 21st-century pedagogy.

In the area of assessment, teachers reported better understanding of how to evaluate learning outcomes. As one respondent shared, *"I now use online quizzes to assess students' understanding right after a lesson."* This illustrates the integration of formative assessment tools promoted within the training modules.

The integration of digital media into teaching was the most significant impact mentioned. Teachers increasingly used technology to share materials and support learning outside the classroom. One participant explained, *"I upload materials to our class group and use video explanations so students can study at home."* These changes demonstrate the relevance of MOOC PINTAR in promoting blended learning and enhancing digital literacy.

These four pedagogical dimensions were frequently mentioned by participants during interviews. Figure 1 summarizes the number of teachers who reported improvement in each area following the MOOC PINTAR training.

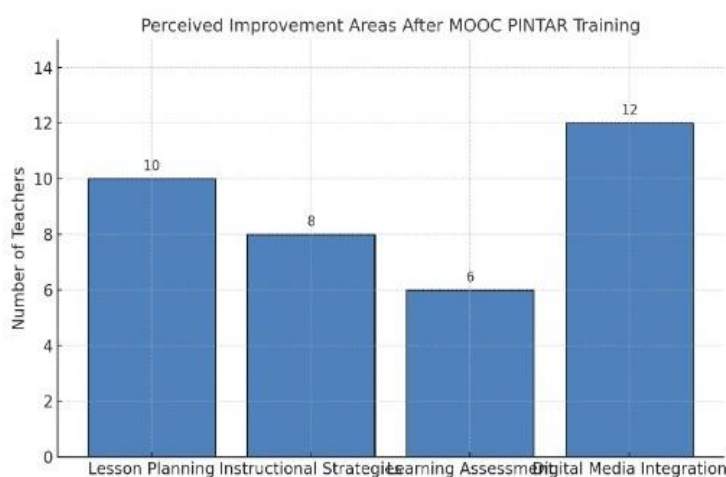


Figure 1. Teachers' perceptions of improved pedagogical competence aspects after MOOC PINTAR training.

This visual representation confirms that the training had the greatest impact on digital media integration and lesson planning. These findings align with the results of Zarkasy et al. (2023), who noted that contextualized digital training can significantly enhance instructional readiness among Islamic school teachers. Moreover, the outcomes support the national pedagogical competency framework (Fitri,

Nursikin, & Amin, 2023), and show that MOOC-based training platforms like PINTAR are effective tools for professional development in Islamic education.

Supporting and Inhibiting Factors in Implementation

The success of MOOC PINTAR was influenced by both supporting and inhibiting factors. Among the supporting factors, flexibility was the most frequently mentioned. Teachers appreciated the ability to learn at their own pace. One teacher shared, *"It was helpful that I could study at night, after school hours."* This flexibility was essential for balancing professional duties and personal development.

Relevant and contextual training content also encouraged participation. Materials that reflected classroom realities were seen as useful. A respondent said, *"The examples used in the modules matched the situations we face in madrasahs."* Such contextualization increased the perceived value of the training.

Institutional support further enabled smooth implementation. The head of curriculum affairs confirmed, *"We encouraged teachers to join the training and gave time during working hours if needed."* This reflects an organizational culture that values continuous professional development.

However, several inhibiting factors were identified. Technical issues, particularly internet access, were major obstacles. As one teacher stated, *"Sometimes the connection failed when I was watching a video or uploading assignments."* These limitations reduced learning efficiency and caused delays in task completion.

Another challenge was the lack of direct instructor interaction. Although materials were well-prepared, teachers sometimes needed clarification. A participant explained, *"I wanted to ask questions, but there was no live session or forum."* This highlights the need for hybrid models that combine asynchronous and synchronous elements.

Furthermore, the evaluation system was perceived as too uniform. Some respondents felt the quizzes and assessments did not fully reflect the depth of their understanding. *"The same test was given regardless of our background. It felt too general,"* said one teacher.

These findings echo challenges reported by Dewi and Rahmawati (2024), who noted that digital professional development in Indonesia often struggles with infrastructure and personalization. Nonetheless, the overall experience was constructive, and most teachers recommended continuing and expanding the program.

CONCLUSION

This study explored the implementation of the MOOC PINTAR training platform and its impact on the pedagogical competence of Islamic Religious Education (PAI) teachers at MAN 2 Kota Semarang. The findings revealed that MOOC PINTAR contributed meaningfully to the improvement of four key pedagogical domains: lesson planning, instructional strategies, learning assessment, and digital media integration. Among these, the integration of digital media emerged as the most significant area of perceived growth.

The training's asynchronous and flexible format allowed teachers to participate without disrupting their teaching responsibilities, while contextualized content increased relevance and engagement. Despite these strengths, several challenges were identified, including limited internet access, the absence of direct instructor interaction, and uniform evaluation formats. These factors suggest that the effectiveness of digital training platforms depends not only on content quality, but also on technological infrastructure and instructional design.

Overall, MOOC PINTAR demonstrated its potential as a scalable and practical solution for professional development in Islamic education settings. Its effectiveness in enhancing pedagogical competence underscores the importance of continued investment in accessible, context-sensitive, and digitally supported teacher training programs. Future initiatives may benefit from hybrid models that combine self-paced learning with real-time guidance to address limitations observed in this study.

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