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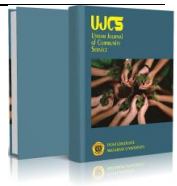

Teacher Empowerment in the Development of Artificial Intelligence (AI)-Based Learning Media in Meranjat Village Ogan Ilir Regency

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Abstract: Training on the use of Artificial Intelligence-based learning media was held as part of teacher empowerment activities in developing such media. This community service activity was held by the Civic Education Study Program, Faculty of Teacher Training and Education, Sriwijaya University. The Community Service Team trained teachers at SMPN 1 Indralaya Selatan, Meranjat Village, Ogan Ilir Regency, to develop Artificial Intelligence (AI)-based learning media. This training and mentoring aimed to improve teachers' capabilities so they could create innovative and effective learning. The methods applied included counseling, training, and mentoring in direct practice using Artificial Intelligence-based media from Wayground AI, Canva AI, Avatar AI, Renderforest AI, LMS AI, and ChatGPT AI, as well as assessments through pretests and posttests to measure the increase in participants' understanding. The results showed a significant increase in understanding of creating Artificial Intelligence-based learning media, with the average post-test score of participants increasing from 37.7 to 80.03 from a total of 30 participants. The evaluation results showed high satisfaction from participants with the material provided and its relevance to needs in the field. The participants' response was very positive, as evidenced by their active discussions, willingness to experiment with the media, and commitment to creating learning products. The program is planned to continue with follow-up publications in newspapers, YouTube, and journals, as well as evaluation meetings and activity reports. It is hoped that this program will continue to empower teachers to improve and develop AI-based learning media in schools.

Keywords: Training, Mentoring, Learning Media, Artificial Intelligence, Teachers.

Introduction

Whether we realize it or not, times have changed. Slowly but surely, all activities will move to digital platforms. The pandemic has accelerated this massive shift. Ready or not, all activities are forced to use technology to reduce physical human contact (Inderawati et al., 2024). Society 5.0 is an era where AI and IoT have developed rapidly, while big data is used to improve the quality of human life and solve various social problems (Khoiriah et al., 2023) Society 5.0 combines technological advancements and humanitarian values, where data is collected, analyzed, and transformed into meaningful information before being applied in the real world to improve various aspects of human life. Technological developments in the 21st century have also had a significant impact on education. Education serves as a bridge between the Industrial Revolution 4.0 and Society 5.0 (Ahmadi & Ibda, 2019), with a primary role in equipping individuals with the skills to adapt to changing times. Society 5.0 integrates technology and humanity, aiming to create a balance between human intelligence and machine

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learning to address educational and social challenges (Hanjowo et al., 2023).

According to (Diantama, 2023), AI has enormous potential to contribute to the world of education. The use of artificial intelligence in the educational process is one innovation that can improve the quality of learning. In an era that offers more open and accessible information, education can be implemented more flexibly, allowing students to learn anytime and anywhere, thereby accelerating the learning process (Rahmawan & Effendi, 2021). The use of AI in education offers solutions to the challenges faced by teachers and students by providing more effective, affordable, and personalized learning (Huang et al., 2021). Learning methods can be made smarter and emphasize the developmental abilities and unique potential of each student. Teachers can more accurately and effectively assess student learning outcomes using artificial intelligence. This allows for the modification of teaching strategies to suit each student's needs. AI can also predict future student performance, providing insight into potential success or potential difficulties, allowing teachers to design more timely and targeted interventions (Nazla, 2025). Teachers face several challenges in developing AI-based learning media, such as minimal technology training, limited facilities, and difficulties in designing technology-appropriate learning (Fira et al., 2024). These challenges include limited technological skills and difficulties in presenting material engagingly and interactively. Most teachers still lack the competency or training experience in applying AI for educational purposes. This can make it difficult for them to effectively plan and create learning media using available technology. The use of AI in learning media can enable more dynamic and interactive presentations. Artificial intelligence technology opens up opportunities for teachers to create more innovative and engaging learning environments, where students can be more engaged in the learning process (Sutrisno et al., 2025) Teachers who are technologically proficient tend to be more easily able to understand and adapt to AI (Ashshiddiqi et al., 2024). However, not all teachers may have sufficient creativity or knowledge on how to incorporate artificial intelligence into the learning media they design to make it more engaging for students. Teachers need training and professional development to improve their ability to use AI technology (Mukti, 2023). According to (Meiliawati et al., 2024). AI has enormous potential for developing learning media. Therefore, training for teachers in developing AI-based learning media is crucial. The program's success illustrates the importance of integrating AI literacy, critical thinking, and technical mentoring to ensure meaningful adoption of digital innovations in education (Yao & Hu, 2025). Thus, a community service project entitled "Teacher Empowerment in the Development of Artificial Intelligence-Based Learning Media in Meranjat Village, Ogan Ilir Regency" was prepared.

