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Strategies to Minimize Negative Effects of AI Applications for Independent English Learning Situation

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Abstract
Applications based on artificial intelligence are becoming widely used in education as well. These applications are utilized by both students and professors. Artificial intelligence-based applications that are available for free and indefinite use raise worries about the possibility of abuse. This study aimed to minimize the negative impacts of using artificial intelligence (AI)-based applications on independent English learning activities. The research method used was a descriptive qualitative approach, with data collection techniques through semi-structured interviews with 15 lecturers and open questionnaires with 169 students from four educational institutions in Palangkaraya City. The results of the study showed that 93% of students and 87% of lecturers stated that the use of AI applications has the potential to trigger violations of academic ethics, especially plagiarism and copyright infringement, if users are not prepared with critical awareness. The key findings of this study underlined the importance of strengthening ethical-based digital literacy through three main efforts, they are1) socialization of guidelines for the use of AI in accordance with academic principles, 2) integration of technology ethics modules in the learning curriculum, and 3) development of a collaborative-based supervision system between institutions, lecturers, and students.

Keywords
artificial intelligence; english learning; negative effects

INTRODUCTION

This research was intended to identify some challenges and formulate some solutions related to the use of artificial intelligence (AI)-based technology in the context of independent learning. The increasingly massive adoption of AI among academics presents both opportunities and risks, so systematic efforts are needed to minimize its negative impacts. Through a case study in Palangkaraya City, it was hoped that the results of this

study can be used as a reference for the development of education policies to face the advanced technology use in English learning process.

There are many artificial intelligence (AI)-based applications that can be used in education. Usually, application usage is selected based on the user's needs. If the user needs help in the brainstorming process, then AI-based applications that can be used include Chat GPT and Gemini AI. These applications can assist users in generating ideas, organizing thoughts, and enhancing creativity. By leveraging AI's capabilities, users can explore new perspectives and solutions that they may not have considered on their own.

The use of Chat GPT in academics and education offers great potential benefits, such as increasing efficiency in learning, providing individual support for students, and helping teachers provide more personalized learning. However, behind the benefits, there are also various questions about data privacy, bias in the both results produced, and the responsibility of users in using this technology wisely.

A study conducted by (Rohmiyati, 2025) stated that that AI can make the future of English learning, helping teachers, policymakers, and researchers understand both its potential and its limits. By using AI, students have potential to improve language, so it’s important to implement it thoughtfully to ensure it complements traditional teaching and creates an inclusive environment for all students.

Meanwhile, the use of Gemini AI is no less popular than Chat GPT. This AI model was developed by Google. Gemini AI can facilitate collaborative learning and discussions between students. This platform allows students to work together on projects, exchange ideas, and provide feedback to each other. This can improve communication skills, teamwork, and intercultural tolerance. Besides of all the positive impact of AI usage, somehow students also feel there are negativity impact of it. AI has been a technological tools in english learning. AI is useful, but students as the one who operates takes a role for using AI. Students should be wiser to operates and even using AI as their learning media, so they will get the positive impact more than the negative impact.

However, it cannot be denied that, apart from the many benefits obtained, there are also negative impacts from the use of AI-based applications in the world of education. The negative impacts include the following:

a. Excessive dependence critical and creative thinking skills. The creativity of students needs to be nurtured, developed and improved (Mulyono et al., 2023).

b. Decline in problem-solving skills. The process of problem solving involves understanding the problem, choosing the proper concept and checking the problem suitability with the proposed solution (Gunawan et al., 2020). AI can provide quick and easy solutions, but students need to learn to more complex problems that do not always have direct answers.

c. The digital divide caused by unequal access to technology and the ability to finance the use of technology in everyday life. Several factors that influence the digital divide includes socio-demographic factors, digital literacy factors, and needs factors. Some solutions that can be taken include improving internet infrastructure and digital technology in remote and rural areas, enhancing teachers' ability to use technology for learning, and increasing students' access to quality digital educational content (Adha Zam Zam Hariro et al., 2024).

d. Making students much lazier than before because the features offered make it very easy for students to complete their college work. Students will easily underestimate the work given (Firdaus et al., 2024).

e. Lack of social interaction in the form of a lack of face-to-face interaction. The good influence of using technology, including simple access to information, maintaining touch with faraway acquaintances, extending horizons, and supporting communication and academic development. However, negative repercussions can occur, such as diminished quality of human communication, lack of non-verbal communication skills, poor academic concentration, and dependence on technology for social contact (Syalwa et al., 2024).

f. Possibility of bias in the answers given by AI. This is influenced by the input that AI uses in training. If the data contains bias, AI will also produce biased output.

g. In the world of education, artificial intelligence is used to personalize learning, where the AI system is able to help adapt learning materials to the learning orientation, abilities, learning styles, and experiences of each student. (Oktavian et al., 2024).

