

**THE INTEGRATION OF ARTIFICIAL INTELLIGENCE-BASED APPS IN
INDONESIAN AND INDIAN ELL CLASSROOM CONTEXT:
THE LECTURERS' PERCEPTION**

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Abstract:

The use of Artificial Intelligence-based apps (hereafter, AI-based apps) in ELL classroom has received massive attention. It can affect the teaching learning process as well as the achievement of the students. Therefore, this research was conducted to investigate how the lecturers from Indonesia and India perceive the use of AI-based apps in their ELL classroom. To collect a rich set of data, online questionnaire, interview and focus group discussion were conducted to the representatives of Indonesia and India who experienced integrating AI-based apps within their teaching learning process. The findings could be broken down into three divisions. The first finding implies that all lecturers had positive perception upon the use of AI-based apps in ELL classroom. The second finding implies there were 8 major challenges faced by the lecturers. The last finding figures out AI brought varied merits and demerits in ELL classrooms.

Keywords: AI-based apps, Perception, ELL Classroom

INTRODUCTION

Entering the era of advanced technology, artificial intelligence (hereafter, AI) has made crucial breakthrough in the field of language teaching and learning, especially in English language learning (henceforward, ELL). The rapid development of AI promotes the innovation in ELL. AI not only changes the students' way in their language input and output but also it significantly promotes the reform and innovation in ELL mode (Dong & Wang, 2020). Therefore, AI brings great impacts to the enhancement of education quality especially within language learning and teaching environment.

Using AI technology to teach English represents the implementation of AI in English language learning and teaching involving chat-bots, virtual tutors, educational games, and personalized learning programs (Rukiati et al., 2023). Their usage is aimed at making the ELL more efficient, fun, engaging, and accessible. In addition, the four core language skills—speaking, listening, reading, and writing—can be fostered in a variety of ways by incorporating AI into language learning environments. AI-driven technologies have become increasingly prevalent, offering learners immersive and interactive language learning experiences. These technologies can improve the students' communication skills and speed up their language learning process since they provide features like tailored material, adaptive tests, and real-time feedback (Rusmiyanto et al., 2023).

In the tertiary education, especially in ELL, AI provides the lecturers with new insights and things that possibly affect the existing English classroom practices. The use of AI indicates that the roles of the lecturers are being disrupted which could affect positively and negatively. It means that some activities that performed by the lecturers can be replaced by the expenditure of AI. For

instance, feedbacks that habitually given by the lecturers for the students after they answer the reading comprehension questions can be replaced by instant feedbacks given by the AI-powered applications. Moreover, the AI-power applications also make the learning authentic and accessible through the students' devices. Therefore, AI can be viewed beneficial for both the lecturers and the students. With AI providing tailored learning, it is highly possible that the students can learn without having a lecturer present (Sumakul et al., 2022).

Nevertheless, despite the possible advantages, there are significant challenges and disadvantages with using AI in language learning. These portray that AI has started to invade the ELL classrooms. Therefore, this research would investigate the perceptions of the lecturers from Indonesia and India towards the use of AI in English language learning classrooms. Specifically, the research is aimed at answering three research questions: 1) How do the lecturers from Indonesia and India perceive the use of AI in English language learning classrooms? 2) What are the challenges of integrating AI into English language learning classrooms? and 3) What are the merits and demerits of implementing AI in English language learning classrooms?

METHODOLOGY

To answer the research questions as well as to collect comprehensive research data, this research had been designed and conducted as mixed-method research. Mixed method designs are described as combining the collection and analysis of both quantitative and qualitative data within a quantitative research design or qualitative research design (Creswell, 2002) As the design was used, the data analysis and data interpretation leaned profoundly on the quantitative analysis. To collect the quantitative data, online questionnaire that addresses both Indonesian and Indian lecturers' perception on the use of AI-based apps in their ELL classroom. In addition, focus group discussion (hereafter, FGD) and interview were planned and performed which aimed at gauging the English Department lecturers' views on the challenges, merits and demerits of AI which inserted within the English class context in Indonesia and India. As the respondents of this current research, 29 English Department lecturers were involved. From 29 respondents, they could be broken down into 2 cohorts; 18 lecturers from India (6 males and 12 females) and 11 lecturers from Indonesia (5 males and 6 females). All respondents were the representative of both English Departments of both private institutions in Indonesia and India.

