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Education on the Wise Use of Artificial Intelligence (AI) to Improve Digital Literacy and Promote Innovation and Self-Reliance Among Students and the Public in Indonesia and Thailand

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A B S T R A C T

The digital literacy gap in Indonesia and Thailand underscores the need for education on the wise use of artificial intelligence (AI) for students and the general public. This community service activity was conducted online via the Zoom platform, involving participants from both countries. The objective of the activity was to enhance participants' understanding of AI concepts, benefits, risks, and how to use it ethically and responsibly in the context of education and daily life. The methods used included interactive lectures, discussions, and Q&A sessions with international speakers. The results of the activity showed an increase in participants' understanding of AI-based digital literacy as well as a growing motivation to innovate independently. This activity contributed to strengthening students' digital competencies in line with Indonesia's Society 5.0 agenda and Thailand's Education 4.0 agenda.

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INTRODUCTION

The rapid development of artificial intelligence (AI) technology over the past decade has fundamentally transformed the landscape of education and society. In the Industry 4.0 era, which is now transitioning toward Society 5.0, the ability to understand, evaluate, and utilize AI technology wisely has become an essential competency that every individual must possess, particularly the younger generation and educators (Hikmat, 2022; Yuvita et al., 2023).

Indonesia and Thailand face similar challenges regarding the digital literacy gap. In Indonesia, the public's digital literacy remains limited, and the top priority in the local context is still focused on anti-misinformation literacy (Amalia & Sary, 2024). Meanwhile, Thailand is making strenuous efforts to implement its Education 4.0 agenda, which integrates ICT and AI into its education system (Kornpitack & Sawmong, 2022; Wongwuttiwat et al., 2023). This situation reflects an urgent need for comprehensive educational programs on the wise and responsible use of AI.

Recent research shows that AI-based tools, such as chatbots and educational robots, have proven effective in personalizing learning, strengthening computational thinking skills, and supporting problem-solving among students (Deng & Yu, 2023; Schwenke et al., 2023; Tarrés-Puertas et al., 2023; Yang & Jo, 2023). However, their implementation requires adequate preparation on the part of teachers and educators, as well as an understanding of the ethics of using AI in the classroom (Amin & Mustaqim, 2021; Butar et al., 2024; Ferikoğlu & Akgün, 2022).

In addition, digital security in online learning is a critical concern that cannot be overlooked, particularly regarding data protection and user privacy (Ifelebuegu, 2023; Zulqadri et al., 2022). The inclusive and equitable use of AI is also a key policy consideration to ensure that the benefits of this technology are felt by all segments of society (Tarrés-Puertas et al., 2023).

Based on this background, the community service team from Ngudi Waluyo University (Indonesia), in collaboration with The Global Bilingual College (TGBC) in Thailand, organized an educational event titled "The Wise Use of Artificial Intelligence to Improve Digital Literacy and Promote Innovation and Self-Reliance." This event was held online via the Zoom platform with the aim of efficiently reaching participants from both countries. The objectives of this event were to: (1) enhance participants' understanding of the basic concepts of AI and its historical development; (2) provide guidance on the ethical and responsible use of AI; (3) encourage innovation and self-reliance among participants in utilizing AI for academic and professional purposes; and (4) strengthen digital literacy as the foundation of competencies in the era of Society 5.0 and Education 4.0.

IMPLEMENTATION AND METHODS

This community service activity was conducted as an online webinar via Zoom. Participants included graduate students from Ngudi Waluyo University, Indonesia, and students from The Global Bilingual College (TGBC), Thailand, totaling more than 30 participants from both countries.

The implementation method consists of several stages. First, the preparation stage, which includes coordinating the implementation team, preparing presentation materials, and handling the technical aspects of hosting the webinar. Second, the implementation stage, which consists of sessions where international speakers present material covering: (a) an introduction to the concepts and history of AI from the 1950s to the latest developments, (b) types and applications of AI in daily life and the world of education, (c) guidelines for the ethical, wise, and responsible use of AI, and (d) strategies for fostering innovation and self-reliance through the use of AI. Third, an interactive discussion and Q&A session between participants and speakers. Fourth, the evaluation phase involves reflection and documentation of the event.

