Empowering Teachers through ChatGPT for Lesson Planning at Al Kautsar High School

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ABSTRACT

This community service activity aims to enhance the competence of teachers at SMA Al Kautsar Bandar Lampung in utilizing web-based Artificial Intelligence (AI) technology, specifically ChatGPT, to develop more efficient and innovative lesson plans. The training was held offline on September 19, 2024, involving 33 teachers through a participatory training approach. Evaluation results from pre- and post-training questionnaires revealed an increase in participants' knowledge of AI applications from 90.1% to 100%, with 93.9% readiness to implement the technology in lesson planning. The training positively impacted teachers' digital literacy and the quality of education at SMA Al Kautsar. Recommendations include conducting advanced training sessions, providing technical assistance, and improving the school's digital infrastructure to support sustainable AI integration in teaching and learning processes.

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INTRODUCTION

Artificial Intelligence (AI) is a technology that can support educational transformation, especially in increasing the effectiveness of the teaching and learning process (Yu et al., 2024). The use of web-based AI has grown rapidly with applications such as AI-based learning management systems (LMS), virtual assistants, and student performance analysis tools (FIRAT, 2023). The adoption of AI-based tools, especially in lesson planning, remains limited among educators in many schools across Indonesia (Grace et al., 2023).

SMA Al Kautsar Bandar Lampung, a leading private high school with a strong academic track record, recognizes the importance of preparing its teaching staff to face these technological changes (Velina et al., 2018). Although most teachers are already accustomed to using basic digital tools such as computers and the internet, the use of AI-powered applications like ChatGPT remains underutilized. This underuse is often caused by a lack of familiarity and structured training in leveraging such technologies effectively (İpek et al., 2023).

The Merdeka Curriculum, which emphasizes student-centered learning, requires teachers to be facilitators who can adapt teaching methods to meet diverse student needs (Marsela Yulianti et al., 2022). Preparing lesson plans that are flexible, creative, and responsive to dynamic curricular goals can be time-consuming when done manually. AI tools like ChatGPT can assist in streamlining this process by generating tailored learning content, suggesting creative instructional strategies, and supporting evaluation development (Saputra & Serdianus, 2023).

This community service project was initiated to address the gap in AI literacy among teachers by providing hands-on training on how to utilize ChatGPT as a web-based AI application for lesson planning. By equipping teachers with practical skills and raising awareness of AI's potential in education, the project aims to support sustainable improvements in teaching quality and digital literacy.

METHOD

Community Service Activity was held at SMA Al Kautsar Bandar Lampung on 19 September 2024. The implementation method employed was Participatory Action Research (PAR), which emphasizes active involvement of participants throughout the stages of planning, action, and reflection (Soedarwo et al., 2022). This approach ensures that teachers are not merely recipients of information but active contributors during training through discussion, hands-on practice, and evaluation.

The activity was carried out offline (face-to-face) to ensure effective knowledge and skill transfer. The stages of the activity included:

- Planning. The team did the interviews with the school to identify existing problems and needs. The results of this needs assessment were used to design relevant training content. The team also prepared training materials, technical tools, and evaluation instruments.

- Action. (Training Implementation) The training consisted of a combination of lectures and practical sessions. Teachers were introduced to basic AI concepts, received guidance on the use of ChatGPT, and practiced creating AI-assisted lesson plans based on their respective teaching subjects. A total of 33 teachers participated actively in the training.

- Reflection and Evaluation. After the training, participants completed pre- and post-training questionnaires via Google Forms. These instruments were designed to measure the improvement in understanding and readiness to implement ChatGPT in lesson planning. The evaluation also assessed participant satisfaction with the content and methods of the training.

Target Participants

The primary target of this activity was the teaching staff of SMA Al Kautsar, comprising 33 teachers. In addition, the activity involved supporting staff who contribute indirectly to the learning process within the school.

Topics

The training covered the following topics:

- Introduction to AI and its role in education

- Overview and use of ChatGPT for lesson planning

- Practical exercises on designing AI-assisted lesson plans

The training methods included interactive lectures, demonstrations, hands-on practice, as well as group discussions and Q&A sessions. This approach was intended to ensure participants could immediately apply the knowledge and skills acquired during the session.