The quantitative data of the research were obtained by means of administering AI Perception questionnaire which could be accessed online by the respondents. This questionnaire was adapted and modified based on the aspects written by Aljohani (2021) involving the effects of AI in English language learning (Aljohani, 2021) and AI literacy aspects by Chai et al. (2021). The online AI Perception questionnaire consisted of 15 items where 11 items had been developed in line with AI effects and 5 items was intended to delve the AI literacy of the respondents. All items have a 5-point Likert scale type from "strongly agree or SA" (scored 5) and "strongly disagree or SD" (scored 1). Furthermore, the items were not scored reversed. Meanwhile, the qualitative data were collected by conducting interview and FGD. The researcher prepared the interview protocols and focus group discussion topic to guide the data gathering activity. These instruments were adapted from Celik et al. (2022) and modified which aimed at obtaining deep understanding of the respondents about their perceptions toward the use of AI in English language learning. There were 2 aspects used as the basis of the interview and FGD such as technical knowledge and technical capacity of AI. Specifically, the aspects involved the potential causes and challenges the lecturers

faced in implementing AI and the advantages and disadvantages of AI in English language learning class.

The respondents were invited to go into further depth about their responses and their level of perception of AI during the virtual focus group and interview sessions. A panel of two experts assessed the validity and reliability of the instruments. With a PhD in hand, the expert judges specialize in educational technology and English language instruction. They assessed the instruments according to how well the items corresponded with the research's theoretical frameworks. Feedback on the items' readability was provided after the items' appropriateness to the objectives was emphasized.

The procedures of collecting data could be done in several ways. Priorly, the respondents filled out the online questionnaire that were sent to them via Google Form. Using the descriptive statistic method, the online questionnaire data were first sorted and analyzed such as the mean scores and standard deviation. Then, the representative participants from both universities participated in the online interview based on the appointed time and date. Lastly, the focus group discussion was conducted virtually via Zoom meeting which allowed the respondent representatives of both universities to participate at once. Afterwards, the gathered data were analyzed both quantitatively and qualitatively because a mixed-method study design was used. To determine the degree of the perception towards the use of AI in English language learning and to figure out the differences between lecturers' perception from India and Indonesia, the quantitative analysis computed descriptive statistics (means and standard deviation). Meanwhile, the qualitative data that were collected through focus group discussion and interview were analyzed to figure out the lecturers' point of views on the challenges they faced in integrating AI into their English class, as well as the merits and demerits of using AI to assist them in their English class.

FINDINGS AND DISCUSSION

After research instruments were administered to gain the research data, plentiful findings were gauged in relation to answer the research questions. These findings embodied and answered the research questions dealt with the lecturers' perception on the use of AI in English language learning classroom, the different perception of Indonesian and Indian lecturers on the use of AI in English language learning classroom, and the merits and demerits of English language learning class assisted with AI.

The Lecturers' Perception on the Use of AI in English Language Learning Classroom

The perception of all respondents both from Indonesia and India towards the ELL classroom assisted with AI was presented in the form of table 1 as follows:

Table 1 Means for the Lecturers' Perception

No	Aspects	Means	SD
A	AI effect		
1.	The use of artificial intelligence in education improves the educational environment for learning English language.	3,76	0,99
2.	Artificial intelligence is important to use these days in education to prepare language learners to acquire language learning need of Saudi Arabian vision in education.	3,86	0,92
3.	Artificial intelligence contributes to language development faster.	3,55	0,95
4.	Artificial intelligence caters the needs of all age group and faster the ability in language in English language learning.	3,41	0,87
5.	Artificial intelligence clarifies many points that the teacher cannot cover in his/her explanation.	3,48	0,99
6.	Artificial intelligence fulfils and complements all students' language learning needs.	3,45	1,12
7.	Artificial intelligence enables students to obtain additional educational support for what the teacher does in English language classroom.	3,55	0,99
8.	Learning through using artificial intelligence will make learning language less terrifying than learning it using traditional way.	3,41	1,02
9.	Artificial Intelligence changes the way how students acquire English language skills.	3,90	0,82
10.	The teacher's role will diminish when the student uses artificial intelligence to learn the English language.	2,86	1,22
11.	The use of artificial intelligence affects the ability to communicate with the teacher.	3,48	0,87
B	AI literacy	Means	SD
12.	I know that the use of AI in English language learning can be used to recognize images.	4,14	0,64
13.	I can use AI-assisted voice recognition software to search for information in English language learning.	4,14	0,83
14.	I can interact with AI assistants via speech recognition (e.g., Siri, Google) in English language learning.	4,07	0,92
15.	I am able to use online AI translation tools in English language learning.	3,97	0,91

