

Bridging Awareness and Adoption: Empowering Bantul Educators to Integrate AI Learning Platforms in Classroom Practice

Roni Faslah^{1,*}, Ervina Maulida^{2*}, Henry Eryanto³, Rr. Sri Kartikowati⁴, Adin Nur Rahman⁵, Cherry Pramudhita Artanti⁶, Noor Adila Binti Abd. Raub⁷

¹ Office Administration Education, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

² Office Administration Education, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

³ Office Administration Education, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

⁴ Office Administration Education, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

⁵ Office Administration Education, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

⁶ Office Administration Education, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

⁷ Faculty of Business and Management, Universiti Teknologi Mara, Malaysia

* Corresponding Author: ronifaslah@unj.ac.id and ervinamaulida@unj.ac.id

Abstract.

This study describes a community engagement initiative aimed at empowering teachers at SMP Negeri 3 Imogiri Bantul to integrate AI-powered learning media into classroom instruction. The program addressed challenges of limited confidence and minimal prior experience with platforms such as Eduaide and Magic School. Using a four-stage participatory approach, preparation, training, implementation, and evaluation, educators were guided through defining learning objectives, developing digital materials, and reflecting on their progress.

Pre-test assessments showed that 87.5% of teachers had never used AI tools, and only 12.5% felt very confident in creating digital resources. Following the intervention, all participants successfully produced AI-assisted learning materials, and 37.5% reported feeling very confident. Teachers demonstrated high engagement and expressed enthusiasm for exploring additional tools like Gimkit, underscoring the importance of flexible, responsive facilitation.

The findings highlight that structured, hands-on training combined with collaborative mentoring can effectively bridge the gap between awareness and adoption of innovative technologies. This approach not only increased practical skills but also fostered a sense of ownership and readiness to sustain change. The outcomes offer valuable insights for scaling similar programs to advance inclusive, high-quality education aligned with Sustainable Development Goal 4.

Keywords: *Artificial Intelligence in Education; Teacher capacity Building; digital learning media; Community Service; SDG 4*

I. INTRODUCTION

The integration of Artificial Intelligence (AI) into educational practices has emerged as a transformative approach to enhance teaching effectiveness and foster student engagement (Zawacki-Richter, Marín, Bond, & Gouverneur, 2019). Awareness of artificial intelligence (AI) technologies among educators is pivotal for successful integration into the classroom. Research by

Aghaziarati et al. (2023) highlights the correlation between teachers' awareness of AI and their attitudes towards its adoption in educational settings. Enhancing educators' perceptions of AI can lead to a more positive disposition towards its integration, emphasizing the need for ongoing professional development programs that convey the value and functionalities of AI tools in teaching and learning environments.

Similarly, Bali (2024) analysis reveals that despite the potential of various AI systems, barriers such as limited internet access and lack of training play significant roles in inhibiting adoption among educators. Therefore, developing tailored training programs that focus on both the technical skills necessary for using AI and increasing awareness of its pedagogical advantages is essential for empowering educators. Moreover, AI-powered platforms are also found to allow educators to create interactive quizzes, digital narratives, and personalized learning materials that adapt to diverse learner needs. These innovations align with Sustainable Development Goal 4 (SDG 4), which emphasizes inclusive and equitable quality education for all.

Recent studies have underscored the importance of building teachers' digital competencies as a prerequisite for successful AI adoption in classrooms (Svoboda, 2024). Empirical evidence shows that when teachers receive structured training and mentoring on AI-based tools, their confidence and willingness to implement such resources significantly improve (Sánchez-Prieto, Olmos-Migueláñez, & García-Peñalvo, 2019). However, research also highlights persistent gaps, especially in rural and semi-urban schools where access to training and technological infrastructure remains limited (Pedro, et.al., 2019). These challenges are evident in SMP Negeri 3 Imogiri Bantul, where diagnostic surveys revealed that while teachers are aware of AI platforms, they report only moderate confidence and minimal experience in applying them in practice.