SMP Negeri 1 Indralaya Selatan has strong potential to implement AI-based learning. The teachers possess digital devices, the school has sufficient infrastructure, and there is enthusiasm to innovate learning aligned with the Independent Curriculum. Collaboration with higher education institutions is also vital to sustaining training and mentoring for teacher empowerment (Pangestu & Rahmi, 2022). All teachers have persdevices, such as laptops and smartphones, that can be used as initial tools tool for digital-based learning. The school has also been fully connected to the PLN electricity network, and there is enthusiasm from the school to improve the quality of learning. In addition, the geographical proximity to the UNSRI campus opens up opportunities for collaboration and mentoring. sustainable. This program is projected to provide direct benefits to teachers in terms of improving digital competence, improving the quality of teaching materials, as well as encouraging the development of a more creative, contextual and appropriate learning environment with the Independent Curriculum. This enables more personalized, efficient, and effective learning. Furthermore, AI also helps teachers save time preparing materials and assessing student work, allowing them to focus more on their role as facilitators, guiding students in critical and creative thinking (Astutik et al., 2023). The indirect impact is the creation of a climate learning that is more adaptive to technological developments, while at the same time narrowing the digital divide between schools in urban and semi-rural areas. The first **problem is** the low ability of teachers to use artificial intelligence-based technology. Teachers often face limitations in technological literacy and a lack of training on how to integrate AI into the learning process (Chounta et al., 2022). To address this, the initial solution is to provide short training that is easy to understand and can be immediately applied. The second problem is the absence of relevant learning media with the local context and students' needs. Teachers' limited understanding of CTL principles and practices, including how to design and use learning media that are relevant to students' local contexts (Putri & Nurkifayati, 2025). To answer this, the solutions offered is to invite teachers to create teaching media that depicts life around them, local cultural values, and the challenges faced by local communities.

Method

This activity included training and mentoring sessions to develop the media. The methods applied

included training and mentoring, Focus Group Discussions (FGDs), and an AI-based media development project at SMPN 1 Indralaya Selatan, Meranjat Village, Ogan Ilir Regency. This activity was carried out intensively over six visits and through socialization and coordination, continued with classroom observations, material delivery, and the practical stage and presentation of teachers' work during the community service activities. To ensure the success of the program and provide constructive feedback, the activity was complemented by evaluation through pre-tests and post-tests. In the initial stage, a pre-test was conducted to measure teachers' initial understanding of Artificial Intelligence (AI)-based learning media in general. The development of the training to create AI-based learning media focused on several main platforms, namely Wayground AI, Canva AI, Avatar AI, Renderforest AI, LMS AI, and ChatGPT AI.

The training method included direct mentoring, group collaboration, and practical implementation. Pretests and posttests were conducted to evaluate improvement in understanding, while discussions and feedback sessions were used to ensure learning transfer to classroom practice (Rachmadtullah et al., 2024). To ensure the success of the program and provide constructive feedback, a post-test was conducted to determine the extent to which teachers' understanding improved after the training and to identify obstacles that might be encountered in the digital learning process. This activity is designed to continue to the next stage, which includes the presentation of learning media products by teachers of SMPN 1 Indralaya Selatan in Meranjat Village, Ogan Ilir Regency, implementation of media in the learning process, as well as further mentoring and evaluation as a form of sustainability of the training program. This series of activities is expected to be a strategic step in strengthening teachers' digital competence in improving the quality of learning.

Result and Discussion

The "Teacher Empowerment in Developing Artificial Intelligence-Based Learning Media in Meranjat Village Ogan Ilir Regency" activity aims to improve teaching skills by developing AI-based learning materials. Its implementation was based on initial communication with the principal of SMPN 1 Indralaya Selatan in Meranjat Village, Ogan Ilir Regency. This communication emphasized the importance of innovative media to adapt to student needs.

The initial stage of implementing the community service activities involved intensive discussions. To develop a structured plan, the community service team submitted a proposal to the Institute for Research and Community Service (LPPM) at Sriwijaya University, which was then approved for implementation. Subsequent coordination was conducted via WhatsApp, enabling more effective communication between the community service team and the principal of SMPN 1 Indralaya Selatan, Ogan Ilir Regency. This platform facilitated technical arrangements related to the implementation schedule, activity schedule, and task allocation, ensuring the smooth running of the activities.

