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Empowering Teachers Through Artificial Intelligence: ChatGPT-Based Training for Developing Interactive Learning Media at LKP Karya Prima Kursus

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Abstract - *The rapid advancement of Artificial Intelligence (AI) has created new opportunities to improve teaching and learning through innovative digital technologies. However, many teachers in non-formalz educational institutions still have limited knowledge and practical experience in utilizing AI-based tools for instructional purposes. This community service program aimed to enhance teachers' competencies at LKP Karya Prima Kursus through ChatGPT-based training for developing interactive learning media. The program adopted a participatory approach consisting of preparation, coordination, training material development, workshop implementation, mentoring, monitoring, and evaluation. The training introduced participants to Artificial Intelligence concepts, prompt engineering techniques, and practical applications of ChatGPT for generating lesson plans, teaching materials, quizzes, worksheets, presentation content, and interactive learning activities. Program effectiveness was evaluated using pre-test and post-test assessments, participant observations, and satisfaction questionnaires. The evaluation results demonstrated a significant improvement in participants' knowledge and practical competencies, with the average score increasing from 58.40 in the pre-test to 87.65 in the post-test. Furthermore, the overall participant satisfaction reached 95.80%, indicating that the training materials, mentoring process, and practical sessions effectively addressed participants' professional needs. The program also produced various AI-assisted instructional products that can be directly implemented in classroom activities. Overall, the community service program successfully improved teachers' digital literacy, promoted the adoption of Artificial Intelligence in educational practices, and supported the digital transformation of learning at LKP Karya Prima Kursus.*

Keywords: *Artificial Intelligence; ChatGPT; Community Service; Interactive Learning Media; Teacher Training.*

1. INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) has significantly transformed various sectors, including education(An et al., 2025). AI technologies are increasingly utilized to support teaching and learning activities through intelligent tutoring systems, automated content generation, personalized learning, and interactive educational media(Bhutoria, 2022). Among the emerging AI technologies, ChatGPT has gained considerable attention due to its capability to generate human-like text, assist instructional planning, develop learning materials, and support educators in designing innovative classroom activities. The integration of AI into educational practices has become an essential component of Education 5.0, where digital technologies are expected to enhance creativity, collaboration, and problem-solving skills among both teachers and learners(Samadhiya et al., 2026).

Despite these technological advancements, many educational institutions, particularly non-formal education providers, still encounter challenges in adopting AI technologies effectively. One such institution is LKP Karya Prima Kursus(Tjindrawan & Doradjat, 2025), a non-formal training institution that provides vocational and professional education for the community. As educational demands continue to evolve, teachers at LKP Karya Prima Kursus are expected to develop attractive, interactive, and technology-supported learning materials that can improve student engagement and learning outcomes. However, preliminary observations and discussions with the institution revealed that most teachers still rely on conventional instructional methods and have limited experience utilizing Artificial Intelligence applications in teaching activities.

Several challenges were identified during the initial needs assessment. First, teachers have limited knowledge regarding the practical implementation of AI in education(Chounta et al., 2022). Second, the development of interactive learning media is still performed manually, requiring considerable time and effort. Third, teachers have not yet maximized the potential of ChatGPT to generate lesson plans, learning scenarios, quizzes, teaching

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materials, presentation content, or student worksheets efficiently(ElSayary, 2024). Consequently, the teaching process tends to be less innovative, reducing opportunities to create engaging and student-centered learning experiences.

Recent studies have demonstrated that Artificial Intelligence can substantially improve teaching effectiveness by assisting educators in instructional planning, learning material development, assessment preparation, and personalized learning support. ChatGPT, in particular, has shown considerable potential as an educational assistant capable of accelerating content creation while maintaining instructional quality(Munaye et al., 2025). Previous community service programs have also reported that AI-based training contributes positively to improving teachers' digital literacy and confidence in integrating emerging technologies into classroom practice. Nevertheless, similar training programs targeting non-formal education institutions remain limited, indicating the need for broader dissemination of AI literacy among educators.

Based on these conditions, a community service program was designed to empower teachers at LKP Karya Prima Kursus through Artificial Intelligence training using ChatGPT(Laga et al., 2025). The program combines lectures, demonstrations, hands-on practice, mentoring, and evaluation to ensure that participants acquire practical competencies in utilizing ChatGPT for educational purposes. During the training, participants learn how to generate teaching materials, develop interactive learning media, design assessments, prepare presentation content, and produce creative learning resources that can be directly implemented in their classrooms.

The expected outcomes of this community service program include improved AI literacy among teachers, enhanced competencies in developing interactive learning media, increased confidence in integrating ChatGPT into teaching activities, and the production of innovative instructional materials that support more engaging and effective learning. Furthermore, the program is expected to strengthen the digital transformation initiatives at LKP Karya Prima Kursus by fostering a culture of continuous technological adaptation among educators. Ultimately, this activity contributes to improving the quality of non-formal education services while preparing teachers to face future educational challenges in the era of Artificial Intelligence.