Based on the explanation above, the research team was interested in conducting research that intended to explore the mitigation efforts made by students and lecturers in the city of Palangkaraya related to the negative impacts caused by the use of AI-based applications in English learning activities.

LITERATURE REVIEW

Theoretical support or literature review represents the academic core of an article. A literature review aims to "look again" at what other researchers have done regarding a specific topic. A literature review is a means to an end to provide background and serve as motivation for the objectives and hypotheses guiding your research. A good literature review does not merely summarise relevant previous research. In the literature review, the researcher critically evaluates, re-organizes, and synthesizes the work of others.

Independent learning is a learning system that allows students to learn on their own from printed materials, broadcast programs, and pre-prepared recorded materials. Independent learning activities are the ability and willingness of students to learn based on initiative, with or without assistance from other parties, both in terms of determining learning objectives, learning methods, or learning evaluations. Readiness for independent learning is part of a personality that develops over time through social interaction. This student independence is the ability of students to carry out learning activities that are based on activities, responsibilities, and motivations that exist within the students themselves. Independent learning places students at the centre of their educational experience, allowing them to set and pursue their learning objectives. This process encourages students to take the initiative in defining what they want to achieve academically (Saad et al., 2024)

Nowadays, Artificial Intelligence (AI) is among the growing technologies (Jaakkola et al., 2020). Artificial intelligence is a concept that can be used to develop computers and computing systems to perform tasks that normally require human intelligence. (Setiawi et al., 2024). Artificial intelligence, or more familiarly known as artificial intelligence (AI), has several definitions, namely a) According to (Kusumadewi, 2023) artificial intelligence is a tool to help do work as if it were done by humans, which is part of computer science. b) According to (Barr et al., 2023) Artificial Intelligence is a system that has intelligence almost like humans, which is designed in an intelligent computer system. c) Meanwhile, according to (Rich et al., 2021) artificial intelligence is a discovery that designs how computers can do something that is currently done by humans. Based on the definitions above, it can be interpreted that artificial intelligence provides media and testing of theories about intelligence. These theories can be represented as humans who have brains, as well as computers that are composed of software that functions as brains. In completing various tasks, humans do not only rely on the ability to think and analyze but are also supported

by databases, knowledge, and information obtained from experience and learning processes.

Chat GPT (Generative Pre-training Transformer) is an artificial intelligence system powered by AI that enables text-based conversational interactions. Chat GPT has various functions, including language translation, providing recommendations, increasing productivity, and assisting in education. The use of Chat GPT in education offers benefits such as personalized learning, accessibility and affordability, interactive learning resources, and assignment and problem-solving assistance. (Suharmawan, 2023)

Gemini AI is a high-performance multimodal model developed at Google. Gemini is jointly trained across image, audio, video, and text data with the goal of building a model with strong generalist capabilities across modalities, alongside advanced understanding and reasoning performance in each domain. (Handoko et al., 2024)

Microsoft Copilot is a platform from Microsoft to execute specific commands according to the user's wishes. Generally, a Copilot command is an instruction or question used to tell the Copilot what is desired. It can include four parts: purpose, context, expectation, and source. The more specific the Copilot command, the more accurate the results of the command.

METHOD

The type of research used is qualitative research with a descriptive approach. The goal of this study is a recommendation of strategies that can be used to minimize the negative impacts of the use of Chat GPT and Gemini AI by students and lecturers in independent learning activities. The descriptive qualitative method is a method that describes and explains the actual events of the object being studied based on the situation and conditions when the research was conducted (Sugiyono, 2020). The data collection techniques used was interviews, questionnaires, and observation sheets.

At identification of problems and research objectives stage, the research team determines the problems to be studied and formulates research objectives based on the phenomena that occur in the field. At literature review stage, the research team conducts a literature review to understand the context and theories relevant to the research problem. The sources of the literature review come from journal articles with related themes and primary reference book sources.

