

Microsoft Copilot Training for Monitoring Student Learning: A Case Study Vocational High School Makassar - Indonesia

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ABSTRACT

Artificial intelligence (AI) has become an increasingly popular technology and brings significant educational benefits. This technology increases the learning process's efficiency and productivity, allowing for the development of students' abilities in a more focused manner. AI is a catalyst in preparing generations to face future challenges. One example of AI's application in education is Microsoft Copilot, an artificial intelligence model developed by Microsoft in collaboration with OpenAI. Microsoft Copilot is designed to understand and support various academic tasks through human-like interactions. Training on using Microsoft Copilot was carried out for students of SMKS Wahyu Makassar. This training aims to support the learning process, increase learning effectiveness, and assist students in doing academic assignments. The evaluation results showed that Microsoft Copilot provided significant benefits, with positive feedback from participants. Most students found this training useful, easy to understand and improved their knowledge.

Keywords: Artificial Intelligence; Microsoft Copilot; Education; Learning Effectiveness; Academic Training.

ABSTRAK

Kecerdasan buatan (AI) telah menjadi salah satu teknologi yang semakin populer dan membawa manfaat signifikan dalam dunia pendidikan. Teknologi ini meningkatkan efisiensi dan produktivitas proses belajar, serta memungkinkan pengembangan kemampuan siswa/i secara lebih terfokus. AI berperan sebagai katalisator dalam mempersiapkan generasi untuk menghadapi tantangan masa depan. Salah satu contoh penerapan AI di bidang pendidikan adalah Microsoft Copilot, sebuah model kecerdasan buatan yang dikembangkan oleh Microsoft bekerja sama dengan OpenAI. Microsoft Copilot dirancang untuk memahami dan mendukung berbagai tugas akademis melalui interaksi yang mirip dengan manusia. Pelatihan ini memanfaatkan Microsoft Copilot untuk siswa/i SMKS Wahyu Makassar. Pelatihan ini bertujuan untuk mendukung proses belajar, meningkatkan efektivitas belajar, serta membantu siswa/i dalam mengerjakan tugas akademis. Hasil evaluasi menunjukkan bahwa Microsoft Copilot memberikan manfaat yang signifikan, dengan umpan balik positif dari peserta. Sebagian besar siswa/i menilai pelatihan ini sangat bermanfaat, mudah dipahami, dan meningkatkan pengetahuan mereka.

Keywords: Artificial Intelligence; Microsoft Copilot; Education; Learning Effectiveness; Academic Training.

INTRODUCTION

Artificial intelligence, or Artificial Intelligence (AI), refers to the simulation of human intelligence by machines through the application of Machine Learning (ML),

Deep Learning (DL), and Neural Networks (NN). AI allows machines to learn from experience and perform tasks that humans normally perform (Hulsen, 2022). Recent developments in AI have raised great hopes regarding its future impact on education and learning (Holmes & Tuomi, 2022). Along with technological advances and the application of AI in various sectors, many parties have begun to examine the impact and potential of AI in education. Several studies and discussions have put forward various perspectives on how AI can affect the role and function of teachers in the classroom. The findings suggest that while there is a view that AI may one day replace teachers, most participants argue that human teachers possess unique qualities, such as critical thinking, creativity, and emotion, which make them irreplaceable (Ka Yuk Chan & Tsi, 2023). In the world of lectures, the use of AI cannot replace the role of lecturers but can function as a powerful tool to support the learning process. Lecturers continue to play an important role in providing direction, inspiration, and real experience to students, as well as in increasing student engagement and learning satisfaction (Muarif et al., 2023). On the other hand, there is a concern that students will plagiarize information and that their work will not represent their own abilities. However, the reality is that AI will continue to evolve, and educators have the option of harnessing the potential use of this technology or avoiding it altogether (Brue & Brue, 2024).

Some previous research that has discussed the use of AI applications in educational contexts includes the benefits of artificial intelligence for education (Robiul et al., 2023), Artificial intelligence in education and schools (Gocen & Aydemir, 2020), ChatGPT to improve learning effectiveness (Harmin et al., 2024), and the transformation of education in Indonesia through the application of artificial intelligence potential (Yulianti et al., 2023).

Recently, AI chatbots have shaken up the world of education with their potential to revolutionize the learning system. AI chatbots can provide live support by answering questions, providing explanations, and providing additional resources. In addition, this chatbot can also function as a virtual teaching assistant, helping educators in a variety of ways (Labadze et al., 2023). Advanced language models such as ChatGPT, Microsoft Copilot and Google Gemini are examples of AI chatbots capable of generating human-like responses through user-friendly interfaces. The chatbot are trained with a large amount of data and deep learning algorithms, which allows them to generate coherent responses as well as predict text by identifying relationships between words (Rossettini et al., 2024).

