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Introduction to AI in Learning at Wachid Hasyim 5 High School in Surabaya

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Abstract

The development of information and communication technology has reached its peak with the emergence of artificial intelligence (AI). AI is no longer just science fiction, but has become an integral part of everyday life, permeating various sectors ranging from economics, health, industry, to education. However, there are limitations in basic knowledge about AI and its implementation in the context of learning. Teachers recognize the importance of introducing this technology for students' future, but the lack of resources, training, and relevant materials remains a major challenge. Therefore, the *PPKn* faculty team from Universitas PGRI Adi Buana Surabaya conducted a Community Service Program at SMA Wachid Hasyim 5 Surabaya, specifically targeting teachers, with 28 participants. The series of activities included surveys, presentations, discussions, question-and-answer sessions, evaluations, and dissemination. The results of the community service program demonstrated an increase in participants' understanding of AI in education. The hope is that teachers will improve their use of AI integrated into education, thereby achieving the criteria for 21st-century learning.

Keywords: 21st century skill, high school, introduction to AI, learning, technology

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INTRODUCTION

The development of information and communication technology has reached its peak with the emergence of artificial intelligence (AI). AI is no longer just science fiction, but has become an integral part of everyday life, permeating various sectors ranging from economics, health, industry, to education. AI enables machines to learn from data, recognize patterns, make decisions, and even perform complex tasks that were previously only possible for humans. The 4th Industrial Revolution we are currently experiencing is heavily driven by advancements in AI, the Internet of Things (IoT), big data, and automation (Bramantya et al., 2025; Schwab, 2024). Examining this 4th Industrial Revolution, it has a significant impact on all fields that are focused on advancing with the times, particularly in the field of education, which has embraced technology in every aspect.

In the education sector, AI has tremendous transformative potential. AI can be used to personalize learning, provide instant feedback, automate administrative tasks, and analyze student performance to provide more effective learning

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recommendations (Berland et al., 2014; Donmez, 2024). The integration of AI in learning is expected to improve the efficiency, effectiveness, and relevance of education, preparing the younger generation to face the challenges and opportunities of a digital future. However, many secondary schools in Indonesia, including those in Surabaya, still have a very limited understanding of AI. The formal education curriculum has not yet fully integrated comprehensive material on AI. Data from the Ministry of Communication and Information Technology (Kominfo) shows that although internet penetration in Indonesia is quite high, the digital literacy of the public, particularly in understanding disruptive technologies such as AI, still needs to be improved (Kominfo, 2023).

Survey results from the Program for International Student Assessment (PISA), released by the OECD, also frequently highlight that Indonesian students still face challenges in computational thinking and digital literacy compared to students in developed countries (OECD, 2023). This indicates that the ability to adapt to new technologies, including AI, needs more attention. SMA Wachid Hasyim 5 Surabaya is one of the secondary education institutions located in Surabaya, with great potential for development in technology literacy. Initial observations and discussions with several teachers at SMA Wachid Hasyim 5 Surabaya showed enthusiasm but also a lack of basic knowledge about AI and its implementation in the context of learning. Teachers recognize the importance of introducing this technology for students' future, but the lack of resources, training, and relevant materials remains a major challenge. Based on the above issues, the PPKn lecturer team at Universitas PGRI Adibuana Surabaya organized a community service program aimed at introducing the fundamentals of AI to teachers at SMA Wachid Hasyim 5 Surabaya. This program is expected to not only increase knowledge but also foster interest and awareness of the importance of AI as part of teachers' skills in the 21st century.

METHOD

Given the characteristics of the participants, the community service activity employs a participatory and collaborative approach, involving active interaction between the faculty team and the participants, namely the teachers of Wahid Hasyim 5 High School in Surabaya (Isabella et al., 2023). The activity is conducted face-to-face using interactive lectures, discussions, hands-on practice, and AI-based learning simulations. The stages of the activity are as follows:

1. Preparation: The faculty team coordinates with the school, develops training modules, and prepares presentation tools and materials (laptops, LCD projectors, internet connections, and AI applications).
2. Training Implementation:
   a. Opening and introduction on the importance of integrating AI into 21st-century learning.
   b. Module 1: Introduction to the basics of AI and its ethical use in education.
   c. Module 2: Practical use of AI-based tools such as Canva AI, ChatGPT, and Quillionz. Module 3: Simulation of creating AI-based interactive lesson

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plans and worksheets.

d. Evaluation and reflection: Participants are asked to develop an action plan (RTL) and reflect on the potential application of AI in their respective classrooms.
e. Follow-up: The faculty team will provide online mentoring through discussion groups and regular online evaluations.

This method is expected to foster practical understanding and critical thinking among teachers regarding the use of AI technology in teaching and learning activities.

RESULTS AND DISCUSSION

The community service activities carried out by the PPKn lecturer team from Universitas PGRI Adi Buana Surabaya at SMA Wachid Hasyim 5 Surabaya were implemented in four main phases: (1) Initial survey and needs assessment, (2) Conducting training and interactive discussions, (3) Evaluation and reflection, and (4) Dissemination of results and follow-up actions. Overall, the activities proceeded smoothly and received positive feedback from the participating teachers (Sawyer, 2005). In the review of the initial survey results before the main activities were conducted, the implementation team conducted an initial survey that included the distribution of questionnaires and informal interviews with 28 teachers from various subjects. The survey results revealed several important findings, particularly regarding basic knowledge of AI.

