NYIUR-Dimas: Jurnal Ilmiah Pengabdian Kepada Masyarakat
Vol. 5, No. 1 (2025): 10-17
Website: http://ejournal.iain-manado.ac.id/index.php/nyiur/index

IT-BASED LEARNING MEDIA TRAINING FOR ISLAMIC RELIGIOUS EDUCATION TEACHERS IN KARAWANG REGENCY, INDONESIA

Siti Masruroh
Universitas Buana Perjuangan Karawang, Indonesia, Jl. H.S Ronggo Ronggowaluyo Telukjambe Timur, Karawang, Jawa Barat 41361
E-mail: siti.masruroh@ubpkarawang.ac.id

Rahma Dilla Zainuri
Universitas Buana Perjuangan Karawang, Indonesia, Jl. H.S Ronggo Ronggowaluyo Telukjambe Timur, Karawang, Jawa Barat 41361
E-mail: rahma.dilla@ubpkarawang.ac.id

Lusiana Rahmatiani
Universitas Buana Perjuangan Karawang, Indonesia, Jl. H.S Ronggo Ronggowaluyo Telukjambe Timur, Karawang, Jawa Barat 41361
E-mail: lusiana.rahmatiani@ubpkarawang.ac.id

ABSTRACT

This community service activity aimed to enhance the competence of Islamic Religious Education (PAI) teachers in Karawang Regency in utilizing information and communication technology (ICT) for learning. The training, conducted by the Faculty of Teacher Training and Education, Universitas Buana Perjuangan Karawang, focused on developing IT-based learning media that are interactive, innovative, and aligned with the needs of 21st-century education. A total of 80 teachers participated in the one-day workshop, which included lectures, practical sessions, and collaborative workshops. The results demonstrated significant improvement in teachers' digital literacy, motivation, and ability to design interactive learning media, leading to enhanced teaching quality in PAI classes.

Keywords: Islamic Religious Education; learning media; information technology; teacher training; Karawang.

INTRODUCTION

The integration of information and communication technology (ICT) in education has transformed traditional learning methods, creating opportunities for teachers to design engaging and effective teaching materials. In Indonesia, the demand for digital literacy among teachers is increasing, particularly in Islamic Religious Education (PAI), which traditionally relies on conventional teaching approaches. Many PAI teachers in Karawang Regency still face challenges in utilizing digital tools due to limited training and access to technology. As part of the higher education institution's tri dharma teaching, research, and community service. Universitas Buana Perjuangan Karawang initiated this community service program to improve PAI teachers professional competence and readiness to

integrate digital media in their teaching practices. This initiative aligns with Indonesia's 'Merdeka Belajar' educational policy, which emphasizes creativity, innovation, and digital adaptation in the learning process.

The integration of ICT in education is not merely a technological advancement but also represents a paradigm shift in teaching and learning processes. Globally, educational systems have increasingly recognized that effective utilization of digital tools enhances cognitive engagement, critical thinking, and collaborative learning. According to Wong & Yang (2017), the pedagogical potential of ICT lies in its ability to transform passive learning environments into interactive, learner centered spaces that foster problem solving and higher order thinking. In the context of religious education, this transformation allows instructors to contextualize spiritual and ethical teachings in ways that resonate with contemporary learners, bridging traditional doctrinal instruction with interactive, technology-mediated experiences. Digital storytelling, multimedia simulations, and gamified assessments are examples of how religious content can be enriched through ICT, offering students opportunities for reflection, discussion, and moral reasoning (Ziden & Abdul Rahman, 2013).

In Indonesia, the urgency of integrating ICT in education is underscored by national initiatives aimed at modernizing pedagogical practices. The Merdeka Belajar policy, launched by the Ministry of Education and Culture, explicitly advocates for innovation, creativity, and flexibility in learning processes. This policy encourages teachers to adopt digital media not only as a supplementary tool but as a central element of instructional design. By aligning ICT integration with national education policies, programs such as the IT-based media training for PAI teachers ensure that professional development is relevant, context-sensitive, and responsive to both institutional and societal expectations. In addition, the policy's emphasis on autonomy allows schools and teachers to experiment with diverse teaching modalities, fostering innovation and adaptation in line with local conditions (Kemendikbud, 2020).