In today's digital era, students need to have skills and mastery of Artificial Intelligence (AI) technology, which is good for being able to compete and succeed in the world of work (Ritala et al., 2024). Students who are proficient in the use of technology have their own advantages. They can easily access information from multiple sources, communicate well, and collaborate effectively. To achieve all that, of course, a student must be diligent and persistent in learning. However, in reality, learners often experience obstacles and difficulties in their learning process. This is a natural and important thing to acknowledge in order to be able to find the right

solution to improve the quality of learning. Vocational school students often face various challenges in learning, such as limited access to information, difficulty in solving problems, and lack of relevant learning resources. Therefore, a method or tool is needed that can overcome this problem, one of which is ChatGPT (Rahman et al., 2023). In addition, Microsoft Copilot can also be an effective solution.

This training and mentoring was carried out at SMKS Wahyu Makassar, which is located at Jalan Abdullah Daeng Sirua No. 346, Paropo, Panakkukang District, Makassar City, South Sulawesi. SMKS Wahyu Makassar is a private vocational high school established on May 27, 1992, with Establishment Decree Number 099/KEP/I06/H/1992, under the auspices of the Ministry of Education and Culture. Known for its adequate facilities and qualified teaching staff, this school aims to prepare its students to become a competent workforce and ready to compete in the industrial world.

Based on observations made by the training team at SMKS Wahyu Makassar, some of the problems that are often experienced by students are difficulties in understanding the subject matter, lack of access to information, difficulties in doing school assignments, limited teachers outside of school hours, and limited resources such as books and learning facilities (Arianto, 2022). This can hinder the learning process and affect their academic achievement. To overcome this problem, Microsoft Copilot can be one of the solutions.

This training and mentoring aims to expand students' understanding of the use of artificial intelligence technology in the context of education (Nurmawati et al., 2023). The use of Microsoft Copilot is expected to improve students' digital literacy, encourage creativity, and expand their understanding of the language. Thus, students can be better prepared to face the demands of the ever-evolving digital world.

IMPLEMENTATION METHOD

The implementation method used in this training activity is the lecture, practicum, and question and answer method delivered by the Community Service Team (PkM) to the students of SMKS Wahyu Makassar, which is carried out face-to-face. This training activity was held on Thursday, June 20, 2024, and was attended by 16 students consisting of Class X OTKP 9 people, XI AKL 5 people, and XI OTKP 2 people from SMKS Wahyu Makassar.

Community Service (PkM), which stands for *Pengabdian kepada Masyarakat*, is an initiative aimed at contributing to the community by sharing knowledge, skills, and expertise. This training is part of such an initiative and is carried out in several stages, namely:

1. **Opening and Introduction:** Explanation of the goals and benefits of Microsoft Copilot training.
2. **Lectures:** Presentation of material on artificial intelligence and introduction to Microsoft Copilot.

3. **Internship:** Hands-on session on using Microsoft Copilot to complete academic tasks.
4. **Discussion and Questions:** Discussion session to answer students' questions related to the material that has been delivered.
5. **Closing:** Conclusion and evaluation of training activities.

Planning and Realization Stage

In planning and realizing this training activity, the community service team (PkM) considers several aspects, namely, training location, human resources (HR) needed, training participants, and training support devices or tools (Widasari et al., 2023).

1. **Training Locations:** The location of the training is adjusted to the objectives, target targets, and number of participants and is held at SMKS Wahyu Makassar.
2. **Human Resources Needed:** Human resources needed in the implementation of the training include lecturers as presenters and students as companions during practicum. In addition, the preparation of training materials to be delivered is also important so that the results of the implementation are in accordance with the goals of community service.
3. **Target Participants:** Participants who are the target of the training are expected to have basic skills in operating computers and using the internet network.
4. **Assistive Devices or Devices:** Supporting devices or tools include computers provided by SMKS Wahyu Makassar, as well as additional necessary hardware provided by the team.

Implementation Stage

The training with the theme "Utilization of Microsoft Copilot for Learning Effectiveness and Completion of Academic Tasks for Students at SMKS Wahyu Makassar" took place for a day at the Computer Laboratory of SMKS Wahyu Makassar. This activity was attended by 16 students, consisting of 9 students from class X OTKP, 5 of XI-AKL, and 2 of class XI-OTKP. This training was accompanied by 3 lecturers with a background in computer education and 2 students from the information systems study program.