RESULTS AND DISCUSSION

This community service activity was held on September 19, 2024, at SMA Al Kautsar Bandar Lampung and was attended by 33 teachers from various subject areas. The event began with opening remarks from the school principal and the head of the service team, followed by material delivery, hands-on training with ChatGPT, a Q&A session, and final evaluation.

The training covered the basics of Artificial Intelligence (AI), an introduction to ChatGPT as a web-based AI application, and its application in developing lesson plans. Participants were actively engaged not only through lectures but also through practical exercises where they created lesson plans using ChatGPT tailored to their respective subjects.

Implementation

The community service activity was conducted on September 19, 2024, at SMA Al Kautsar Bandar Lampung and was attended by 33 teachers from various subject areas. The event began with opening remarks from the school principal and the head of the service team, followed by material delivery, hands-on training with ChatGPT, a Q&A session, and final evaluation.

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Evaluation Results

The evaluation was completed through pre- and post-training questionnaires distributed via Google Forms. The aim was to assess changes in participants' knowledge, understanding, and readiness to use AI in lesson planning.

Initial results showed that 90.9% of participants had heard of ChatGPT, but only 36.4% had used it for lesson planning purposes. After the training, there was a significant improvement:

- 100% of participants reported being familiar with ChatGPT

- 97% felt they understood how to use the tool

- 94% agreed that ChatGPT is beneficial for lesson planning

- 93.9% expressed readiness to implement it in their teaching practices

TABLE 1. Comparison of Teachers' Knowledge and Readiness Before and After Training

Column Header Goes Here	Column Header Goes Here	Column Header Goes Here
Familiarity with ChatGPT	90.9%	100%
Actual Use for Lesson Plan	36.4%	94% (perceived benefit)
Understanding of Usage	-	97%
Readiness to Implement	93.9%	100%

These results indicate that the training successfully enhanced digital literacy and increased teachers' confidence in using AI-based tools for instructional purposes. One teacher expressed that the use of this AI-based application provided a new experience in preparing lesson plans more efficiently. "Usually it takes me hours to write a lesson plan, but with this application I can focus more on the learning content rather than just the format," stated one of the participants (Teacher A). This illustrates how AI integration can reduce teachers' administrative workload, aligning with the objectives of the program.
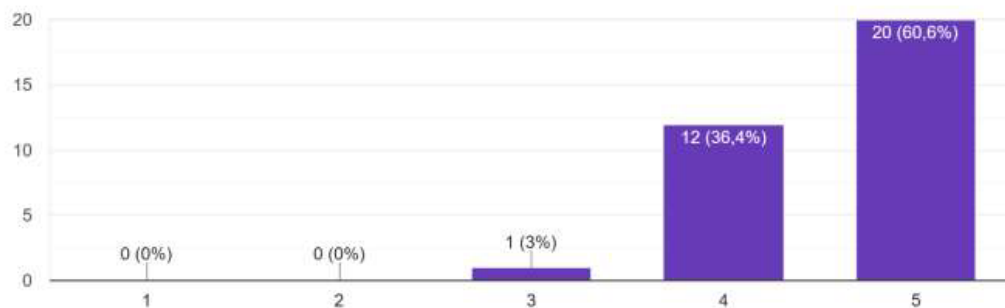
Saya telah mengetahui tentang Artificial Intelligence
33 jawaban
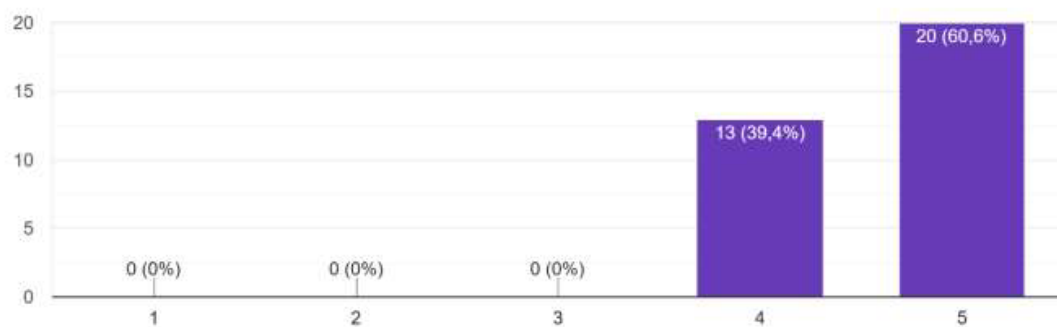
FIGURE 1. Result of teachers who already know about artificial intelligence