2. IMPLEMENTATION METHOD

This community service program was implemented at LKP Karya Prima Kursus, Indonesia, with teachers serving as the primary participants. The program aimed to improve teachers' competencies in utilizing Artificial Intelligence (AI), particularly ChatGPT, to develop interactive learning media that support more engaging, efficient, and student-centered learning. The implementation adopted a participatory training approach that emphasized active involvement, practical experience, mentoring, and continuous evaluation.

The overall implementation consisted of six systematic stages: Preparation, Coordination with the Partner Institution, Training Material Preparation, Training Implementation, Mentoring and Monitoring, and Evaluation. These stages were designed to ensure that participants not only understood the theoretical concepts of Artificial Intelligence but were also able to apply ChatGPT effectively in developing instructional materials and interactive learning media.

Figure 1. Systematic Flow of Community Service Activities

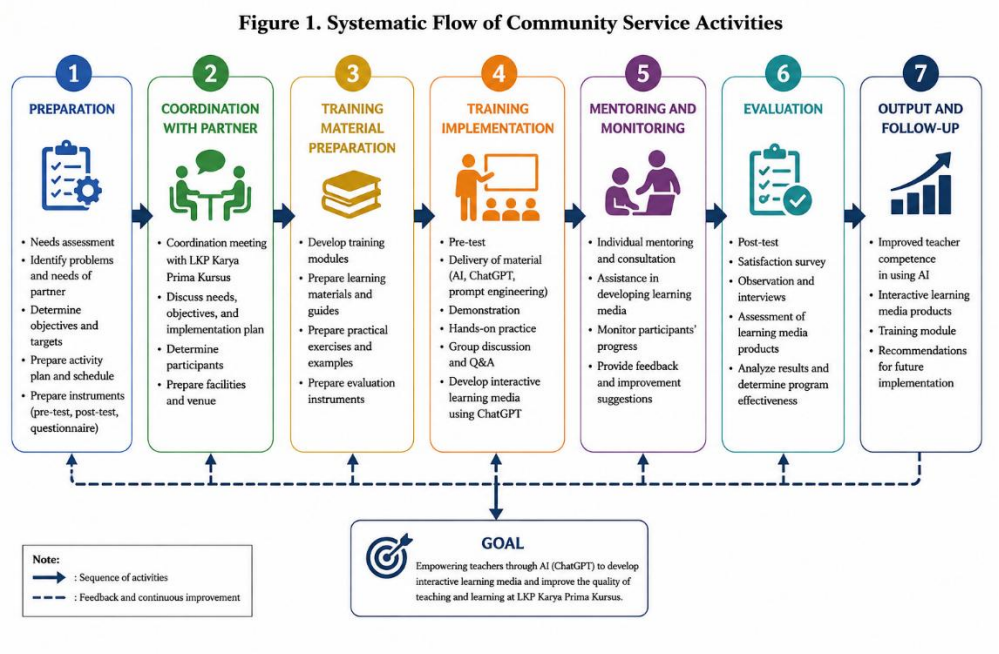


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The activity began with the preparation stage, during which the community service team conducted an initial needs assessment through observations and discussions with the management of LKP Karya Prima Kursus. This activity aimed to identify teachers' competencies, current teaching practices, and challenges encountered in integrating digital technology into classroom instruction. The preparation stage also included preparing training modules, developing presentation materials, designing practical exercises, creating pre-test and post-test instruments, and organizing the implementation schedule.

The second stage involved coordination with the partner institution. Meetings were conducted between the community service team and the management of LKP Karya Prima Kursus to discuss the objectives of the program, determine the number of participants, arrange the implementation schedule, prepare the training venue, and ensure the availability of supporting facilities such as internet access, computers, projectors, and training materials. Effective coordination was essential to ensure that all activities could be implemented efficiently.

The third stage focused on training material preparation. The training modules were designed according to the participants' needs and the current trends in educational technology. The materials covered the concept of Artificial Intelligence in education, an introduction to ChatGPT, account creation and system configuration, prompt engineering techniques, ethical considerations in AI utilization, lesson plan generation, teaching material development, quiz creation, presentation content generation, worksheet preparation, and strategies for developing interactive learning media using ChatGPT. Practical examples and case studies relevant to non-formal education were incorporated to facilitate participants' understanding.

The fourth stage was the training implementation, which constituted the core activity of the program. The training was conducted through lectures, demonstrations, guided practice, group discussions, question-and-answer sessions, and individual assignments. At the beginning of the session, participants completed a pre-test to assess their initial knowledge of Artificial Intelligence and ChatGPT. The facilitators then introduced the basic concepts of AI, followed by live demonstrations on how ChatGPT could be utilized to generate instructional content efficiently.