This study is original in its focus on teachers from a public junior high school in Bantul, a context that has been underrepresented in previous AI-in-education research in Indonesia. Unlike most existing studies, which primarily examine higher education institutions or urban schools, this research highlights the unique barriers and opportunities encountered in a semi-rural setting. The objectives are to explore teachers' perceptions and readiness to adopt AI tools, identify their needs, and do capacity-building interventions tailored to local conditions. The program directly addresses real challenges faced by educators, including limited professional development opportunities, minimal exposure to AI-enabled platforms, and uncertainty about integrating technology into relevant pedagogy. Community participation is central to this initiative: teachers are engaged not only as participants but also as co-creators in designing learning content. Through workshop and feedback, educators actively contribute to shaping materials and strategies that reflect their needs and classroom realities. This participatory approach is designed to foster a sense of ownership, ensure sustainability, and create long-term impact by equipping teachers to leverage AI in ways that enhance learning outcomes and reduce educational disparities.

II. METHODS

This community service program was designed to address the low levels of confidence and limited experience among teachers in integrating AI-powered learning platforms into their instructional practices. The activity was carried out on May 20, 2025, at SMP Negeri 3 Imogiri Bantul, Yogyakarta, Indonesia, with the preparation, implementation, and evaluation process spanning approximately six weeks. The initiative aimed to empower educators to adopt Eduaide

and Magic School as tools to develop innovative digital learning materials, in alignment with Sustainable Development Goal 4 (SDG 4) on quality education. The community service team developed a four-stage participatory intervention process: preparation and socialization, workshop training, implementation, and evaluation and reflection. The program design followed principles of participatory action research to ensure the activities were contextually relevant and fostered a sense of ownership among participants. During the preparation and socialization phase, coordination meetings were held with the school principal, representatives of the teaching staff, and a district education officer to establish objectives, expectations, and mutual responsibilities. A formal collaboration agreement was signed outlining the provision of facilities by the school, including classroom space, internet access, and basic IT support. The university team committed to delivering the training materials, supplying mentors, and conducting the evaluation process.

For the implementation, the participants in this community service consisted of teachers from grades 7 and 8 at SMP Negeri 3 Imogiri Bantul. A purposive sampling approach was used, as all members of the target group were considered essential to achieving the research objectives of school-wide capacity building. Participation was voluntary, and informed consent was obtained from all individuals involved. Data collection techniques included the administration of pre- and post-tests, structured observations, and reflective discussions. The AI-driven workshop training involved a live demonstration of Eduaide and Magic School, showing how these platforms could be used to design adaptive quizzes and interactive learning resources. This demonstration was followed by hands-on practice sessions or implementation during which participants developed their own digital materials with support and guidance from instructors.

For evaluation and reflection we used quantitative data from the pre- and post-tests that were analyzed descriptively by calculating the percentage of participants selecting each response category to show shifts in confidence and familiarity. While qualitative data were documented through observation notes and participants' informal reflections, which were summarized descriptively to illustrate perceptions of the training experience. All procedures were conducted in accordance with ethical standards, including anonymization of participant data, transparency of objectives, and the assurance that participation was voluntary with the right to withdraw at any time. Through this comprehensive methodology, the program was designed to respond directly to the documented challenges and to foster the skills and mindsets necessary for effective integration of AI learning platforms into classroom practice.

III. RESULT AND DISCUSSION

The community empowerment program implemented at SMP Negeri 3 Imogiri Bantul achieved the intended objectives of improving teachers' confidence, familiarity, and readiness to integrate AI-powered learning media into classroom practice. Before the intervention, the majority of participants demonstrated limited practical experience with Eduaide and Magic School and expressed only moderate levels of confidence. Specifically, as summarized in Table 1, reflected that only 50% of teachers initially rated themselves as *Quite Confident*, 37.5% as *Less Confident*, and only 12.5% as *Very Confident*. No participants reported feeling *Not Confident at All*. Prior to implementation, 87.5% of teachers indicated they had never used AI platforms to support teaching and learning. Responses captured in the pre-test word cloud included expressions such as "not yet," "oh, not yet sir," and "noooooo yet," demonstrating a clear gap between awareness and adoption.