Saya telah mengetahui dan memahami bagaimana cara penggunaan ChatGPT
33 jawaban

FIGURE 2. The result of teachers who already know about Artificial Intelligence and how to use it

Saya akan menggunakan ChatGPT untuk membantu saya dalam membuat modul ajar
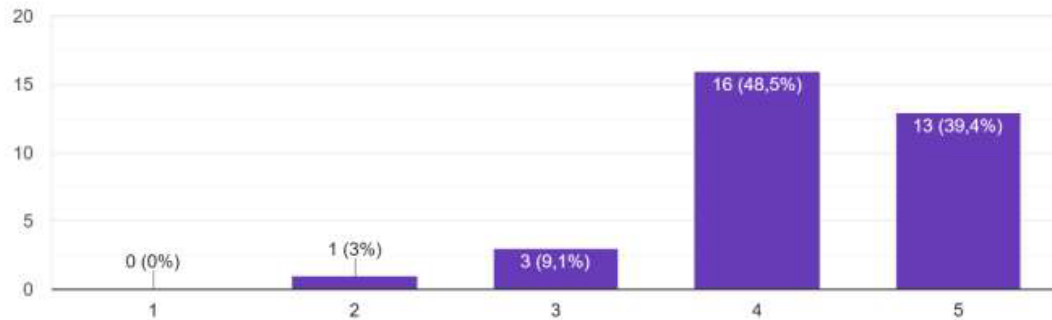33 jawaban

FIGURE 3. The result of teachers who will use ChatGPT to make teaching module

Saya menyadari penggunaan ChatGPT sangat bermanfaat dalam proses penyusunan modul ajar yang efisien dan efektif
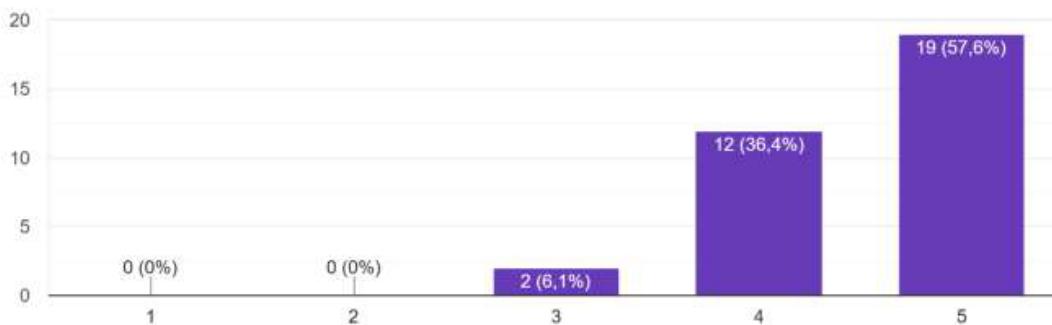33 jawaban

FIGURE 4. The result of teachers who realize the use of ChatGPT are very useful in the process of compiling efficient and effective teaching modules.