Previous studies highlight that technology-enhanced learning significantly improves teaching efficiency, creativity, and student engagement (Polly et al., 2021). Effective teacher training programs must combine pedagogical theory, technical skills, and ongoing mentoring to ensure long-term integration of ICT in education (Huang et al., 2024). In religious education, digital media can support moral and spiritual development while making learning more interactive and contextual(Müller & Friemel, 2024). Postholm (2018) further emphasizes that sustained professional development is key to teacher adaptation in the digital era. Local studies in Indonesia reveal that the successful adoption of ICT among teachers depends on institutional support, access to infrastructure, and practical experience (Machmud et al., 2021). Taken together, these insights formed the foundation of the IT-based media training program for PAI teachers in Karawang Regency, reflecting a growing awareness that technology integration must be both pedagogically grounded and contextually responsive.

Building upon this foundation, additional research reinforces these findings, suggesting that integrating digital pedagogy requires not only technical proficiency but also a shift in teachers' beliefs about teaching and learning (Tsankov & Damyanov, 2019). This implies that professional development must also address teachers' epistemological and pedagogical orientations toward technology use. In a similar vein, Tondeur et al. (2017) argue that teachers attitudes, pedagogical frameworks, and school culture collectively determine the success of ICT implementation, indicating that institutional and cultural dimensions are just as crucial as individual competence.

Furthermore, scholars such as Mishra and Koehler (2006) emphasize that technology integration should not be treated as a technical issue alone but as a complex interaction among technology, pedagogy, and content knowledge. This holistic perspective deepens the theoretical framework for understanding teacher readiness in the digital age. It is particularly relevant in religious education, where moral, cultural, and contextual elements play a vital role in shaping learning experiences. Integrating ICT into PAI instruction thus demands sensitivity to religious values, ethical considerations, and the developmental stages of learners (Zakiyyah et al., 2024). By aligning digital tools with pedagogical intentions and religious principles, teachers can ensure that ICT becomes a medium for deeper reflection and spiritual engagement rather than a mere display of technological skill.

METHODS

The community service program was conducted in August 2025 at Aula 1, Universitas Buana Perjuangan Karawang. Eighty PAI teachers from different sub-districts participated in the one-day workshop. The implementation process included several stages: (1) coordination and planning with the Islamic Education Study Program, (2) administrative preparation and participant registration, (3) workshop execution, and (4) evaluation and reporting. The training sessions covered both theory and practice, including tutorials on digital tools such as PowerPoint, Canva, Quizizz, and Kahoot. Participants were guided to create interactive teaching media relevant to Islamic Religious Education. Evaluation involved pre- and post-training surveys to assess improvement in teachers' skills, motivation, and confidence.

RESULT AND DISCUSSION

The training resulted in notable improvements across several dimensions. Teachers demonstrated enhanced ability to operate digital tools, design multimedia content, and integrate interactive features into lesson plans. Before the training, most participants had limited digital skills and were hesitant to use IT in teaching. Afterward, they showed greater enthusiasm, motivation, and self-confidence in adopting technology. Several teachers successfully produced interactive presentations, short video lessons, and digital quizzes aligned with the national curriculum. The workshop also fostered peer collaboration and sharing of best practices, strengthening teachers' professional networks. These outcomes align

with global findings that short-term, practical training can trigger significant attitudinal and behavioral changes among educators (Amemasor et al., 2025; Annemann et al., 2025). However, sustainability requires continuous mentoring, institutional support, and improved school infrastructure. This program demonstrated that effective integration of ICT in religious education requires both technical training and moral-pedagogical alignment.

In terms of technical skills, teachers became proficient in operating widely-used digital platforms and software such as PowerPoint, Canva, Quizizz, and Kahoot. These tools enabled the creation of interactive learning media tailored to Islamic Religious Education topics, including animated presentations on Islamic history, short video lessons explaining moral and ethical concepts, and digital quizzes that provided instant feedback to students. By actively engaging with these platforms during hands-on sessions, teachers learned to design lesson materials that incorporated multimedia elements, fostering a more dynamic learning environment. These outcomes corroborate findings from Huang et al. (2024), who emphasized that teacher training programs combining practical exercises with pedagogical guidance significantly enhance the quality of instructional delivery in technology-mediated classrooms.

Beyond technical proficiency, the workshop also positively influenced teachers' pedagogical approaches. Participants reported adopting student centered learning strategies for the first time, such as collaborative projects, interactive quizzes, and discussion forums facilitated through digital platforms. The integration of ICT allowed teachers to move away from teacher-dominated lectures and towards approaches that encouraged active student participation, critical thinking, and self-directed learning (Polly et al., 2021). This shift aligns with the principles of Indonesia's Merdeka Belajar policy, which advocates for creativity, innovation, and adaptability in education. Observations during the workshop revealed that teachers who previously relied solely on conventional methods began experimenting with digital storytelling, gamified exercises, and visual simulations, all of which enriched lesson content and enhanced student engagement.