This event featured three international speakers from Thailand: Dr. Prattana Srisuk, Dr. Marlon Rael Astillero, and Dr. Nico Irawan, who each presented on education, technology, and digital nursing. The event moderator was a faculty member from Ngudi Waluyo University. The event's success was evaluated based on the level of active participant engagement, the quality of the discussions, and participant feedback on the presented material.

RESULTS AND DISCUSSION

Event Implementation

The webinar titled "International Guest Lecture: Digital Innovation and Transformation for Sustainable Institutions" was held online via the Zoom Meeting platform. The event was attended by more than 30 participants, consisting of graduate students from Ngudi Waluyo University and The Global Bilingual College in Thailand. Visual documentation shows the active participation of attendees from both countries throughout the event.

Figure 1. Documentation of online webinar participants via Zoom Meeting

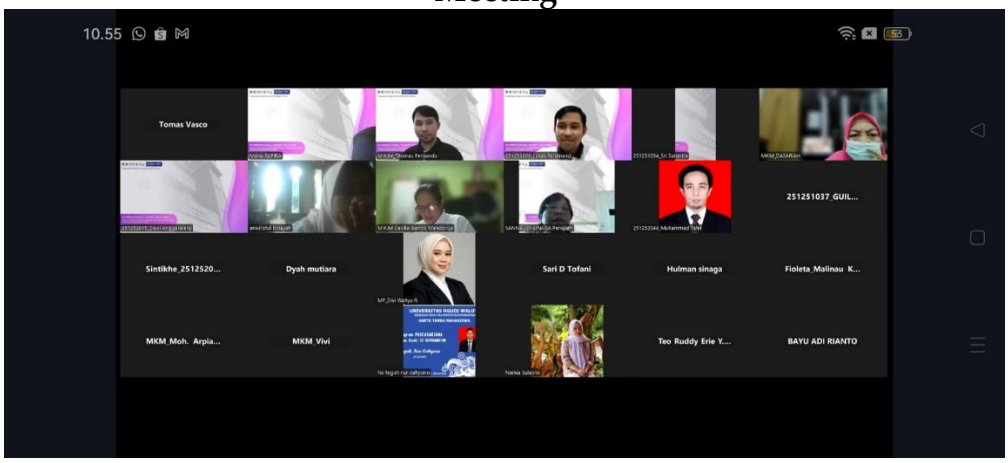


Figure 2. Documentation of the event via Zoom Meeting

The event was opened by a moderator from Ngudi Waluyo University, followed by presentations by international speakers. The first session addressed the fundamental question, "What is Artificial Intelligence?" covering its definition, how it works, and its classifications. The second session presented a historical timeline of AI, starting with the Turing Test (1950), the Dartmouth Conference (1956), Expert Systems (1980), Deep Blue (1997), Deep Learning/AlexNet (2012), GPT-3 (2020), up to GPT-4 & ChatGPT (2023), and projections for the Rise of Multimodal & Agentic AI (2025). Participants enthusiastically received this comprehensive historical overview as it provided a strong context for understanding the future development and potential of AI (Díaz et al., 2024; Vázquez-Herrero & Pérez-Seijo, 2022).

Figure 2. Historical material on the development of artificial intelligence was presented to participants