Saya akan mengaplikasikan ChatGPT dalam keseharian untuk mendukung pembelajaran siswa
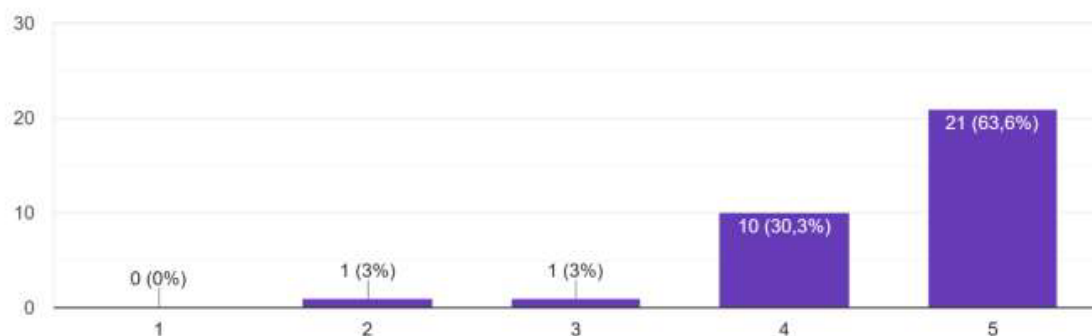33 jawaban

FIGURE 5. The result of teachers who will use ChatGPT daily and to support the student learning process

Discussion

The findings of this training demonstrate that teachers are highly interested in adopting new technologies when provided with practical and relevant training. ChatGPT proved to be a practical solution for lesson planning, particularly for educators facing time constraints and a lack of access to diverse instructional materials.

The participatory approach employed in this training allowed teachers to engage in meaningful discussions, share experiences, and learn collaboratively. The evaluation also revealed a need for follow-up training and technical assistance, particularly for participants who require additional support to fully utilize the technology.

Overall, the activity had a positive impact on teacher preparedness for digital-era learning and supported the implementation of the Merdeka Curriculum, which emphasizes flexible, technology-based, and student-centered instruction.
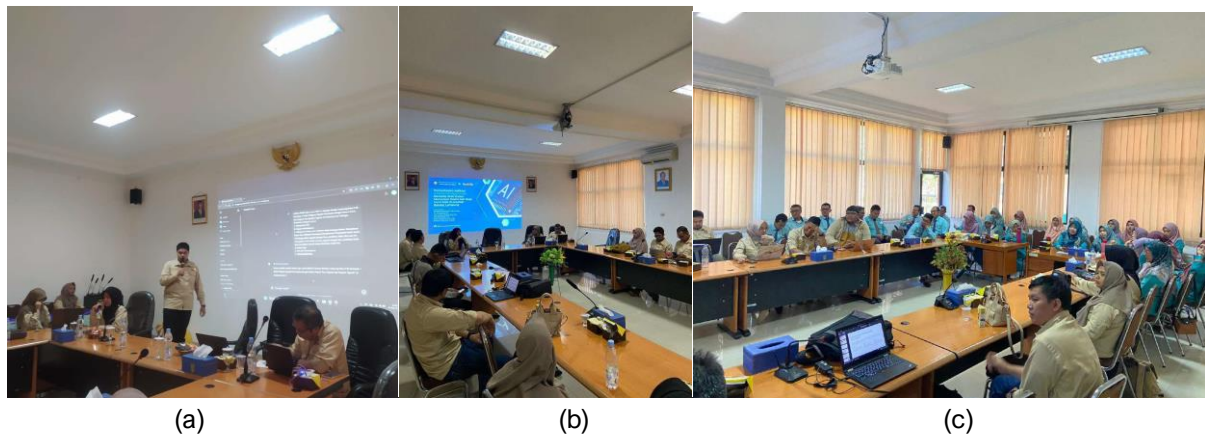

(a)   (b)   (c)

FIGURE 6.

CONCLUSION

The community service activity focusing on the utilization of web-based Artificial Intelligence applications, specifically ChatGPT, successfully enhanced the knowledge and skills of teachers at SMA Al Kautsar Bandar Lampung in designing lesson plans. The training not only improved digital literacy among teachers but also offered a practical solution for developing lesson plans that are more efficient, varied, and adaptable to curriculum changes.

A significant improvement was observed through the comparison of pre- and post-training evaluations, particularly in participants' understanding of AI, their ability to use ChatGPT, and their readiness to implement the tool in classroom practices. The participatory approach adopted in the training encouraged active engagement, resulting in an interactive and hands-on learning experience.

This program made a meaningful contribution in promoting the adoption of AI technology in education, supporting the transformation of teaching and learning processes towards a more innovative and effective digital era.

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