Figure 1. The team carries out the coordination of Community Service Activities, Collection of Initial Target Information

Figure 2. Socialization and Focus Group Discussion at SMPN 1 Indralaya Selatan School on the Importance of AI-Based Learning Media

This activity lasts for 8 days, the first activity is the coordination of community service activities, gathering initial target information on June 25, 2025, the second activity on October 2, 2025, namely socialization and FGD to schools the importance of AI-based learning media. The third activity on October 9, 2025, is training on the development of AI-based learning media in schools. The fourth activity on October 13-24, 2025, is the

implementation of learning media in the classroom. The fifth activity on October 31, 2025, is mentoring and evaluating the results of media implementation. The sixth activity on November 7, 2025, is monitoring the sustainability of the program with the Principal and checking the AI corner. The seventh and eighth activities are follow-ups.

The second activity, held on October 2, 2025, involved a socialization and focus group discussion (FGD) at schools on the importance of AI-based learning media. The school officially opened the event and was met with high enthusiasm from teachers for the training and mentoring, along with the hope of gaining new knowledge that could be implemented in the learning process.

Next, participants took a pretest to assess their initial knowledge. The pretest was conducted online using a Google Form prepared by the community service team. The results of this pretest served as the basis for determining the participants' initial general understanding.

The third activity, on October 9, 2025, will be training on developing AI-based learning media in schools. The AI-based learning materials include Wayground AI as an interactive quiz or evaluation tool, Canva AI as a learning material design tool, Avatar AI as a virtual tutor in learning materials, Renderforest AI as a learning material design tool, LMS AI as a learning management platform, and ChatGPT AI as a learning material aid.

Figure 3. AI-Based Learning Media Development Training at SMPN 1 Indralaya Selatan School

Explanatory material regarding Artificial Intelligence in general was delivered by Dra. Umi Chotimah, M.Pd, Ph.D. Wayground AI was delivered by Rizki Maharani S.I.P., M.I. Pol. Canva AI was delivered by Camellia, S.Pd., M.Pd and Rike Erlande, S.Pd., M.Pd. ChatGPT was delivered by Dra. Sri Artati Waluyati, M.Si and Muhammad Alipraja S.H, M.H. Material on Avatar AI, LMS AI, Renderforest AI was delivered by the student PPM team.

Table 1. Comparison of Pretest and Posttest Values

Respondents	Pretest	Posttest
RJ	60/100	85/100
A	35/100	88/100
L	47/100	85/100
IS	28/100	93/100
WI	50/100	67/100
ID	59/100	82/100
AND	31/100	75/100
H	25/100	88/100
DS	26/100	73/100
MZ	14/100	88/100
S	28/100	88/100
WITH	51/100	79/100
N	48/100	78/100
EC	43/100	73/100
N	40/100	94/100
TH	67/100	73/100
PI	25/100	73/100
RM	22/100	68/100
AND	7/100	80/100
PL	47/100	80/100
JPW	62/100	86/100
English	28/100	80/100
IN	15/100	67/100
N	33/100	65/100
LS	26/100	78/100
R	45/100	81/100
PDR	33/100	68/100
DD	39/100	87/100
ND	58/100	86/100
LSM	39/100	93/100
Score	1,131	2,401
Average	37,7	80,03

This selection of materials aims to help teachers design innovative and enjoyable learning processes. Participants are required to bring their own devices and practice using each platform directly. Participants were invited to ask questions about the advantages, disadvantages, and differences of AI-based learning media, and the community service team responded to these questions. This discussion provided teachers with new insights into learning media that can be adapted to the needs of the methods used in classrooms. In addition to providing material, this PPM activity also provided a space for teachers to learn and practice directly.

The success of this activity was reflected in the teachers' increased understanding of the material presented. The community service team evaluated the

effectiveness of the training through pretests and posttests. The evaluation showed a significant increase in understanding among teachers. Based on a comparison of pretest and posttest scores, the average score of participants increased from 37 in the pretest to 80 in the posttest, a difference of 43 points. The posttest results showed a significant increase in teachers' understanding, as reflected in the scores compared to the pretest results. This indicates that the community service training activities have achieved their main objectives.

The fourth activity, which took place from October 13–24, 2025, involved implementing learning media in the classroom. In this activity, teachers used artificial intelligence-based learning media during the learning process.

The fifth activity, held on October 31, 2025, involved mentoring and evaluating the results of media implementation. This activity was met with great enthusiasm as teachers presented their work, including AI-based learning media products. This step aims to ensure that the acquired skills can be applied sustainably, thus directly impacting the quality of learning in schools.

