The Use of Artificial Intelligence Technology in Enhancing Student Participation in Classroom Activities at the English Subject Teacher's Association

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Abstract: The development of various post-pandemic technologies has significantly changed teaching and learning activities. Through a brief interview between the head of the English Language Teachers' Association in Banjar Regency and the head of the community service team, data was obtained that identified the issues faced by of the English Language Teachers' Association members: 1) Teachers still lack information about various Artificial Intelligence (AI) technologies for English language teaching. 2) The teachers still lack information about free applications that can be used to support technology-based learning to increase student participation. Given the challenges faced by the partners, the goal of this community service was to provide secondary school teachers in South Kalimantan, especially in Banjar Regency, with insights into how AI plays a comprehensive role, as well as training in how to integrate various AI technologies to support the teaching and learning process. The implementation method offered for this activity included lectures, discussions, and collaborative learning with several stages, such as preparation, execution, and evaluation. The results of this training were as follows: 1) New experience for the teachers about AI-based support applications in the learning process. 2) How to integrate these applications into the classroom learning process. 3) Teachers successfully created their learning media using applications learned during the training. 4) Learning practices that integrated AI into the teaching process increased student motivation to learn English. The conclusion of this community service was that services could help the teacher in using technology, especially AI, to increase student participation in class.
Keywords: artificial intelligence; students' participation and engagement; technology

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INTRODUCTION
Utilizing technology during the pandemic is a necessity for teachers to deliver the material that will be presented in the classroom. The pandemic also brings about significant changes to the teaching and learning process. The COVID-19 pandemic has become a powerful catalyst driving transformation in the world of education (Kuncoro et al.,

2022; Zainuddin, 2021). COVID-19 not only causes a health crisis worldwide but also brings about changes in various aspects of life, including education (Rosalina et al., 2020). Initially, the teaching and learning process was conducted face-to-face without the influence of technology. However, due to the pandemic, the teaching and learning process had to involve technology. After almost two years of enduring the pandemic, in the post-pandemic era, using technology in the teaching and learning process has become an inseparable aspect between educators and students. This is in line with the Hindu religious learning activities during the COVID-19 pandemic changing strategy, unlike the learning methods before the pandemic. Before the pandemic, learning was conducted face-to-face. However, during the pandemic, learning shifted to online or distance learning. In online learning, preparation involves strategies, media, techniques, and attention to specific situations. Therefore, educators must have a special understanding and strategy for teaching and learning activities (Paramartha, 2021). The effects of the pandemic have made the use of technology something familiar and necessary to make the teaching and learning process more engaging. Terms such as online and offline learning and utilizing Information and Communication Technology (ICT) are widely recognized in line with the development of Information and Communication Technology (Paramartha, 2021).

The implementation of online learning is certainly inseparable from the role of technology. Technology can provide convenience in all aspects of the teaching and learning process (DS et al., 2022). According to Utami (2019), the rapid development of technology and automation in various fields in the era of Industry 4.0 has led to a shift in roles from humans to robots, which can degrade human existence. To solve this global trend, a transition to the era of Society 5.0 is needed, a concept of society that focuses on developing various aspects (Azhari et al., 2022).

Teachers in the digital era are facing rapid transformation and digitalization to equip graduates with broad skills and competencies in line with the needs of the current digital era and the future. This involves character development, literacy in reading and writing, and digital literacy, considering that the current generation, known as Generation Z, has specific needs and challenges in this regard (Sitompul, 2022). From the research, it can be depicted that its implementation is not as easy as turning one's hand over. The significant gap between educators and students affects the adaptation process itself. The generational gap between students born in the digital era and teachers who are just adapting to digitalization has an impact. The implementation of online learning does not automatically run smoothly; issues still arise. One of these issues is that both teachers and students must be able to adjust the use of technology in the learning process so that the learning process can proceed smoothly and the learning objectives can be achieved (Juliya & Herlambang, 2021; Kuncoro et al., 2022; Verawati et al., 2022). The dominant response is the constraint teachers and students face regarding technology proficiency and the varying conditions in each region (Kuncoro et al., 2022; Muiz & Sumarni, 2020).

Although digital technology rapidly evolves and supports online learning processes conducted by teachers, it still takes time to adapt. Several studies have revealed that the information, communication, and technology competencies of teachers in Indonesia are not evenly distributed across all fields (Adisel & Prananosa, 2020; Kuncoro et al., 2022; Latip, 2020; Surahman et al., 2020). Furthermore, the significant shift

from conventional teaching before the pandemic to online teaching during the pandemic and blended learning (a combination of online and offline learning) afterward demands that teachers adapt to various incoming technologies. The current gap lies in the shift of focus in technology utilization in the learning process, which is no longer centered on teachers (human-centered) but more reliant on technology as the focal point of the learning process (Azhari et al., 2022). From the theory above, it can be depicted that knowledge about applications, especially regarding AI (artificial intelligence) and how to integrate these applications into learning, poses a challenge for some teachers due to limited information about such integration. Artificial intelligence requires a certain level of intelligence for adaptation to new rules, problem-solving, providing answers, planning devices, and executing them (Lukita et al., 2020; Manongga et al., 2022).