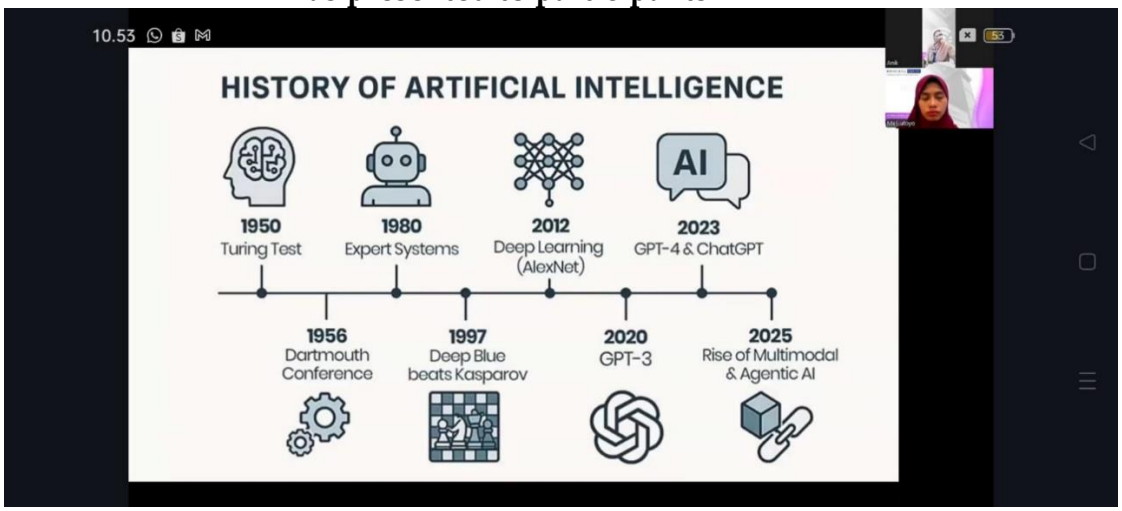
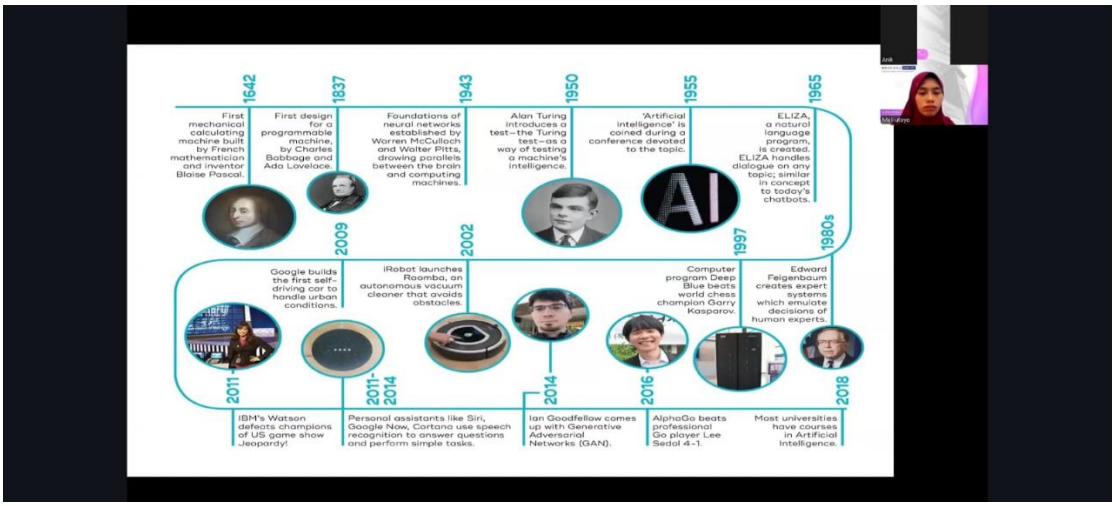


Figure 2. AI materials presented to participants



Participant Responses and Engagement

Throughout the session, participants demonstrated high enthusiasm, actively asking questions and sharing experiences of using AI in their respective professional contexts. Discussions covered various aspects, ranging from the use of chatbots in academic writing, the implications of AI for the nursing field and healthcare services, to strategies for developing AI-based digital content.

These findings align with research showing that interactive, technology-based learning approaches can significantly enhance participant engagement and motivation (Deng & Yu, 2023; Li et al., 2024). The presence of participants from two countries with different cultural backgrounds also enriched the discussion with diverse perspectives, highlighting both shared challenges and potential for collaboration in improving digital literacy across the ASEAN region (Wongwuttiwat et al., 2023; Yuvita et al., 2023).

Enhanced Participant Understanding

Based on observations and feedback during the event, several achievements can be identified. First, improved conceptual understanding: participants with limited understanding of AI demonstrated greater understanding after the material presentation sessions, particularly regarding the differences between conventional and generative AI and how large language models (LLMs) work. Second, ethical awareness: discussions on the responsible use of AI successfully raised participants' awareness of potential AI risks, including algorithmic bias, academic plagiarism, and data privacy issues, which align with the findings of Ifelebuegu (2023) and Zulqadri et al. (2022). Third, motivation to innovate: many participants expressed an intention to begin utilizing AI in their research projects and professional practice—a positive indicator of a growing innovative mindset driven by adequate AI literacy.