Figure 4. Implementation of AI Learning Media in Classrooms at SMPN 1 Indralaya Selatan

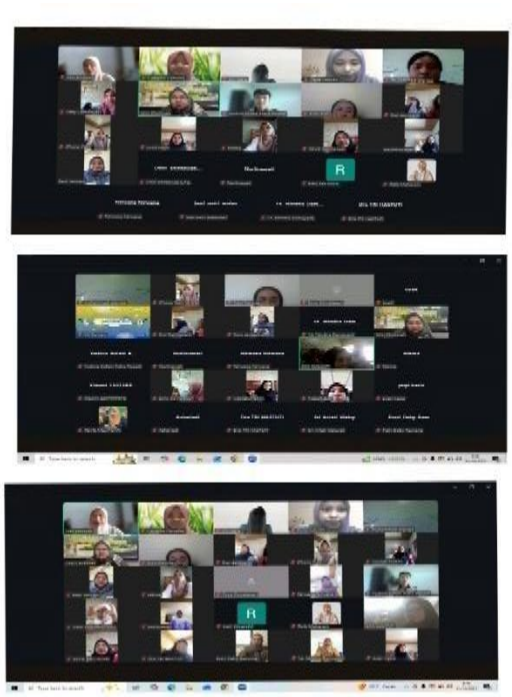

Figure 5. Mentoring and Evaluation of the Results of the Implementation of AI-Based Learning Media

The main activity, PPM participants presented the results of the products they had made related to the learning media that has been assigned, the learning media that has been displayed by each group will be given an assessment, response and suggestions by the team dedication. At the product presentation, there were several participants representing each group, telling their experiences regarding making media products learning.

Figure 6. Results of AI-Based Teacher Learning Media

The sixth activity on November 7, 2025, namely monitoring the sustainability of the program with the Principal and checking the AI corner.

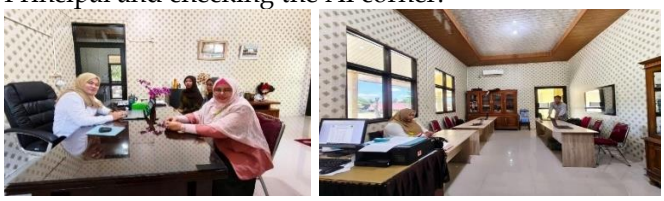

Figure 7. Monitoring program sustainability and checking AI corners

As a follow-up to this activity, several follow-ups have been planned for the seventh activity, namely publication of newspapers, YouTube and journals and the eighth activity, namely an evaluation meeting for the implementation of activities and the preparation of reports on community service activities. This activity also fostered collaboration among teachers, allowing knowledge sharing and joint problem-solving in applying AI tools for subject-specific learning media (Rachmadtullah et al., 2024). It confirms findings from previous research that teacher training integrated with hands-on AI applications leads to sustainable professional growth (Nuridayanti et al., 2025)

Overall, this training program has had a significant impact on teachers ability to apply innovative AI-based teaching materials to the learning process. This activity will not only be beneficial but also enable innovative, interactive changes in line with current developments.

Conclusion

Training and mentoring activities have been carried out and have succeeded in improving teacher competency in using AI as a learning medium in the learning process. This activity has made a significant contribution to teachers at SMP Negeri 1 Indralaya Selatan, Ogan Ilir Regency. In the systematic training session of this activity, participants were introduced to six main platforms: Wayground AI, Canva AI, Avatar AI, Renderforest AI, LMS AI and ChatGPT AI. With the increased knowledge and skills gained, participants are expected to be more effective in implementing AI-based learning media in their schools. Participants' test results showed an increase from 37.7 in the pretest to 80.03 in the posttest, a difference of 43 points. This demonstrates the program's success in improving teachers' understanding of AI-based learning media. The positive response from participants and the high level of participation in the training sessions demonstrate the program's benefits both theoretically and practically.

Overall, this activity has contributed positively to strengthening the digital literacy and pedagogical innovation of teachers in Meranjat Village, supporting Indonesia's education transformation in the Society 5.0 era (Ridho et al., 2025 ;Hanjowo et al., 2023). Follow-up plans for this activity include publications through newspapers, YouTube, and journals, as well as evaluation meetings for the implementation of community service and the preparation of activity reports. The results of the activity showed increased understanding, success in creating products, and a high level of participant satisfaction. These findings indicate that the activity has had a significant impact on the creation of innovative learning media in the related schools. Through this program, it is hoped that teachers can continue to improve their skills in innovating learning media in the teaching and learning process.

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