The implementation of the training began with the signing of a cooperation agreement between STMIK Profesional Makassar and SMKS Wahyu Makassar by Mr. Hamid S.E., principal of SMKS Wahyu Makassar. Mr. Hamid emphasized that the signing of this cooperation reflects the commitment of both parties to actively participate in and support training activities and provide a clear basis for training organizers to deliver materials effectively. He also hopes that this training activity will run smoothly, provide additional knowledge to students of SMKS Wahyu Makassar, and be sustainable in the future.

Furthermore, the implementation of the training was completely handed over to the community service team (PkM) from STMIK Profesional Makassar, starting with an introduction to the trainees. The PkM team consists of lecturers from the Information Systems and Computer Science Study Program, namely Nasir Usman, Andi Harmin, Dikwan Moeis, Muhammad Faisal, and all acted as resource persons in this activity, as shown in Figure 1. After the introduction, the discussion of the material began with an explanation of the basic concept of Artificial Intelligence (AI), its development and benefits in the world of education, and how to use AI as a virtual assistant in learning, as seen in Figure 2.



Figure 1. Instructors Delivering Training



Figure 2. Training Session at SMKS Wahyu Makassar

In the training activity, the three lecturers acted as speakers who took turns explaining the material using the lecture method. In addition, 2 students act as companions, helping students if they experience difficulties, especially in the practicum session. As seen in Figure 3, a lecturer is presenting the.



Figure 3. A lecturer presents AI benefits in education

Training and mentoring are carried out in this one-day activity through four stages. The first stage began by discussing the basic concept of artificial intelligence (AI), its development in education, its benefits, and how to use it as a virtual assistant in learning. The second stage focuses on using Microsoft Copilot as a virtual assistant in learning. In this stage, trainees learn how to integrate Microsoft Copilot into the

learning process and explore its benefits for students. Training involves practical exercises and collaborative discussions. This activity was carried out in an intensive and interactive atmosphere of cooperation, with participants actively involved in discussions and hands-on exercises. Presenters and facilitators provide the necessary direction and support to ensure in-depth understanding and practical application in the learning process.

Based on Figure 4, it can be seen that students are very enthusiastic during the practicum. Participants showed a very positive response to this training activity, as can be seen from their seriousness in paying attention to the explanation of the practicum material delivered by the lecturer.



Figure 4. Enthusiastic students engaged in practicum

The last stage is the evaluation, carried out in two forms. The first form is a short question and answer about the material that has been explained, while the second form involves working on practicum questions. The question and answer aims to assess students' theoretical understanding of the material delivered, while the practicum questions aim to measure their understanding of using Microsoft Copilot to study and do schoolwork. During the practicum, students can demonstrate step-by-step how to interact with Microsoft Copilot. They started by creating their own accounts on the Microsoft platform, then worked on various schoolwork-related questions. Students are also asked to understand the context of the answers given, test the variations of the prompts, and evaluate the correctness of the information obtained. This practicum provides valuable hands-on experience in applying the new skills learned.

At the end of this training activity, the community service team and students took a group photo, as seen in Figure 6. Next, the PkM team visited the principal's room to thank and say goodbye.



Figure 6. Group photo after training session

Evaluation

The evaluation stage is carried out to assess the trainees' level of understanding of the training materials that the team has delivered. The evaluation was carried out using the question-and-answer method and working on practicum questions.

RESULTS OF ACTIVITIES

After the evaluation, students are given a questionnaire to find out their responses to the training that has been given. The questionnaire was designed according to the community service needs in Indonesia, which means PkM with 5 statements. The questionnaire results showed that this activity received a very positive response from participants. The results are described in the form of a graph that can be seen in Figure 5 below.