Based on table 1, it can be figured out that the means of the items under dimension of AI effects (11 items) ranged from 2.86 (SD=1.22) to 3.86 (SD=0.92). The means under the dimension of AI literacy ranged from 3.97 (SD=0.91) to 4.14 (SD=0.64). based on these descriptive quantitative findings, it can be interpreted that all lecturers perceived positively towards the use of AI to support their ELL classrooms.

The findings of the current research are supported by the research results of Aljohani (2021) that the teachers had positive attitude towards the use of AI to learn English language in Saudi Arabia. Moreover, another study by Chounta et al. (2021) also supports the current research findings that the teachers of Estonian K-12 education perceived AI as a tool to support them in accessing, adapting and using multilingual content. It was found that the teachers under study were identified to possess limited knowledge about AI and how it could support them in practice. They require support to be efficient and effective in the world practice, and to do it, AI is perceived possible to provide this support.

The lecturers' perception towards the AI as educational technology is based on their experiences in teaching which accumulated within the long-term teaching process and activities (Lin, 2022). Furthermore, this perception will benefit them in updating and expanding their comprehension upon professional knowledge, their communication skill, their professional development and the quality of language teaching. The perception of the lecturers were also investigated by Sharawy (2023) who involved the faculty members as the participants of the study. The findings showed that the faculty members were willing to adopt AI in their institutions. They also viewed AI as a tool to achieve the accessibility and equity which possibly accomplished after successfully combating the challenges of AI brought.

As AI is crucial in ELL, its existence must be arranged and integrated into curricula for tertiary education. it is supported by the research findings of Mandal & Mete (2023) that AI integration in the curriculum offers a student-centric approach to learning and increases the joy of learning, and it also supports lecturers with their instruction, assessment procedures, and other areas. Students will be ready for technological innovation and able to adapt to the shifting demands of society with the inclusion of AI in the curriculum.

The Challenges that AI Brings to ELL Classrooms

The data about the challenges that the lecturers faced in integrating AI into their ELL classrooms were collected by means of interview and FGD which conducted virtually via Zoom meeting to the representatives of the lecturers from Indonesia and India. These findings were afterwards analysed to sift the findings in detail. The findings are presented in the form of a figure as follows:

