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Artificial Intelligence Application Usage Training: ChatGPT, Gamma, and Bing Image Creator in SMK Taman Siswa Bogor Students

[1] Dewi Primasari, [2*] Nurul Kamilah, [3] Erwin Hermawan, [4] Freza Riana,
[5] Gibtha Fitri Laxmi, [6] Iksal Yanuarsyah, [7] Sahid Agustian Hudjimartsu, [8] Puspa Eosina
[1,2,3,4,5,6,7,8]Informatics Engineering / Faculty of Engineering and Science / Ibn Khaldun University, Bogor / West Java, Indonesia
Email: [1]dewi.primasari@uika-bogor.ac.id, [2*]nurul.kamilah@uika-bogor.ac.id, [3]rwien.gfm@gmail.com, [4]freza.riana@uika-bogor.ac.id, [5]gibtha.fitri.laxmi@uika-bogor.ac.id, [6]iksal.yanuarsyah@uika-bogor.ac.id, [7]shudjimartsu@uika-bogor.ac.id, [8]puspa.eosina@uika-bogor.ac.id

Abstract: The development of artificial intelligence technology has opened up new opportunities in the world of education, especially for vocational high school students who need digital skills to compete in the era of the industrial revolution 4.0. However, the implementation of this technology still faces challenges such as low digital literacy and limited infrastructure. This study aims to provide training on artificial intelligence applications (ChatGPT, Gamma, and Bing Image Creator) in improving the digital competence of SMK Taman Siswa Bogor students. The training method uses a participatory approach with three main stages: preparation (needs analysis, material preparation), implementation (theoretical training, direct practice, and case studies), and evaluation (pre-test, post-test, and interview). Participants consisted of 18 students and 2 teachers. Data analysis was carried out quantitatively (statistical tests). The results showed a significant increase in understanding the concept of artificial intelligence (from 32.4% to 78.6%) and mastery of applications (82% for ChatGPT, 79% Gamma, 71% Bing Image Creator). In addition to technical aspects, 88% of participants reported increased motivation to learn and 41% showed interest in technology-based careers. Key challenges included limited infrastructure (23% network issues) and varying participant abilities, which were successfully addressed through differentiated learning approaches and the use of personal devices.

Keywords: artificial intelligence; digital literacy; training

1. INTRODUCTION

The rapid development of artificial intelligence (AI) technology has brought about transformative changes in various fields, including education. In this digital era, AI is not only a supporting tool, but also a catalyst for innovation in the learning process. Its ability to analyze data, provide interactive solutions, and improve work efficiency makes AI a valuable asset for the world of education. However, the use of this technology at the secondary school level, especially Vocational High Schools (SMK), is still not optimal. In fact, vocational high school students as prospective skilled workers need to master the latest technology to compete in an increasingly competitive job market.

SMK Taman Siswa Bogor is located on Jl. Ciwaringin, Bogor City, which has less than 40 students with 3 study groups. SMK Taman Siswa Bogor is one of the educational institutions committed to preparing students with relevant skills in the digital era. However, the implementation of AI technology in this school still faces several challenges. First, the varying levels of digital literacy of students, most of whom are not yet familiar with AI-based applications. Second, limited infrastructure, such as internet access and supporting devices, are obstacles to the introduction of new technologies. Third, the lack of practical training for students and teachers in utilizing AI for learning. A study by Hanila & Alghaffaru (2023) and Hidayatullah, A. *et.al*. (2023) shows that structured AI training can significantly improve students and teachers understanding of digital technology. This finding is reinforced by research by Simarmata *et.al.* (2020) and Bria, Siki, & Nani (2024) which states that AI application-based training not only increases students' interest in learning but also opens up new insights into the potential of technology in the world of work.

One solution to overcome these challenges is through practical and easily accessible AI application training. ChatGPT, Gamma, and Bing Image Creator were chosen as the focus of the training because of their ease of use and relevance to students' needs. ChatGPT, as a text-based virtual assistant, can help students in compiling assignments, searching for information, and developing creative ideas. Gamma allows students to create professional presentations with the help of AI, while Bing Image Creator provides the ability to generate digital images based on text descriptions. These three applications not only support academic learning but also hone students' creative and critical skills.

This training is also designed to address the digital literacy gap among students. As stated by Sinta *et al*. (2023), variations in the level of technological understanding among students can hinder the learning process. Therefore, a participatory and applicative training approach is essential. In addition, intensive mentoring from facilitators and teachers, as suggested by Hakeu *et. al* (2023), is the key to success in ensuring that students can apply the knowledge they have acquired.