AI represents a technological advancement in civilization, and undoubtedly, this will also impact the education sector, particularly in the learning process. This is in line with the issue of education partners' lack of information about the utilization of AI. Integrating technology in the teaching process is expected to enable students to play an active role in learning because effective teaching should always involve interaction and active participation between teachers and students. This is also in line with Elfiana et al (2022), who argue that education within schools involves teachers and students through teaching-learning interactions or the learning process. Education in schools is considered successful when its objectives are achieved, with observable improvements in students' development from day to day.

English Subject Teacher's Association in Banjar Regency serves as a partner for this Community Service (*PkM*) activity. The English teachers who are members of this *MGMP* are approximately 25 individuals, and they are spread out to serve as high school teachers in Banjar Regency. The new government regulations regarding Post-Pandemic Face-to-Face Learning require teachers to design English language teaching using engaging technologies that align with scholarly approaches. Through a brief interview conducted by the head of the service team with the head of the English Language Teachers' Association (*MGMP Bahasa Inggris*) in Banjar Regency and the head of the community service team, data has been gathered regarding the issues faced by the members of the MGMP: 1. Teachers still lack information about various technologies (Artificial Intelligence) for English language learning. 2. Teachers still lack information about free AI applications that can be used to support learning and utilize technology to enhance student participation. In addition to the brief interview with the head of the English Language Teachers' Association (*MGMP Bahasa Inggris*), the head of the service team also conducted brief interviews with teachers who are members of the MGMP community. They agreed that there is still a lack of information regarding the maximal utilization of AI in the learning process.

Given the considerations of the issues faced by partners and some data from the literature theory above, this community service project aims to make a tangible contribution to secondary school educators by providing them with the tools to implement English language teaching concepts that align with the characteristics of the current era. This involves integrating face-to-face learning with technology in a proportional and balanced manner in classroom teaching practices. Therefore, this community service aims to provide insights to teachers in secondary schools in South Kalimantan, especially in Banjar

Regency, to understand the comprehensive role of AI and provide training on integrating various AI applications to support the teaching and learning process. The objectives of our community service project can also be measured through pre- and post-questionnaires that we have prepared, the results of which will be described qualitatively in the outcomes and conclusions section of our activity. The solutions offered for the partner's issues are: (1) Providing workshops for partners to socialize the role of technology/AI in supporting the teaching and learning process, (2) Providing workshops for partners on applications/AI that can be used to enhance student participation in learning English, (3) Diverse learning practices utilizing technology/AI, and (4) Practice using applications/AI to enhance student participation in the teaching and learning process in the classroom.

METHOD

The methods used to carry out this activity were lecture, discussion, and collaborative learning among teachers and speakers (Wijayanti et al., 2023). This community service activity was implemented over three sessions. The first session was on July 26, 2023, covering ChatGPT, Tome App, Lesson Writer, Learning Apps, and Wordwall. This was followed by the second session on August 9, 2023, focusing on using Google Jamboard, Mendeley, Quizizz, and Kahoot for the learning process. The final session was held on September 13, 2023, covering applications such as Canva, Padlet, and Curipod.

The community service activity was conducted at SMAN Banua Boarding School, at Jl. A. Yani KM.17, Kayu Bawang, Gambut District, Banjar, South Kalimantan. The participants targeted for this activity were the Subject Teacher's Association members from Banjar Regency, totaling 30 individuals. The methods used in this community service were lecture, discussion, and collaborative learning. These methods were appropriate for the title of the community service conducted. Initially, these applications were explained or lectured to the participants, followed by discussions or question-and-answer sessions. Subsequently, Collaborative Learning among participants was conducted by creating several teaching materials using the applications that had been taught. Collaborative learning is a form of learning done together to achieve specific goals (Sitompul, 2022). At the beginning, the presenter elaborated on the latest AI-based applications to enhance student participation in the classroom and how to integrate them into the learning process. A discussion or question-and-answer session by the participants and group practice followed this. There were several stages in this community service activity, namely:

The preparation stage included the development of materials for the PkM activity and the formulation of a schedule related to the training with the theme "The Use of AI Technology in Enhancing Student Participation in Classroom Activities for English Subject *MGMP* Teachers in Banjar Regency High Schools".

The implementation stage lasted three meetings to provide materials and practice or trial sessions. During these sessions, information about using AI technology to enhance student participation in classroom activities for English Subject *MGMP* High Schools' Teachers in Banjar Regency was presented, followed by practical exercises. Subsequently, participants were asked to practice implementing AI technology in the classroom to enhance student participation in class activities.