After conducting a literature review, the research team designed the research design. The following are the stages of research that have been carried out by the researcher:

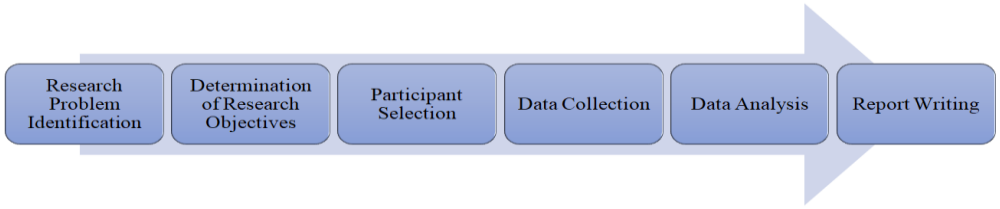

Figure 1. Research Design

This research begins with identifying the problems in the city of Palangka Raya, which is determining the specific topic or phenomenon that is the focus of the study. Starting from the identification of the problem, the research objectives are then formulated clearly to determine the purpose of the study. Furthermore, the selection of relevant participants who have a deep understanding of the phenomenon being studied is carried out; at this stage, purposive sampling techniques are often applied to select key informants based on specific criteria set by the researcher. The data collection process is carried out using qualitative techniques such as in-depth interviews, participant observation, and document analysis to obtain a complete and contextual picture. The collected data then undergoes an in-depth analysis stage by identifying patterns, themes, and categories that emerge inductively. Finally, all findings and research processes are comprehensively documented through writing a report that describes the results of the study in detail and systematically.

To determine the sample for this study, the purposive sampling technique was employed. The criteria for selecting the sample are as follows: 1) Students must have used AI-based applications for a minimum of 4 semesters. 2) Students may come from various study programs in both private and public higher education institutions in the city of Palangka Raya. 3) Lecturers must have used AI-based applications for at least 4 semesters. 4) Lecturers can also come from different study programs, including both PTN and PTS, in the city of Palangka Raya. 5) A total of 184 data points were collected, consisting of 169 students and 15 lecturers.

At the data collection stage, the research team collects data through predetermined methods. The data collection methods that will be carried out are interviews and questionnaire surveys. This survey link is shared via WhatsApp groups and other social

media. After the data is collected, the data is then analyzed. Data analysis is done thematically or narratively to identify patterns, themes, or categories that emerge from the data that has been collected. After the data is analyzed, data validation is carried out. At the data validation stage, data triangulation is carried out or feedback is requested from participants to ensure the validity and accuracy of the findings. Data triangulation in this study was carried out by conducting further interviews with lecturers or teachers, in addition to conducting a relevance search related to the related research topic. After ensuring that the existing data is valid, the findings are interpreted and the research report is prepared. This section explains the findings, implications, and recommendations based on the results of the data analysis.

RESULT AND DISCUSSION

The result and discussion should be presented clearly and briefly in the same section. The discussion part should contain the benefit of the research result, not the repeat result part. The result and discussion can be written together to avoid extensive quotations. The results and discussion must be presented in the same section, clearly and concisely, and not cause multiple representations to many people in the form of interpretations that are not in accordance with what was conveyed by the researcher. The discussion section must contain the benefits of the research results, not the repetition results section. The results and discussion sections can be written in the same section to avoid extensive citations. Image and table legend fonts; 10 points Times New Roman, single-spaced. The legend must be preceded by an appropriate label, for example, "Figure 2" or "Table 2".

Respondents of this study consisted of lecturers and students from Palangkaraya University, Muhammadiyah University of Palangka Raya, STMIK Palangkaraya, and Palangkaraya State Christian Institute. Based on the analysis of data collected from 184 respondents consisting of 15 lecturers in Palangkaraya and 169 students in Palangkaraya related to the use of AI-based virtual assistant applications, the following facts are known:

a. As many as 40 people, or 21.73% of people, are not accustomed to using virtual assistants based on artificial intelligence (AI) in their daily activities. Meanwhile, 144 people, or 78.26%, are accustomed to using virtual assistants based on artificial intelligence (AI) in their daily activities.

b. Based on the category of the number of users, the following data is known: 1) only GPT Chat users are 75 people, or 40.54%; 2) users of GPT Chat and CoPilot simultaneously are 3 people, or 1.62%; 3) users of GPT Chat and Gemini AI simultaneously are 61 people, or 32.97%; 4) users of GPT Chat, Gemini AI, and CoPilot simultaneously are 6 people, or 3.24%; 5) only Gemini AI users are 18 people, or 9.73%; and 6) users of Gemini AI and CoPilot simultaneously are 1 person, or 0.54%. Based on this data, it can be concluded that the AI-based applications that are often used by lecturers and students in the city of Palangkaraya are the Chat GPT and Gemini AI applications. Based on the results of in-depth interviews with respondents who use the Chat GPT and Gemini AI applications, it is known that the reason for using the two applications is because the features are quite complete even though they use the free mode. In addition, the use of sentences used by the two applications in explaining the answers is easier for respondents to understand.