The involvement of three experts from different fields (education, information technology, and nursing) provided highly valuable interdisciplinary perspectives. This demonstrates that AI is not merely a technological domain but has expanded into various professional fields, including healthcare, the primary field of the participants from Ngudi Waluyo University. This multidisciplinary approach aligns with the perspectives of Valbuena & Meneses (2021) and Battikh et al. (2024) regarding the importance of cross-sectoral AI integration.

Challenges and Opportunities

This activity also identified several challenges that need to be addressed in efforts to improve AI digital literacy in both countries. From a technical standpoint, internet connectivity issues and limited access to devices posed obstacles for some participants. From a pedagogical perspective, the need for ongoing training for educators is urgent, given that artificial intelligence continues to evolve at a rapid pace (Amin & Mustaqim, 2021; Butar et al., 2024; Ferikoğlu & Akgün, 2022). A clear and standardized digital competency framework is also needed to guide systematic learning and evaluation processes (Machacado-Rojas & Pico, 2021).

This initiative opens opportunities for cross-national research collaboration between Ngudi Waluyo University and TGBC Thailand in the fields of digital literacy and AI-based education. The online format has proven effective in reaching participants from various regions without geographical barriers, in line with the increasingly dominant trend of digital learning in the post-pandemic era (Kornpitack & Sawmong, 2022).

CONCLUSIONS AND RECOMMENDATIONS

This community service activity, an online webinar on the wise use of AI, was successfully conducted with the participation of students from Indonesia and Thailand. The activity achieved its objectives of enhancing participants' understanding of AI's concepts, history, and applications, while also raising awareness of the importance of ethical and responsible AI use. The international collaboration between Ngudi Waluyo University and TGBC Thailand provided added value in the form of cross-cultural perspectives when discussing digital literacy issues relevant to both countries.

Based on the results of this initiative, several recommendations can be proposed. For educational institutions, it is necessary to design sustainable AI digital literacy programs that are integrated into the curriculum. For educators, regular training is needed to update their AI knowledge and skills in line with rapid technological advancements. For students, it is recommended that they actively explore and utilize AI-based tools in a critical and ethical manner in their learning and research processes. Similar community service activities should be followed up with more structured programs, including the development of learning modules, standardized assessments of digital literacy competencies, and the formation of cross-national communities of practice to share experiences and best practices in the use of AI in the fields of education and health.

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REFERENCES

Amalia, N., & Sary, K. A. (2024). Communication Management at Mafindo Samarinda as an Anti-Hoax Facilitator. Jurnal Indonesia Sosial Teknologi, 5(3), 831–842. https://doi.org/10.59141/jist.v5i3.937

Amin, M., & Mustaqim, B. (2021). Vocational Teachers' Readiness in Integrating the Principles of the Fourth Industrial Revolution into the Learning Process. Elinvo (Electronics, Informatics, and Vocational Education), 6(2), 106–119. https://doi.org/10.21831/elinvo.v6i2.44210

Battikh, H. R., Prados, E. E., Valdés, E. C., Juan, F. M. de, & García-Corpas, J. P. (2024). Knowledge of Patients with Type 2 Diabetes Mellitus Regarding Their Disease: A Systematic Review. Ars Pharmaceutica (Internet), 65(3), 258–277. https://doi.org/10.30827/ars.v65i3.30295

Bravo, L. E. C., Molano, J. I. R., & López, H. J. F. (2021). Academic analytics: new tools applied to education. Revista Boletín Redipe, 10(3), 137–158. https://doi.org/10.36260/rbr.v10i3.1225

Butar, S. B., Mulyadi, H., & Ramdhany, M. A. (2024). The Mediating Role of Work Motivation in the Impact of Training on Teachers' Digital Literacy. Lectura Jurnal Pendidikan, 15(2), 509–520. https://doi.org/10.31849/lectura.v15i2.20646