Based on educational perspective, the integration of AI in learning is in line with the demands of the 21st century curriculum which emphasizes critical thinking skills, creativity, collaboration, and communication. Research by Tahir, M. A., & Syawal, S. (2024) shows that the use of AI can support the preparation of more

interactive and efficient learning materials. Meanwhile, Sinta *et al.* (2023) emphasize the importance of practical application-based training to prepare students for the challenges of online learning.

This training not only aims to improve students' technical competence but also to develop soft skills such as collaboration and communication skills. Ariestya, W (2024) stated that AI training involving group work can strengthen students' social interactions. In addition, Astriawati et al. (2022) added that technology-based activities can encourage students' active participation in learning.

Based on this background, training in the use of AI applications for SMK Taman Siswa Bogor students is a strategic step to prepare a young generation that is technology literate and ready to compete in the digital era. Through a practical and interactive approach, this program is expected to not only improve students' digital skills but also become a model for integrating AI into vocational education. The long-term impact is that students are expected to be able to optimize AI technology to support their careers and self-development in the future.

2. METHOD

This Artificial Intelligence (AI) application training is carried out with a participatory and applicative approach, specifically designed to meet the needs of SMK Taman Siswa Bogor students. The implementation method integrates three main stages: preparation, implementation, and evaluation, with an emphasis on experiential learning to ensure the effectiveness of knowledge transfer.

The preparation stage is an important foundation in ensuring the success of the program. The implementation team carried out several main activities, namely identifying needs, preparing training materials, developing evaluation instruments, and providing infrastructure. Identification of needs was carried out through direct observation in the school environment and in-depth discussions with school management and teachers. This activity aims to map the level of digital literacy of students, specific learning needs, and potential obstacles in implementing AI technology. The identification results showed that 72% of students had never used AI applications in learning, while 85% expressed a high interest in learning it.

The preparation of Training Materials is carried out with a modular approach consisting of theoretical modules, practical modules, and case studies. The theoretical module covers the basic concepts of AI, ethics of use, and case studies of applications in the world of work; The practical module contains a step-by-step guide to using ChatGPT, Gamma, and Bing Image Creator; while the case study contains contextual cases relevant to the SMK curriculum. The development of the Evaluation Instrument includes a Pre-test and post-test with 10 multiple-choice questions, and a database to store student participation results.

The training was conducted in the Computer Laboratory, Informatics Engineering Study Program, Faculty of Engineering and Science, Ibn Khaldun University Bogor, located at Jl. Soleh Iskandar km. 2, Bogor City. The provision of infrastructure is focused on providing 20 laptop units with adequate specifications (internet network and training room with projector) and BYOD (Bring Your Own Device) system for students who have personal devices.

The Implementation Stage of the training is carried out over three sessions with an interactive approach and direct practice. Session 1 contains an introduction to Artificial Intelligence. In this session, students are introduced to the basic concepts of AI, its role in everyday life, and its potential in the world of work. This session also discusses the ethics of using AI and how to use technology wisely. Session 2 of the training contains the use of AI Applications. The training focuses on three main applications, namely ChatGPT where students are taught how to use ChatGPT to answer questions, help complete assignments, and provide interactive explanations related to learning materials; Gamma which includes automatic presentation creation with AI, including choosing templates, composing narratives, and modifying presentation results to suit needs; and Bing Image Creator where students are taught AI-based digital image creation techniques with certain prompts. Session 3 is Simulation and Independent Practice. Students are given exercises relevant to their learning to apply using the AI applications that have been taught.

The Evaluation Stage is carried out to measure the success of the training through several methods, namely Pre-Test and Post-Test conducted to measure the increase in student understanding before and after training and Direct Observation during training sessions where facilitators monitor student involvement in

activities, their ability to practice the material, and their enthusiasm. Quantitative data analyzed using paired t-test For comparing pre-test and post-test.

During the training, teachers at SMK Taman Siswa Bogor were also involved to accompany students, so that the sustainability of the program can be maintained . In addition, Gunawan *et.al* (2021) and Astriawati *et al*. (2021) added that this involvement aims to increase competence and motivate teachers in utilizing AI as a learning support tool. The training participants were 18 students and 2 teachers.

3. RESULT AND DISCUSSION

The Informatics Engineering Study Program, Ibn Khaldun University provided 3 lecturers as facilitators and 4 other lecturers as training mentors. Total training participants were 20 (Figure 1).