c. Regarding the use of this AI-based application it self by the respondents, it can be seen in the following table:

Tabel 1. Respondents' Use of AI-based Applications

No	Purpose(s) of Use	User Count	Percentage
1	Essay writing, project ideation, question creation, other purposes	39	1%
2	Question creation, other purposes	22	1%
3	Completing assignments, question creation, other purposes	20	1%
4	Completing assignments, final exams, project ideation	12	1%
5	Completing assignments, final exams, essay writing, project ideation, question creation, other purposes	10	1%
6	Completing assignments, final exams, project ideation, other purposes	10	1%
7	Completing assignments, midterm exams, final exams	9	1%
8	Completing assignments, midterm exams, essay writing, project ideation, other purposes	6	1%
9	Completing assignments, midterm exams, essay writing	4	1%
10	Completing assignments, midterm exams, final exams, project ideation, question creation	4	1%
11	Completing assignments, midterm exams, essay writing, project ideation	4	1%
12	Completing assignments, midterm exams, final exams, essay writing, project ideation, other purposes	3	1%
13	Midterm exams only	3	1%
14	Midterm exams, project ideation	2	1%
15	Essay writing, project ideation	2	1%
16	Essay writing, project ideation, question creation	2	1%
17	Project ideation, question creation	2	1%
18	Completing assignments, other purposes	2	1%

No	Purpose(s) of Use	User Count	Percentage
19	Completing assignments, essay writing, project ideation, question creation, other purposes	2	1%
20	Completing assignments, essay writing, project ideation, question creation	2	1%
21	Completing assignments, project ideation, question creation, other purposes	2	1%
22	Completing assignments, project ideation, question creation	2	1%
23	Completing assignments, midterm exams, final exams, essay writing, project ideation, question creation	2	1%
24	Completing assignments, midterm exams, project ideation	2	1%
25	Completing assignments, midterm exams, essay writing, project ideation, question creation	2	1%
26	Completing assignments, midterm exams, final exams, other purposes	1	1%
27	Completing assignments, midterm exams, final exams, essay writing, project ideation	1	2%
28	Completing assignments, midterm exams, final exams, project ideation	1	2%
29	Project ideation, question creation, other purposes	1	2%
30	Completing assignments, essay writing, project ideation, other purposes	1	2%
31	Completing assignments, midterm exams, final exams, essay writing, project ideation, question creation, other purposes	1	2%
32	Completing assignments, midterm exams, final exams, project ideation, other purposes	1	3%
33	Completing assignments only	1	5%
34	Other purposes only	1	5%
35	Completing assignments, essay writing, project ideation	1	5%
36	Project ideation, other purposes	1	7%
37	Completing assignments, project ideation, other purposes	1	11%
38	Project ideation only	1	12%
39	Completing assignments, project ideation	1	21%

Based on the data in table 1, it can be concluded that the majority of AI-based applications are used by students to support independent learning activities, either to find ideas for doing assignments or to dig up information that can be used as a reference for them in doing college assignments. A fact was found in this study, namely that there were several respondents who used AI-based applications as a medium to gain experience talking to other parties, or in social terms, "online consulting." Meanwhile, for lecturers, the use of AI-based applications is more often used for references for teaching materials.

Based on the level of satisfaction with the answers given by the AI-based application, it is known that 10 people, or 5.43% of respondents, are not satisfied; 77 people, or 41.86% of respondents, feel quite satisfied; 70 people, or 38.04% of respondents, feel satisfied; and 26 people, or 14.13% of respondents, feel very satisfied with the results of the answers given by the AI-based application.

Based on the level of respondent dependence on the use of AI-based applications, it is known that 45 people, or 24.32% of respondents, feel very independent; 36 people, or 21.08% of respondents, feel independent; 53 people, or 28.65% of respondents, feel dependent; 21 people, or 11.35% of respondents, feel quite dependent; and 26 people, or 14.05%, feel very dependent on the use of AI-based applications in their activities, especially in completing college assignments or studying independently.

Based on data from lecturers and teachers regarding efforts that can be made to prevent negative impacts from the use of AI-based applications, building and strengthening user awareness to use AI-based applications wisely and not violate applicable academic ethics (plagiarism and copyright violations) is the important key.