The evaluation stage took place at the end of the activity. This stage emphasized evaluating both the training process and its outcomes. Participants elaborated and implemented their

findings in their respective classrooms at school. Subsequently, the training outcomes were analyzed, and a report on the community service results was compiled. The evaluation stage involved administering a post-questionnaire to the participants regarding the training that had been conducted. In addition, after the training, teachers were also asked to create teaching materials using the technology or AI that had been taught during the training. They were then requested to send videos of themselves teaching using those applications to see how students responded. Collaborative analysis was conducted with the team based on the instructional videos sent by several teachers when using the applications that had been taught.

RESULTS AND DISCUSSION

The outcome was the benefits gained by the participants of this community service activity. These outcomes could be outlined based on brief interviews or testimonies from the participants after participating in the community service activity. In general, the results obtained from this community service activity included:

1. Teachers gained new knowledge about supporting learning process applications. Applications used included *Canva* for listening and speaking learning, *Kahoot*, *Wordwall*, and *Quizizz* for interactive quizzes, *Chat GPT* for online discussions and Q&A with AI, *Padlet* for reading and writing learning, and *Google Jamboard* as an online whiteboard for digital discussions. Additionally, *LessonWriter* was used to create lesson plans and *Curipod* to create PowerPoint presentations (*PPT*). Attached are slides from the training materials and examples of the applications taught during the training. The training material slides are shown in Figure 1.

Figure 1 Material slides during training

An example of the application of Padlet taught to training participants is shown in Figure 2.
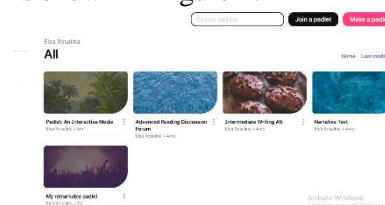

Figure 2 Example of *Padlet* application taught to training participants

2. The process of integrating those applications into classroom learning could be observed from the videos made by teachers while teaching using that AI.

3. The teacher succeeded in creating their learning media using applications resulting from training. This could be seen from how the teacher not only used questions available in libraries like Kahoot, Quizizz, or Wordwall, but they were also able to create questions that suited their students' needs using AI, which became the media used by the teacher for the learning process. In education, implementing AI can potentially solve several existing problems (Sallu et al., 2023).

4. Learning practices by integrating AI into the learning process have increased students' motivation to learn English. The teacher could feel the students' motivation itself during teaching. Teachers who became partners in this training also observed that their students indeed seemed more enthusiastic when the teacher used applications or AI rather than

just using conventional techniques. Artificial intelligence and other technologies, such as virtual reality (VR), three-dimensional (3D) games, and simulations, could enhance students' educational experiences. They could feel significant benefits from combining these technologies in their learning process (Manongga et al., 2022).

5.

This training ultimately provided new insights for teachers regarding using free AI applications that could serve as learning media in their classrooms. These insights were obtained from our brief interviews with the head of the English Language Teachers' Association and training participants and from the results of questionnaires distributed to participants after the training. This was also in line with the statement that Artificial Intelligence requires a certain level of intelligence for adaptation to new rules, problem-solving, providing answers, planning devices, and executing them (Lukita et al., 2020; Manongga et al., 2022). This could also be seen from the instructional videos sent by one of the participants to the team after conducting learning activities utilizing AI, and the results of these videos subsequently became the subject of observation and evaluation by the team regarding the accuracy and success of this training. The success of this training was also supported by the results of the questionnaire distributed after the training, where the responses from the participants were nearly identical. This alignment was also reflected in the statement made by the head of the English Language Teachers' Association at the high school level in Banjar Regency, who also represented the training participants. He stated, *"The training on AI-based applications greatly helped teachers enrich the learning process. The various AI-based applications taught by the team of lecturers and students from the Faculty of Teacher Training and Education from Universitas Lambung Mangkurat greatly assisted us in conducting a very engaging and enjoyable teaching and learning process for students."*

He also added that the applications taught increased student participation and provided convenience for teachers in preparing the teaching process. This was also supported by the statement that technology significantly facilitates various job functions, including education (Madjid, 2022; Sallu et al., 2023). Various positive responses and videos sent by participants, which were then observed by the team, indicated that this training was in line with the outcomes desired by the team for community service. The quantitative data presented in Table 1 were calculated using the results of pre-and post-questionnaires.

Table 1 Quantitative data

Information	Before Training	After Training
Level of familiarity with using AI	60%	90%

The results shown in Table 1 showed an increase in the level of familiarity among teachers in using AI for teaching purposes.

Attached are images depicting the atmosphere of the training conducted by our community service team in Figure 2. Over three sessions were provided, from the presentation of materials to joint practice by the teachers.

(a)

(b)   (c)

Figure 2 (a) Delivery of the material, (b) The practice of using *Canva* by training participants, and (c) Group photo of the last session

CONCLUSION

This community service activity concluded that training on utilizing AI-based learning applications was highly beneficial for teachers in enhancing student participation in the classroom. These AI-based applications could not only be utilized by teachers to enhance student participation but also could be used by teachers to design learning activities, allowing them to utilize time more efficiently.

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