It was found that 85% of teachers stated that they had never received formal training or materials on AI. Their knowledge was limited to general understanding, such as AI in the form of digital assistants (e.g., Siri or Google Assistant). Second, regarding the use of AI in learning, only 92% of teachers admitted that they had never integrated AI-based tools into learning activities, whether in lesson plan development, worksheets, or assessments. Third, the main obstacles encountered were: (1) Lack of training, (2) Limited resources or supporting devices, and (3) Lack of knowledge on how to practically begin using AI in learning. These findings confirm the existence of an AI literacy gap among teachers, while also reinforcing the urgency and relevance of this community service program (Kolb, 2014).

The PPM activities categorized as training are conducted in person over a full day using an interactive approach, which includes a) interactive lecture sessions where the material is presented in simple language while still emphasizing the basic concepts of AI, its ethical use in education, and global trends in the use of AI in learning. Meanwhile, the lecturers use discussion-based methods to encourage active participation from participants, b) hands-on practice sessions where teachers are introduced to and immediately try out several educational AI tools such as: ChatGPT (for creating questions, writing teaching materials, and developing lesson plans), Canva AI (for creating visual-based learning materials using prompts), Quillionz and Curipod (for generating interactive questions and quizzes), and Google Teachable Machine (for basic understanding of machine learning), c) group

discussion sessions where teachers are divided based on subject areas and asked to develop scenarios for integrating AI into teaching and learning activities in their respective classrooms.

This community service activity shows that the potential for AI integration in secondary education is enormous, but has not been optimized due to limitations in literacy and resources. The success of this program demonstrates that a) AI is not solely the domain of IT teachers but is relevant for all teachers across various subjects, from Indonesian Language to Social Studies and Biology, b) participatory and contextual AI introduction is more effective than a purely technical approach, c) teachers can innovate when given the space to explore and supported by a collaborative learning community, and c) further support is needed from educational institutions and the government in the form of regular training, provision of tools, and a curriculum responsive to new technologies (Tran, 2023). Thus, the outreach activities have addressed most of the initial challenges identified and significantly enhanced the readiness of teachers at Wachid Hasyim 5 High School in Surabaya to navigate the AI-driven digital education transformation. However, to ensure sustainability and long-term impact, further training, intensive mentoring, and the gradual integration of AI content into the school curriculum are necessary

CONCLUSION

The community service program “Introduction to AI in Learning at Wachid Hasyim 5 High School in Surabaya” successfully improved teachers' understanding and literacy of AI. Through a participatory, collaborative, and practice-based approach, this program not only provided basic knowledge but also fostered interest and awareness of the importance of AI as a learning support tool. As a follow-up, it is recommended that the school:

1. Integrate AI materials and practices into the curriculum and ongoing teacher professional development activities.
2. Encourage the formation of a practice community (teacher sharing forum) to continue exploring and sharing AI-based learning innovations.
3. Provide adequate infrastructure support for the use of AI technology in the school environment.

Thus, SMA Wachid Hasyim 5 Surabaya can serve as a model of a proactive school in addressing the challenges of the digital age, preparing teachers and students for success in the future.

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We hope that the results of this community service can serve as valuable resources for teachers to continue innovating in their teaching methods and prepare students at SMA Wachid Hasyim 5 Surabaya to face the challenges of the digital age. May this collaboration continue in the future.

BIBLIOGRAPHY

Berland, M., Baker, R. S., & Blikstein, P. (2014). Educational data mining and learning analytics: Applications to constructionist research. *Technology, Knowledge and Learning*, *19*(1), 205–220. https://doi.org/https://doi.org/10.1007/s10758-014-9223-7

Bramantya, A., Pujiati, E., Kuswandi, D., Aulia, F., & Untari, S. (2025). Bibliometric Review of Artificial Intelligence in Project-Based Learning: Trends and Gaps in Social Sciences, Arts, and Humanities. *Nusantara: Jurnal Pendidikan Indonesia*, *5*(2), 261–280. https://doi.org/https://doi.org/10.62491/njpi.2025.v5i2-1

Donmez, M. (2024). AI-based feedback tools in education: A comprehensive bibliometric analysis study. *International Journal of Assessment Tools in Education*, *11*(4), 622–646. https://doi.org/https://doi.org/10.21449/ijate.1467476

Isabella, I., Iriyani, A., & Lestari, D. P. (2023). Literasi Digital sebagai Upaya Membangun Karakter Masyarakat Digital. *Jurnal Pemerintahan Dan Politik*, *8*(3), 167–172. https://doi.org/https://doi.org/10.36982/jpg.v8i3.3236

Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. FT press.

OECD. (2023). *PISA 2022 Results (Volume I): The State of Learning and Equity in Education* (PISA). OECD. https://doi.org/https://doi.org/10.1787/53f23881-en

Sawyer, R. K. (2005). *The Cambridge handbook of the learning sciences*. Cambridge University Press.

Schwab, K. (2024). The Fourth Industrial Revolution: what it means, how to respond1. In *Handbook of research on strategic leadership in the Fourth Industrial Revolution* (pp. 29–34). Edward Elgar Publishing. https://doi.org/https://doi.org/10.4337/9781802208818.00008

Tran, T. M. (2023). Integrating 21st century skills into translation classroom from students' perspective. *International Journal of TESOL & Education*, *3*(1), 64–78. https://doi.org/https://doi.org/10.54855/ijte.23315