Deng, X., & Yu, Z. (2023). A Meta-Analysis and Systematic Review of the Effect of Chatbot Technology Use in Sustainable Education. Sustainability, 15(4), 2940. https://doi.org/10.3390/su15042940

Díaz, M. I. P., Criollo-Cruz, I. D., Viloria, H. G., & Pacheco, M. C. F. (2024). Disruptive Innovation in Tourism Programs at Higher Education Institutions: The Case of San Andrés Islands. Revista Boletín Redipe, 13(8), 102–121. https://doi.org/10.36260/26wet145

Ferikoğlu, D., & Akgün, E. (2022). An Investigation of Teachers' Artificial Intelligence Awareness: A Scale Development Study. Malaysian Online Journal of Educational Technology, 10(3), 215–231. https://doi.org/10.52380/mojet.2022.10.3.407

Hikmat, H. (2022). The Readiness of Education in Indonesia to Face Society 5.0. Jurnal Basicedu, 6(2), 2953–2961. https://doi.org/10.31004/basicedu.v6i2.2526

Ifelebuegu, A. O. (2023). Rethinking online assessment strategies: Authenticity versus AI chatbot intervention. Journal of Applied Learning & Teaching, 6(2). https://doi.org/10.37074/jalt.2023.6.2.2

Kornpitack, P., & Sawmong, S. (2022). Empirical analysis of factors influencing student satisfaction with online learning systems during the COVID-19 pandemic in Thailand. Heliyon, 8(3), e09183. https://doi.org/10.1016/j.heliyon.2022.e09183

Li, J., Bai, J., Zhu, S., & Yang, H. H. (2024). Game-Based Assessment of Students' Digital Literacy Using Evidence-Centered Game Design. Electronics, 13(2), 385. https://doi.org/10.3390/electronics13020385

Machacado-Rojas, A. M., & Pico, L. E. A. (2021). Artificial Intelligence Techniques Applied to Diagnostic Image Analysis. Eco Matemático, 12(2). https://doi.org/10.22463/17948231.3237

Schwenke, N., Söbke, H., & Kraft, E. (2023). Potentials and Challenges of Chatbot-Supported Thesis Writing: An Autoethnography. Trends in Higher Education, 2(4), 611–635. https://doi.org/10.3390/higheredu2040037

Tarrés-Puertas, M. I., Costa, V., Álvarez, M. P., Lemkow-Tovías, G., Rossell, J. M., & Castaño, A. D. D. (2023). Child–Robot Interactions Using Educational Robots: An Ethical and Inclusive Perspective. Sensors, 23(3), 1675. https://doi.org/10.3390/s23031675

Valbuena, M. T. B., & Meneses, F. E. G. (2021). Predicting Corporate Bankruptcy: A Literature Review. Activos, 19(1). https://doi.org/10.15332/25005278.6684

Vázquez-Herrero, J., & Pérez-Seijo, S. (2022). Chapter 11. Interactive and Immersive Narratives. Espejo De Monografías De Comunicación Social, (7), 173–183. https://doi.org/10.52495/c11.emcs.7.p92

Wongwuttiwat, J., Lawanna, T., & Tantontrakul, T. (2023). The state of digital technology and innovation development: The comparative position of Thailand in ASEAN. The Electronic Journal of Information Systems in Developing Countries, 90(4). https://doi.org/10.1002/isd2.12311

Yang, Y., & Jo, J. (2023). A Study on Computational Thinking for Computer Science Majors. International Journal on Advanced Science Engineering and Information Technology, 13(5), 1993–1998. https://doi.org/10.18517/ijaseit.13.5.19044

Yuvita, Y., Husain, A., Sulistyawati, A. E., Meiristiani, N., Fatimah, E., & Sunmud, S. (2023). Assessing the digital literacy competence of pre-service English teachers in Indonesia and Thailand. Journal of Education and Learning (Edulearn), 17(4), 604–612. https://doi.org/10.11591/edulearn.v17i4.20910

Zulqadri, D. M., Mustadi, A., & Retnawati, H. (2022). Digital Safety During Online Learning: What Do We Do to Protect Our Students? Jurnal Iqra, 7(1), 178–191. https://doi.org/10.25217/ji.v7i1.174