Based on data related to respondents' responses to the use of artificial intelligence (AI)-based virtual assistants by students, it can be seen that users are aware that the use of AI-based applications has many benefits, but the use of AI-based applications without control also has a negative impact on users, such as the emergence of a reluctance to think creatively and dulling curiosity by users. Most users are aware that information obtained through AI-based applications cannot be immediately accepted or used without first checking the accuracy of the data. In this regard, user awareness is needed to think more critically about the answers obtained through AI-based applications.

CONCLUSION

This research was purposes to delve deeper into the efforts to mitigate the negative impacts of AI usage in self-directed English learning activities by students and lecturers in the city of Palangkaraya. The results of this research are expected to benefit various parties, both lecturers and students, as well as the organizers of educational institutions. The results of this research provide recommendations for students and lecturers on how to lessen negative impacts in using AI-based application. The findings of this research can be used as one of the considerations for educational institutions in creating rules and policies related to the use of AI-based applications to improve the quality and academic performance of all parties involved. The research method in this study was qualitative research with a descriptive approach has been completed, which produces a real report on the efforts made by students and lecturers in the city of Palangkaraya in minimizing the negative impacts of the use of AI-based applications. This finding is relevant to the finding

by (Apriliani, 2024) who conducted a study about AI use in Indonesian language learning. The use of artificial intelligence in Indonesian language learning for students and teachers indicates that AI has the ability to enhance the quality of learning. AI can help personalize learning, provide faster and more accurate feedback, and improve teaching methods. AI can help teachers create more effective and efficient materials. This study finds that AI technology offers potential to support and facilitate English language acquisition. AI technology delivers some benefits for both teachers and pupils if AI technology is placed as aiding tools. It will not replace teachers' role in the class. The emergence of AI technology has challenged teachers to be more creative and deliberate in developing learning scenario which place students as the focus of the learning process (Hartono, 2024). However, in order to be used efficiently, AI implementation requires infrastructure preparation as well as an increase in digital literacy among teachers and pupils. The use of AI also provides prospects for the creation of more flexible and individualized teaching approaches, but this must be balanced with teacher training and investment in technology infrastructure. This study also emphasizes the necessity of educational policies that promote the use of AI, as well as the need for ongoing evaluation to ensure a good influence on student learning outcomes. The use of AI-based applications referred to here is the use of applications in independent English learning activities, whether in activities to work on assignments or projects or digging up information to be used as a reference in English learning. It is relevant to the study conducted by (Idayani et al., 2024). Based on the research conducted by Idayani et al. (2024) on the implementation of AI usage ethics in the education system and learning analysis in Indonesia, it is known that the utilization of artificial intelligence in assisting individual work in the field of education opens many opportunities to improve the quality, efficiency, and accessibility of education. However, its implementation must be carried out with caution, considering ethical and humanitarian aspects, while still preserving the essence of education as a process of holistic human development. However, it is important to remember that AI should function as a tool to enhance, not replace, the role of teachers and human interaction in education. Artificial intelligence cannot replace the teacher's job. AI technology only supports teachers in the classroom and increases student learning, thus its existence should be employed optimally following its capacity and purpose. To ensure that humanist principles and affection in an educational process continue and remain consistent with the core of that education, which

is humanizing persons, the importance of the teacher's position must be upheld (Nur, 2023). AI technology should be used in a way that strengthens teacher-student relationships and encourages the development of important social and emotional skills. With a balanced and wise approach, the utilization of AI in education can open the door to a new era of more effective, inclusive, and student centered learning. The suggestion that can be given based on the results of this study is that there needs to be wise socialization of using AI-based applications for students throughout the city of Palangkaraya. It is very important to raise and increase awareness of students and college students throughout the city of Palangkaraya to avoid academic deviations in utilizing AI-based applications. In the next stage, longitudinal research is needed to evaluate the long-term effectiveness of the recommended mitigation measures for the negative impacts of AI suggested through this study. This approach involves continuous monitoring of the practices of lecturers and students in implementing strategies to prevent the negative impacts of using AI-based applications, as well as measuring their impact on academic integrity and learning outcomes. Further research data can be periodically collected through in-depth interviews, participatory observations, and document analysis to identify changes in AI usage patterns. Additionally, it is necessary to replicate the study in other regions of Central Kalimantan to test the generalizability of the findings. Expanding the scope allows for the identification of contextual variations in AI usage and specific policy needs based on the demographic characteristics and digital infrastructure of each location. Comparing data between regions will enrich the understanding of regional challenges in the wise use of AI-based applications.

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