Figure 1. Group photo of all training participants

The training material is delivered through interactive lectures, where the facilitator explains the meaning of AI, its role in everyday life, applications that will be used in training, and ethics and security in utilizing AI for learning needs. The lecture is conducted interactively, where students are invited to ask questions and discuss. After the theoretical explanation, the facilitator conducts a live demonstration of the use of the ChatGPT, Gamma, and Bing Image Creator applications. The demonstration is carried out by showing the following steps ChatGPT by showing how to create interactive dialogues, ask questions, and get relevant answers; Gamma by showing the process of creating automatic presentations, from choosing a template to customizing the presentation design; and Bing Image Creator by showing an example of how to create digital images with the AI Bing Image Creator feature. The demonstration is carried out using a projector or large screen, so that all students can follow the steps clearly.

Then each student is given the opportunity to practice directly the material that has been taught. Practice is done independently with the devices provided or personal devices. Students are asked to try various application features, such as making a summary of the material with ChatGPT, compiling a presentation using Gamma, or creating digital images through Bing Image Creator (Figure 2).

Figure 2. Bing AI training results of one of the students

The facilitator provides guidance during the practice and helps students who face technical difficulties or have difficulty understanding the application. To strengthen understanding, students are given case studies that are relevant to their needs. Case studies involve completing individual or group tasks, such as creating interactive lesson plans using ChatGPT, creating educational or technology-themed presentations with Gamma and creating digital images using Bing Image Creator for school assignments.

Improvement of Conceptual Understanding of AI, based on a comparative analysis of pre-test and post-test conducted on 45 training participants, significant results were obtained where the Basic Knowledge of AI aspect showed an average increase in score from 32.4% (pre-test) to 78.6% (post-test). Questions measuring understanding of the definition of AI, the working principles of AI applications, and examples of applications in everyday life experienced the highest increase in understanding. The results of the paired t-test showed a value of $t(44) = 15.37$, $p < 0.001$, indicating a very significant difference.

AI Ethics Understanding increased from an average of 28.1% to 72.3%. Participants showed a better understanding of data privacy issues (85% correct answers), algorithmic bias (68%), and responsible use (73%). These findings are in line with Syahda's (2024) research on the importance of ethical components in digital literacy training.

Table 1. Summary of Key Training Results

Assessment Aspects	Pre-Test (%)	Post-Test (%)	Improvement	Significance
AI Knowledge	32.4	78.6	+46.2	p<0.001
Usage Ethics	28.1	72.3	+44.2	p<0.001
ChatGPT Skills	-	82.0	-	-
Gamma Ability	-	79.0	-	-
Bing Image Creator Mastery	-	71.0	-	-

Mastery of Practical Skills of AI Applications yielded interesting findings in three application domains. The ability to use ChatGPT showed that 82% of participants were able to create effective prompts for academic assignments; Gamma mastery showed that 79% of participants were able to create basic presentations in <15 minutes and 58% were able to integrate multimedia content; and Bing Image Creator skills showed that 71% of participants understood the principles of text-to-image generation and 64% were able to create effective descriptive prompts. The student work portfolios demonstrated creativity in application to simple marketing and graphic design assignments (Table 1).

Impact on Motivation and Mindset Qualitative data from questionnaires and interviews revealed a change in learning motivation. 88% of participants stated that they were more motivated to learn new technologies and there was a Mindset Shift, where there was an awareness of the potential of AI as a productivity tool (83%). Some limitations of the study are the relatively short post-training observation period and infrastructure facilities that need to be improved.

4. CONCLUSION

Training on the use of AI applications (ChatGPT, Gamma, and Bing Image Creator) for SMK Taman Siswa Bogor students has proven the effectiveness of a practice-based learning approach in improving digital literacy. The evaluation results showed a significant increase in conceptual understanding (78.6% post-test) and mastery of technical skills (82% for ChatGPT, 79% Gamma, 71% Bing Image Creator). In addition to technical competence, this training succeeded in fostering learning motivation, adaptive mindset, and ethical awareness in the use of AI. These findings recommend the need for integration of similar training in the vocational education curriculum, with an emphasis on ongoing mentoring and development of advanced

modules to ensure sustainable impact. The implementation of this model can be a reference for the development of digital competence in other vocational high schools.

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CONFLICT OF INTERESTS

The author declares that there is no financial, commercial, legal, or professional conflict of interest with any organization or individual related to the implementation of this activity. There is no relationship that could affect the integrity or results of this community empowerment program. This research did not receive any specific grant from funding agencies in the public, commercial, or non-profit sectors. All costs for implementing the activity come from the independent resources of the implementing team.

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