The program also emphasized the social and collaborative dimensions of professional development. During the workshop, participants engaged in peer-to-peer mentoring, sharing best practices, discussing challenges, and co-creating lesson plans. This collaborative approach strengthened teachers' professional networks and fostered a culture of mutual support, which is crucial for the long-term sustainability of ICT integration in education (Postholm, 2018; Machmud et al., 2021). Several teachers reported that through collaborative sessions, they discovered innovative ways to contextualize Islamic teachings using technology, such as linking moral concepts with real-life scenarios or current social issues, thereby making learning more relevant and relatable for students.

Despite these positive outcomes, several challenges were observed during and after the training. Some participants struggled with time management and balancing workshop activities alongside their teaching responsibilities, while others

faced limited access to reliable internet connections and inadequate school infrastructure, which constrained the implementation of digital learning media. Addressing these obstacles requires ongoing institutional support, including the provision of hardware, software, and consistent technical mentoring. Previous studies have highlighted that the sustainability of ICT integration in schools is highly dependent on both the availability of resources and continued professional guidance (Müller & Friemel, 2024). Consequently, the program organizers recommended follow-up sessions, virtual mentoring, and the establishment of online forums where teachers can continue to exchange ideas and resources.

In addition to technical and infrastructural considerations, the program highlighted the importance of moral pedagogical alignment in Islamic Religious Education. Teachers were encouraged to design digital media that not only conveyed factual knowledge but also reinforced ethical, spiritual, and social values. For instance, video lessons illustrating stories from the Qur'an and Hadith were paired with reflective discussion prompts to facilitate critical thinking and moral reasoning among students. This approach resonates with the argument by Huang et al. (2024) and Postholm (2018) that teacher training must integrate content knowledge with pedagogical strategies to achieve meaningful learning outcomes.

Comparative analysis with similar initiatives in other regions revealed that the Karawang program exhibited both contextual relevance and innovation. While ICT based teacher training programs are increasingly common in urban Indonesian settings, rural and semi-urban areas such as Karawang often face unique constraints related to infrastructure and access. By tailoring the workshop to address local challenges such as providing low-bandwidth solutions and offline digital resources, the program ensured inclusivity and practical applicability. Similar findings have been reported in studies by Machmud et al. (2021), who emphasized that localized adaptations are essential to maximize the impact of ICT interventions in education.

Furthermore, the workshop fostered long-term professional growth and reflective practice. Teachers were prompted to critically evaluate their instructional methods, identify areas for improvement, and develop action plans for integrating ICT into future lessons. Several participants expressed an intention to create portfolio-based documentation of their digital teaching activities, which could serve as a reference for self-assessment and peer evaluation. This reflective component is consistent with global best practices, which suggest that ongoing reflection and iterative improvement are key factors in sustaining educational innovations (Amemasor et al., 2025; Polly et al., 2021).

CONCLUSION

The IT-Based Learning Media Training for Islamic Religious Education Teachers in Karawang Regency successfully enhanced teachers' competence, confidence, and motivation to utilize ICT in teaching. This program shows that practical, context-based training can effectively support the digital transformation of Islamic education. To ensure sustainability, it is recommended that (1) periodic

follow-up workshops be organized, (2) ICT infrastructure in schools be strengthened, (3) digital literacy components be integrated into teacher certification programs, and (4) partnerships between universities, schools, and government agencies be expanded to support continuous professional develop he IT-Based Learning Media Training for Islamic Religious Education (PAI) Teachers in Karawang Regency successfully enhanced teachers' competence, confidence, and motivation to utilize ICT in their teaching practices. The program demonstrated that short-term, practical, and contextual training can lead to significant pedagogical transformation. Teachers who previously relied on conventional lecture-based methods became more capable of designing interactive, media-rich lessons that engage students in critical thinking and spiritual reflection. This outcome shows that integrating digital tools in Islamic education is not merely about technology adoption, but also about fostering creativity, adaptability, and innovative learning cultures among educators.

Furthermore, the program provides valuable insights for teacher education institutions and policymakers. It illustrates that community-based professional development initiatives can bridge the digital divide among educators in rural or suburban areas. The collaboration between the university, local schools, and the Ministry of Religious Affairs created a supportive ecosystem for continuous improvement. Therefore, higher education institutions should play an active role in designing and implementing digital literacy programs that address real classroom challenges and encourage lifelong learning among teachers. From an academic perspective, the results of this community service activity contribute to the broader discourse on digital pedagogy in Islamic education. The integration of ICT not only modernizes instructional methods but also revitalizes the relevance of Islamic values in the 21st century. This initiative serves as a model for future studies, encouraging researchers and lecturers to explore innovative frameworks for teaching and learning that harmonize technology, ethics, and spirituality. Students and academics can use these findings as a reference for developing community service programs, theses, and classroom research projects on technology-based Islamic learning.