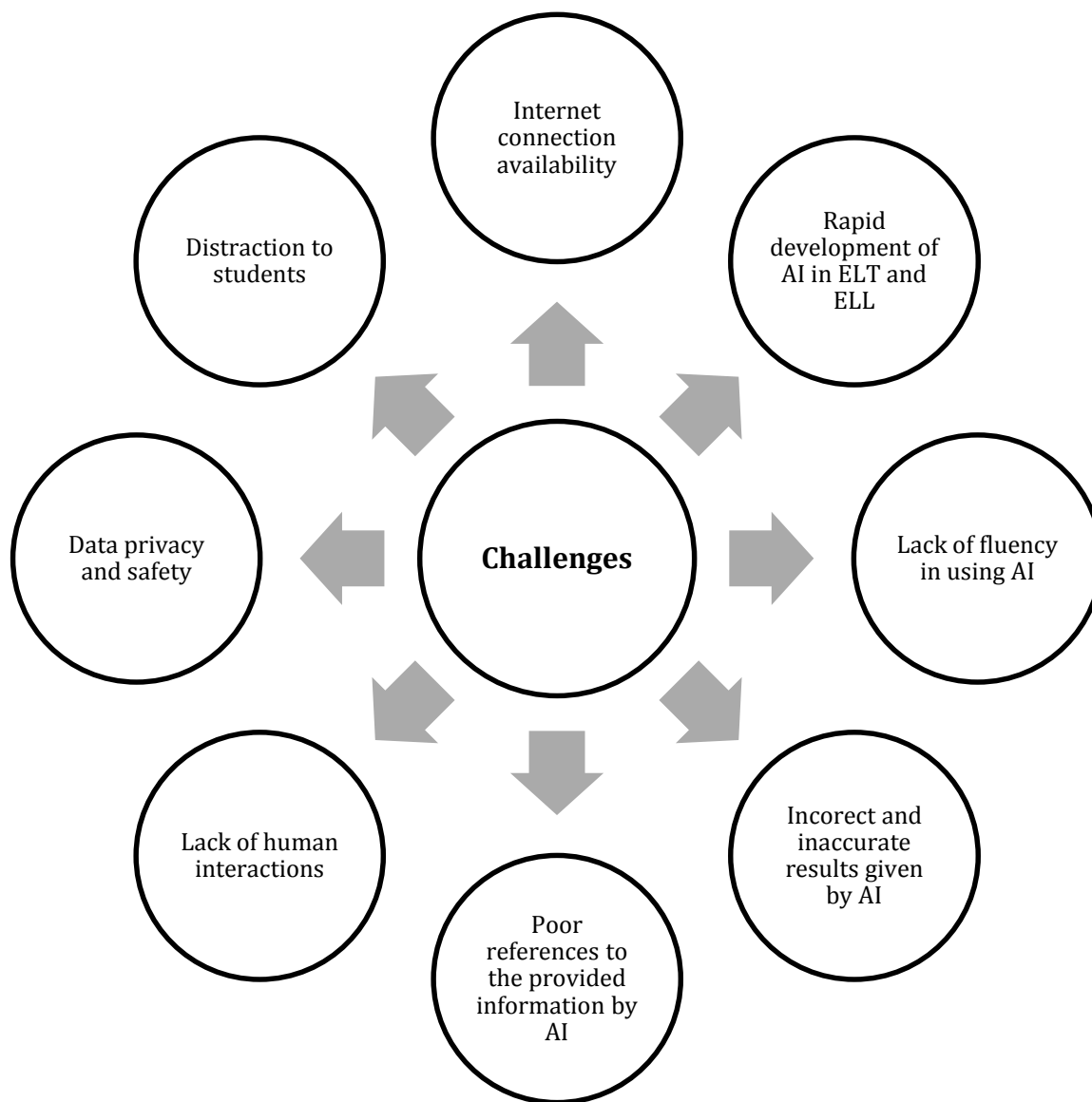


Figure 1 The Challenges of Integrating AI in ELL Classroom

Based on the figure 1, it can be figured out that the lecturers faced 8 major challenges in integrating AI into their ELL classrooms. They were internet connection availability, rapid development of AI in ELT and ELL, lack of fluency in using AI, incorrect and inaccurate results given by AI, poor references to the provided information by AI, lack of human interaction, data privacy and security, and distraction to students.

The use of AI in ELL definitely requires good and strong internet connection to stay connected with the devices which support AI implementation. If the strong internet connection is available for both the lecturers and the students, a promising ELL will be formed and accomplished. In this case, the facilities provided by the institutions must be supportive to AI.

The next challenge was the rapid development of AI in ELT and ELL which enables the applications driven by AI are able to precisely customize material in real-time to each user's needs,

preferences, and learning style. However, the rapid development of AI will diminish its benefits if the lecturers and the students possess unsatisfactory fluency in using AI. Moreover, AI-powered applications do not always provide its users with correct and accurate results. It is because decision-making abilities of AI systems is sometimes mistrusted because they are not always entirely reliable. Then, AI-powered applications also provided poor references to the given information given. This condition ensures that the role of the lecturer in ELL is still necessitated particularly in providing the students with proper and various references to their students.