Table 1. Self-Reported Confidence Levels Before the Program

Confidence Level	Percentage (%)
Not Confident at All	0
Less Confident	37.5
Quite Confident	50
Very Confident	12.5

Source: Authors (2025)

During the implementation phase, teachers were guided step by step to first define their learning objectives before creating digital media, ensuring alignment between the instructional goals and the resources produced. Although the training initially focused on Eduaide and Magic School, teachers were encouraged to select topics and types of media most relevant to their classrooms. Several participants experimented with Tic-Tac-Toe games, which were unfamiliar to many but were successfully created during the hands-on session. An important observation was the spontaneous interest expressed by teachers in Gimkit, an additional platform that was not part of the original workshop plan. When participants asked about Gimkit, the facilitator provided an impromptu demonstration and guided teachers in exploring its features. This adaptive response was welcomed enthusiastically, and several teachers indicated their intention to use Gimkit in future lessons. Overall, participants followed all steps attentively, demonstrated high engagement, and appreciated the flexibility to explore diverse forms of AI-powered learning media.

After the structured workshop, there was an increase in teachers rating themselves as *Very Confident* in developing digital materials, rising from 12.5% before the program to 37.5% afterward. This shift highlights the effectiveness of providing hands-on practice and sustained support rather than relying solely on theoretical presentations. Previous studies have shown that confidence and perceived self-efficacy are essential predictors of educators' willingness to adopt AI and other educational technologies (Sánchez-Prieto, Olmos-Migueláñez, & García-Peñalvo, 2019). The results of this community service program demonstrate a clear and measurable improvement in teachers' confidence, familiarity, and readiness to integrate AI-powered learning tools into their teaching practice. Before the intervention, the majority of participants had no practical experience with Eduaide or Magic School and only moderate levels of confidence. This initial situation reflected a gap between awareness and actual implementation, which is a common challenge in technology adoption in educational contexts, especially in semi-rural schools (Zawacki-Richter, Marín, Bond, & Gouverneur, 2019).



Figure 1. Teachers Participating in the Workshop

Source: Authors (2025)

These findings offer several new perspectives. First and a notable finding in this program was the role of flexibility and responsiveness in fostering engagement. Allowing teachers to select their own topics and media types increased ownership and relevance. This is consistent with Luckin and Holmes (2016), who noted that professional development must be adaptive to teachers' contexts and needs to be effective. The process of first defining learning objectives before creating media helped participants see how AI tools could integrate meaningfully with their existing curriculum, supporting perceptions of practical utility and reducing anxiety about complexity (Holmes, Bialik, & Fadel, 2019). Community participation was not passive but active and adaptive. The spontaneous interest in Gimkit, which was not planned in the initial curriculum, shows that teachers were motivated to explore additional innovations. When facilitators demonstrated Gimkit in response to participant questions, it created a dynamic learning atmosphere where emerging needs were addressed collaboratively. This participatory approach reflects the perspective that sustainable innovation in education is built on co-creation and peer learning (Zawacki-Richter et al., 2019).



Figure 2. Workshop Session with Instructors and Participants

Source: Authors (2025)

Second, the combination of live demonstrations, guided practice, and collaborative workshops proved essential to transforming initial curiosity into real capability. Teachers commented that the process was “*practical,*” “*easy to understand,*” and “*encouraging,*” suggesting that structured, supportive learning environments help overcome perceptions that AI tools are too complex or intimidating. These experiences reinforce that community empowerment requires more than content delivery. It demands an approach responsive to participants’ interests, supportive of diverse skill levels, and grounded in real classroom applications. When teachers are engaged as partners in the learning process, they are more likely to adopt and sustain innovative practices. As recent reviews suggest, AI adoption is most successful when accompanied by a clear sense of purpose, opportunities for experimentation, and ongoing access to supportive networks (Zhao, et. al., 2025).

Lastly, the adoption of AI-generated media indicates that community empowerment is not limited to technical skills but also involves shifting mindsets and building confidence. Community participation played a significant role in the success of this program. Teachers were not merely passive recipients of training but were actively involved in creating content, exchanging ideas, and reflecting on their progress. Importantly, the analysis of pre- and post-intervention conditions confirms that targeted interventions can rapidly accelerate adoption of digital innovations even among educators with minimal prior exposure. While some teachers still expressed a desire for additional mentoring and follow-up support, the overall shift in confidence and competence represents a significant and original contribution to community capacity building. These results suggest that similar approaches could be scaled to other schools facing comparable challenges, with an emphasis on sustained mentoring, collaborative resource development, and practical demonstrations. The program demonstrates that when teachers are empowered to co-create and share digital content, they are more likely to adopt and sustain innovative practices in the long term. Overall, the program provided evidence that targeted, adaptive professional development can bridge the gap between awareness and confident use of AI learning media, even among educators with

little prior exposure. The positive reception, high engagement, and successful creation of instructional materials suggest this approach could be replicated and scaled to other schools with similar challenges.