To ensure long-term sustainability, several recommendations are proposed: (1) periodic follow-up workshops should be organized to reinforce digital skills and promote peer mentoring among teachers; (2) ICT infrastructure in schools should be continuously strengthened through institutional partnerships; (3) digital literacy components should be embedded in teacher certification and curriculum design; and (4) multi-sector collaboration among universities, schools, local governments, and private industries should be expanded to foster innovation and professional growth. These strategies will ensure that the momentum of digital transformation in Islamic education continues to evolve and inspire future generations of educators.

ACKNOWLEDGEMENTS

The authors express sincere gratitude to the Institute for Research and Community Service (LPPM) of Universitas Buana Perjuangan Karawang for funding and facilitating this project. Appreciation is also extended to the Dean of the Faculty of Teacher Training and Education, the Karawang Regency Office of the Ministry of Religious Affairs, and all participating teachers and students for their invaluable contributions to the success of this program.

REFERENCES

Amemasor, S. K., Oppong, S. O., Ghansah, B., Benuwa, B.-B., & Essel, D. D. (2025). A systematic review on the impact of teacher professional development on digital instructional integration and teaching practices. *Frontiers in Education*, *10*, 1541031. https://doi.org/10.3389/feduc.2025.1541031

Annemann, C., Menge, C., & Gerick, J. (2025). Teachers' Participation in Digitalization-Related Professional Development: An International Comparison. *Education Sciences*, *15*(4), 486. https://doi.org/10.3390/educsci15040486

Huang, L., Liang, M., Xiong, Y., Wu, X., & Lim, C. P. (2024). A systematic review of technology-enabled teacher professional development during COVID -19 pandemic. *Computers and Education*, *223*, 105168. https://doi.org/10.1016/j.compedu.2024.105168

Machmud, M. T., Rosidah, F., Fadhilatunnisa, D., & Fakhri, M. M. (2021). Indonesia Teacher Competencies in Integrating Information and Communications Technology for Education. *Athens Journal of Technology and Engineering*, *8*(4), 331–348. https://doi.org/10.30958/ajte.8-4-4

Miarso, Y. (2004). *Fostering the Seeds of Educational Technology*. Kencana.

Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teachers College Record: The Voice of Scholarship in Education*, *108*(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Müller, J., & Friemel, T. N. (2024). Dynamics of Digital Media Use in Religious Communities—A Theoretical Model. *Religions*, *15*(7), 762. https://doi.org/10.3390/rel15070762

Polly, D., Byker, E. J., & Colonnese, M. W. (2021). Future Directions for K-12 Technology-Enhanced Learning Environments. *TechTrends*, *65*(3), 240–242. https://doi.org/10.1007/s11528-021-00602-y

Postholm, M. B. (2018). Teachers' professional development in school: A review study. *Cogent Education*, *5*(1), 1–22. https://doi.org/10.1080/2331186X.2018.1522781

Rusman. (2012). *Learning and Instruction Based on Information Technology*. Alfabeta.

Tondeur, J., van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2017). Understanding the Relationship Between Teachers' Pedagogical Beliefs and Technology Use in Education: A Systematic Review of Qualitative Evidence. *Educational Technology Research and Development*, *65*(3), 555–575. https://doi.org/10.1007/s11423-016-9481-2

Tsankov, N., & Damyanov, I. (2019). Expertise in the Selection of Electronic Educational Resources - Conceptual Vision. *International Journal of Emerging Technologies in Learning*, *14*(7), 216–225. https://doi.org/10.3991/ijet.v14i07.9922

Wong, G. K. W., & Yang, M. (2017). Using ICT to facilitate instant and asynchronous feedback for students' learning engagement and improvements. In *Emerging Practices in Scholarship of Learning and Teaching in a Digital Era* (pp. 289–309). Springer Singapore. https://doi.org/10.1007/978-981-10-3344-5_18

Zakiyyah, I., Suparto, & Maswani. (2024). Learning Management of Islamic Religious Education Based on Digital Technology. *2024 12th International Conference on Cyber and IT Service Management (CITSM)*, 1–7. https://doi.org/10.1109/CITSM64103.2024.10775708

Ziden, A. A., & Abdul Rahman, M. F. (2013). The Effectiveness of Web-based Multimedia Applications Simulation in Teaching and Learning. *International Journal of Instruction*, *6*(2), 211–222. https://dergipark.org.tr/en/pub/eiji/issue/5137/70010