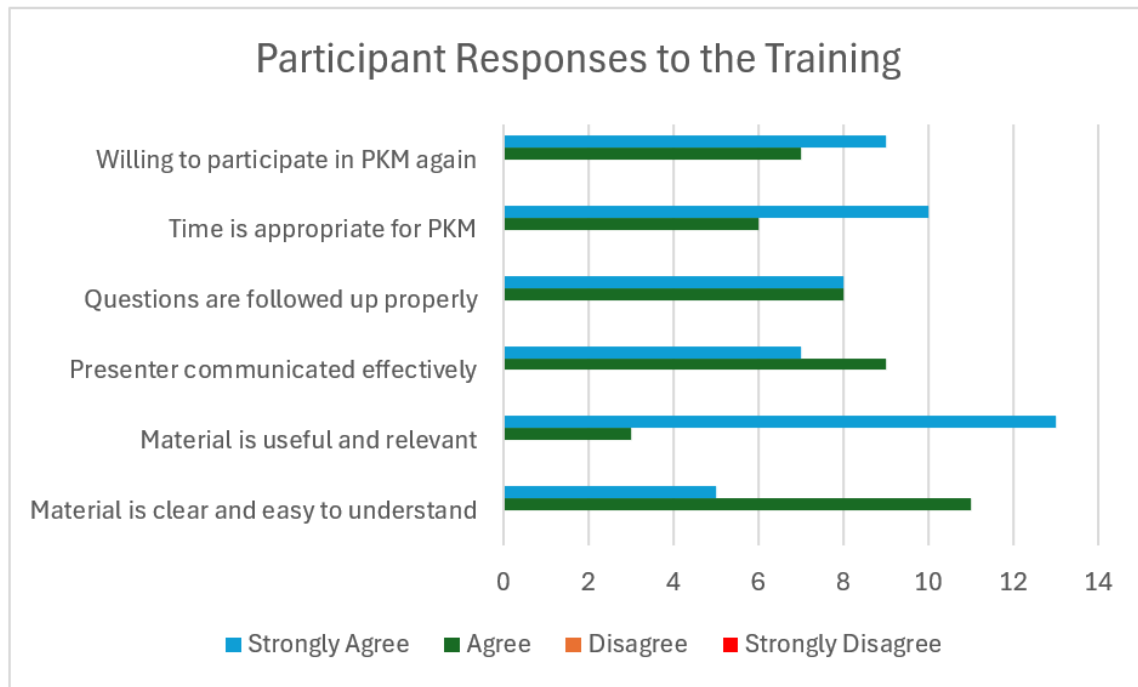


Figure 5. Graph showing training participants' feedback

Training Impact Evaluation

The Microsoft Copilot training held for 16 students from SMKS Wahyu Makassar, consisting of 9 students from class X OTKP, 5 from class XI-AKL, and 2 from class XI-OTKP, received highly positive feedback. The majority of participants found the training material clear, useful, relevant, and easy to understand, with most agreeing or strongly agreeing on these points. They also expressed satisfaction with the effectiveness of the presenter's communication and the appropriate follow-up to their questions. While there was some variation in opinions regarding the time allocation, most participants felt it was suitable. Importantly, the willingness of the participants to engage in similar future training indicates the success of this program in enhancing students' interest and understanding of artificial intelligence technology. This positive response underscores the effectiveness of the training in achieving its goal of improving learning effectiveness and technological literacy among the students.

Sustainability Plan

To ensure the sustainability of the training program, the following steps can be taken:

1. Student Development Program

Students who have participated in the training can be involved in mentoring programs or guiding other students who have not yet attended the training. This will allow the knowledge they have acquired to be shared, thus strengthening the learning community within the school.

2. Training Module Enhancement

Based on evaluation results, the training modules should be continuously updated to remain relevant to the participants' needs. For instance, updating materials on new features of Microsoft Copilot or other AI technology developments. This ensures that the training content is always up-to-date.

3. Teacher Competency Development

Teachers at SMKS Wahyu Makassar need to receive further training or workshops to ensure they are always keeping up with the latest technological advancements. This will enable them to continue effectively supporting students.

4. Post-Training Monitoring and Support

After the training is completed, the school and the PkM team can provide technical support and regular mentoring. This aims to assist students in overcoming challenges that may arise when using Microsoft Copilot in their academic tasks.

5. Ongoing Collaboration with STMIK Profesional Makassar

The collaboration with STMIK Profesional Makassar can be continued and expanded. For example, by organizing regular seminars or workshops, or establishing internship programs for students. This will help maintain a strong relationship between institutions and provide ongoing benefits to students.

This sustainability plan is crucial to ensure that the positive impacts of the training can continue to be felt by both students and teachers, and to support ongoing competency development at SMKS Wahyu Makassar.

CONCLUSIONS

The community service activity with the theme "Utilization of Artificial Intelligence Technology to Increase Learning Effectiveness for Students of SMKS Wahyu Makassar" was completed smoothly. This training provides significant benefits to students, where Microsoft Copilot allows them to access a wider range of information, utilize various learning resources, answer questions, summarize documents, create images from text, and translate texts.

This community service activity can be the basis for further research on using Microsoft Copilot in education. Research can focus on various aspects, such as the effectiveness of Microsoft Copilot in improving student understanding, the impact of its use on learning independence, or comparisons between Microsoft Copilot and other learning methods.

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