IV. CONCLUSION

This community empowerment program successfully improved teachers' confidence, skills, and readiness to integrate AI-powered learning media in SMP Negeri 3 Imogiri Bantul. Before the intervention, most participants had limited experience with Eduaide and Magic School and expressed only moderate confidence in creating digital resources. By the end of the program, all teachers had produced at least one AI-generated instructional material, with a notable increase in self-reported confidence levels. The main impact of this initiative was the transformation of teachers' perceptions from uncertainty to proactive interest in exploring digital tools, including additional platforms like Gimkit that were not originally part of the training. The benefits extended beyond technical skill development to include stronger motivation, increased professional collaboration, and a clearer understanding of how AI can be integrated into everyday teaching practices. The program also introduced a structured training model that combines live demonstrations, guided practice, and responsive discussion tailored to participants' real classroom needs. This approach can serve as a practical method for similar capacity-building efforts in other schools.

For future community empowerment programs, it is recommended to provide sustained mentoring support, establish resource-sharing platforms, and incorporate flexible content that adapts to emerging participant interests. Additionally, involving teachers as co-creators and decision-makers throughout the process will further enhance ownership and sustainability. This activity offers a new practical model for AI-focused teacher training that is grounded in participatory learning and immediate application. The structured combination of learning objectives mapping, demonstration, and hands-on practice can be adapted as a principle or method to accelerate the adoption of digital innovations in education, particularly in contexts where initial exposure and confidence are limited. In conclusion, this community empowerment program demonstrated that even short-term, participatory interventions can produce meaningful pedagogical change when teachers receive structured guidance and practical support. Empowering teachers to integrate AI tools not only improves the quality of learning but also contributes to achieving Sustainable Development Goal 4 on inclusive and equitable quality education.

V. ACKNOWLEDGMENTS

The authors wish to express their gratitude to the principal, teachers, and staff of SMP Negeri 3 Imogiri Bantul for their active participation, cooperation, and enthusiasm during the implementation of this community empowerment program. Special appreciation is extended to the Village Head of Wukirsari and the Regent of Bantul for their support and encouragement provided throughout the implementation of this community empowerment program. This study received a grant in 2025 from the Faculty of Economics and Business, Universitas Negeri Jakarta, which supported the preparation, implementation, and evaluation of the activities. The authors declare that there are no conflicts of interest regarding financial, commercial, legal, or professional relationships with other organizations or individuals involved in this community service and its publication.

REFERENCES

- Aghaziarati, A., Nejatifar, S., & Abedi, A. (2023). Artificial intelligence in education: investigating teacher attitudes. *AI and Tech in Behavioral and Social Sciences*, 1(1), 35-42.
- Bali, B., Garba, E. J., Ahmadu, A. S., Takwate, K. T., & Malgwi, Y. M. (2024). Analysis of emerging trends in artificial intelligence for education in Nigeria. *Discover Artificial Intelligence*, 4(1), 110.
- Holmes, W., Bialik, M., & Fadel, C. (2019). Artificial intelligence in education promises and implications for teaching and learning. Center for Curriculum Redesign.
- Luckin, R., & Holmes, W. (2016). Intelligence unleashed: An argument for AI in education.
- Pedro, F., Subosa, M., Rivas, A., & Valverde, P. (2019). Artificial intelligence in education: Challenges and opportunities for sustainable development.
- Sánchez-Prieto, J. C., Olmos-Migueláñez, S., & García-Peñalvo, F. J. (2017). MLearning and pre-service teachers: An assessment of the behavioral intention using an expanded TAM model. *Computers in human behavior*, 72, 644-654.
- Svoboda, P. (2024). Digital competencies and Artificial Intelligence for education: transformation of the education system. *International Advances in Economic Research*, 30(2), 227-230.
- Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education—where are the educators?. *International journal of educational technology in higher education*, 16(1), 1-27.
- Zhao, J., Li, S., & Zhang, J. (2025). Understanding Teachers' Adoption of AI Technologies: An Empirical Study from Chinese Middle Schools. *Systems*, 13(4), 302.