Another challenge was lack of human interaction. Khanzode & Sarode (2020) argued that the main limitation of AI language learning tools is the poor human interaction which become problematic for the students who prefer a more interactive and personalized learning experience (Rebolledo Font de la Vall & Araya, 2023). To optimize the use of AI in ELL, it requires still human touch which can guide, conduct and join the learning process more meaningful.

The challenge of using AI which become serious issue for its users was data privacy and security. AI and its applications' machine learning and decision-making capabilities rely on vast amounts of classified data, most of it sensitive and private (Harkut et al., 2019). It becomes susceptible to major problems like identity theft and data breaches as a result. These tools are typically internationally networked, making it challenging to control or limit their use. In addition, it is obviously known that AI is attracting and fun. However, if it is excessively used without the students' self-awareness and self-control, it can distract them from learning as their main task.

The Merits and Demerits that AI Brings to the ELL Classrooms

The research data about the merits and demerits that AI brings to the ELL Classrooms that gathered by means of virtual interview and FGD which engaged the representatives of the lecturers from Indonesia and India. These obtained data were analysed to sift the findings in detail which can be presented in the following table.

Table 2 The Merits and Demerits of Integrating AI in ELL Classroom

Merits	Demerits
<ul style="list-style-type: none"> - The students are easier and quicker in finding answers to questions in ELL. - The class is focused and the outcome is positive. - It can provide the lecturers with the material that they want to teach in class. - The students learn the hard topics easily. - It takes less effort to prepare exercises. - It simplifies complex things and provides many options for supporting the learning. - The students were exposed to different varieties of language with adequate examples and activities 	<ul style="list-style-type: none"> - Excessive use of AI by the students could hamper or limit their own critical and analytical skills as well as creativity. - The use of AI can hamper the learning which is made possible only through repetitions and spending time over concepts and things that need serious reflection. - The students are over reliant and dependent on AI and think less. - The students generate answers using AI.

- It makes the students to access relevant information easily which eases their learning.	- The students pay less attention in classroom teaching since it makes them procrastinators.
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Based on table 2, it can be identified that AI has varied merits and demerits to its users, particularly in ELL classrooms. Khanzode & Sarode (2020) stated that the benefits of AI are incredible including accomplishing tasks faster than a human, handling complex tasks with ease, doing tough tasks quickly, performing multiple tasks at once, increasing efficiency quickly, and finding previously undiscovered items. Similarly, Fitria (2021) also concerned on the good relationship between AI and English teaching. AI changes the atmosphere in which English is learned. The English learning becomes more visual and stereoscopic by means of integrating images, sound, and text in AI-powered devices.

Moreover, according to (Gawate, 2019), AI is advantageous to ELT and learning instructional programs. For instance, AI-based systems that can learn English in multiple ways and provide feedback can be developed. For tasks like grading, review, cross-verification, and in-depth presentation, it can be utilized in AI-based educational programs to measure and interpret the data in accordance with the demands of the students. The success of the students is evaluated in every way. Besides, with the use of an AI-powered learning platform, students may study at their own pace, go over material again, identify areas of difficulty, participate in activities tailored to their interests, and more. It highlights how the English course materials are created depending on student needs.

Then, the findings of this current study were also supported by the research findings of Liu (2023) that the use of artificial intelligence (AI) technology in teaching foreign languages is auspicious, and with the abundance of language practice chances and materials made possible by AI, learning efficiency has increased and individualized education has been provided.

CONCLUSION

Based on the research findings, it could be concluded that the ELL-injected AI has shown promising results, of course, after combating with the demerits of it. Even though, AI is favorable in colorizing and designing the meaningful ELL classrooms, its problems and challenges must be granted proper solutions. It can be achieved through vigorously exploring and smearing AI in ELL classes to accomplish the learning outcomes. Therefore, a set of suggestions are proposed as follows: 1) The lecturers must ensure that the AI-powered applications have data security and privacy protection system, 2) The lecturers must join particular trainings to train themselves about the basic skills of operating and utilizing AI-powered applications, 3) The lecturers must choose appropriate AI-powered applications which support the students' learning and needs as well as optimally achieve the learning outcomes, and 4) The lecturers' roles are required to accompany the students when they are engaged in ELL-injected AI technologies.

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