During the practical session, participants learned how to create effective prompts for various educational purposes, including preparing lesson plans, generating learning objectives, producing classroom activities, creating multiple-choice questions, developing discussion topics, designing project-based learning scenarios, and producing presentation materials. Each participant was required to develop at least one interactive learning media product based on their own teaching subjects using ChatGPT. Facilitators provided direct assistance throughout the activity to ensure that participants could independently utilize the technology.

Following the workshop, the program continued with the mentoring and monitoring stage. During this phase, facilitators observed participants while they implemented the acquired knowledge in developing their instructional materials. Individual consultations were provided to assist participants in refining prompts, improving the quality of generated content, and adapting AI-generated materials to the specific learning characteristics of their students. Monitoring activities also documented participants' progress, identified challenges encountered during implementation, and provided immediate technical assistance whenever necessary.

The final stage involved evaluation of the community service program. Evaluation was conducted using both quantitative and qualitative methods. Quantitative evaluation involved comparing participants' pre-test and post-test scores to measure improvements in AI literacy and practical competencies after the training. Qualitative evaluation included direct observation, participant interviews, satisfaction questionnaires, and assessment of the interactive learning media developed during the workshop. These evaluation methods provided comprehensive evidence regarding the effectiveness of the training program and served as the basis for future improvements.:

2.1 Location and Participants

The community service activity was conducted at LKP Karya Prima Kursus, a non-formal educational institution that provides vocational and professional training programs for the community. The participants consisted of teachers actively involved in instructional activities. They represented diverse educational backgrounds and possessed different levels of experience in utilizing digital technologies for teaching and learning.

2.2 Identification of Partner Problems

Based on observations and interviews conducted before the implementation, several problems were identified:

a. Teachers had limited knowledge regarding Artificial Intelligence applications in education.
b. The development of teaching materials and learning media still relied on conventional approaches requiring considerable preparation time.
c. Most teachers had never utilized ChatGPT to support instructional planning, assessment preparation, or learning media development.
d. Digital transformation initiatives within the institution had not been fully implemented because of limited AI-related competencies among teachers.

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These identified problems became the foundation for designing the community service program and selecting the training materials.

2.3 Implementation Stages

The implementation stages are summarized as follows:

a. Preparation
   1. Needs assessment.
   2. Development of training modules.
   3. Preparation of learning materials.
   4. Development of pre-test and post-test instruments.

b. Coordination
   1. Coordination with institutional management.
   2. Participant recruitment.
   3. Activity scheduling.
   4. Facility preparation.

c. Training Material Preparation
   1. Introduction to Artificial Intelligence.
   2. Introduction to ChatGPT.
   3. Prompt engineering.
   4. Interactive learning media development.
   5. Ethical use of AI in education.

d. Training Implementation
   1. Lectures.
   2. Demonstrations.
   3. Hands-on practice.
   4. Group discussions.
   5. Individual assignments.

e. Mentoring and Monitoring
   1. Individual consultation.
   2. Product improvement.
   3. Progress monitoring.
   4. Technical assistance.

f. Evaluation
   1. Pre-test and post-test analysis.
   2. Participant satisfaction survey.
   3. Observation and interviews.
   4. Assessment of learning media products.
   5. Preparation of recommendations for future implementation.

3. RESULT AND DISCUSSION

3.1 Implementation of Activities

The community service program was successfully implemented at LKP Karya Prima Kursus with the participation of teachers from various instructional backgrounds. The activity began with participant registration followed by the administration of a pre-test to assess their initial understanding of Artificial Intelligence (AI) and ChatGPT in educational contexts.

The training continued with presentations introducing Artificial Intelligence, the role of generative AI in education, and the practical use of ChatGPT for instructional purposes. Participants were introduced to prompt engineering techniques, enabling them to generate teaching materials, lesson plans, quizzes, worksheets, presentation slides, and interactive classroom activities efficiently.

Following the theoretical session, participants engaged in hands-on practice under the guidance of the facilitators. Each participant developed an interactive learning media product relevant to his or her teaching subject using ChatGPT. Throughout the activity, facilitators provided direct mentoring to ensure that every participant understood how to formulate effective prompts and refine AI-generated content.

The implementation concluded with a discussion session, participant reflection, completion of the post-test, and distribution of satisfaction questionnaires. Overall, the participants actively engaged in every stage of the training and demonstrated enthusiasm toward integrating Artificial Intelligence into their teaching practices.

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(a) (b)

Figure 2. (a) and (b) Activity documentation

3.2 Results of Activities

The training produced significant improvements in participants' understanding and practical skills related to the use of ChatGPT in education. Comparison of the pre-test and post-test results indicated an increase in teachers' knowledge regarding Artificial Intelligence concepts, prompt engineering techniques, and the development of interactive learning media.

Table 1. Comparison of Pre-test and Post-test Results

Assessment	Mean Score
Pre-test	58.40
Post-test	87.65
Improvement	29.25

The results indicate that the training effectively enhanced participants' knowledge and competencies in utilizing Artificial Intelligence for educational purposes. In addition, all participants successfully developed at least one interactive learning media product using ChatGPT, including lesson plans, instructional modules, quizzes, presentation materials, and classroom learning activities.

3.3 Program Evaluation

Program evaluation was conducted using participant satisfaction questionnaires and facilitator observations. The evaluation focused on four aspects: training materials, facilitator performance, implementation process, and perceived usefulness.

Table 2. Participant Satisfaction

Evaluation Aspect	Percentage (%)
Training Materials	95.2
Facilitator Performance	97.1
Training Implementation	94.3
Program Benefits	96.5
Overall Satisfaction	95.8

The evaluation results demonstrate that participants expressed a very high level of satisfaction with the community service program. Most participants considered the training materials relevant to their teaching needs and appreciated the practical exercises that enabled immediate application of ChatGPT in classroom preparation.

Facilitator observations further indicated that participants became increasingly confident in generating instructional content independently after several guided practice sessions. The mentoring process contributed significantly to improving participants' abilities to formulate effective prompts and evaluate AI-generated outputs.

3.4 Discussion

The findings demonstrate that ChatGPT-based training can effectively improve teachers' digital competencies, particularly in the utilization of Artificial Intelligence for instructional design. Prior to the training, many participants had limited knowledge of AI applications and relied primarily on conventional methods for preparing

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instructional materials. After participating in the workshop, teachers demonstrated improved understanding of prompt engineering and were able to produce instructional resources more efficiently.

The hands-on learning approach adopted during the program played an important role in increasing participants' confidence. Rather than focusing solely on theoretical concepts, the training emphasized practical application through real classroom scenarios. This approach enabled participants to directly experience the advantages of ChatGPT in supporting lesson planning, assessment preparation, presentation development, and interactive learning activities.

The mentoring stage also contributed to the success of the program. Continuous assistance allowed participants to overcome technical difficulties, improve prompt quality, and adapt AI-generated materials to suit the characteristics of their learners. These findings indicate that combining training with mentoring provides greater educational benefits than conducting workshops alone.

Overall, the program supports ongoing digital transformation initiatives in non-formal education by promoting AI literacy among teachers and encouraging innovative teaching practices.

3.5 Impact and Sustainability of the Program

The community service program generated positive impacts for both teachers and LKP Karya Prima Kursus. Teachers acquired practical competencies in utilizing Artificial Intelligence as an instructional assistant, enabling them to prepare learning materials more efficiently while enhancing creativity and instructional quality.

From the institutional perspective, the training contributed to strengthening digital transformation initiatives through increased adoption of AI-supported teaching practices. The learning media developed during the workshop can be continuously utilized and further improved in future instructional activities.

To ensure sustainability, participants are encouraged to continue practicing prompt engineering techniques, share knowledge with colleagues, and participate in follow-up training on emerging Artificial Intelligence technologies. Continuous collaboration between higher education institutions and LKP Karya Prima Kursus is expected to support long-term improvements in educational quality and digital innovation.

4. CONCLUSION

This community service program successfully achieved its objective of empowering teachers at LKP Karya Prima Kursus through Artificial Intelligence training focused on the utilization of ChatGPT for developing interactive learning media. The implementation, which combined lectures, demonstrations, hands-on practice, mentoring, and evaluation, significantly improved participants' understanding and practical competencies in applying AI technologies to educational activities. The comparison between pre-test and post-test results demonstrated a substantial increase in teachers' knowledge and confidence in using ChatGPT to create lesson plans, instructional modules, quizzes, worksheets, presentation materials, and other interactive learning resources. In addition to improving digital literacy, the program encouraged teachers to adopt more innovative and student-centered instructional approaches that support the ongoing digital transformation of non-formal education. Participant satisfaction indicated that the training materials, facilitation process, and practical learning experiences were highly relevant to their professional needs. Furthermore, the interactive learning media developed during the workshop demonstrated the practical applicability of ChatGPT in enhancing teaching efficiency and instructional quality. To ensure the sustainability of the program, continuous mentoring, advanced AI training, and institutional support are recommended to strengthen teachers' competencies and encourage wider adoption of Artificial Intelligence in educational practices. Future community service initiatives may expand the program by integrating additional AI-based educational tools, thereby promoting continuous innovation and improving the overall quality of teaching and learning at LKP Karya Prima Kursus.

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