ARTIFICIAL INTELLIGENCE USAGE IN HIGHER EDUCATION: EFL STUDENTS' VIEW

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Abstract
This research aims to determine students' perceptions and challenges faced using AI due to the gaps faced by EFL students. This research uses a qualitative method which uses two data collection techniques, namely observation as supporting data and interviews with 6 students from different classes as main data. To analyze the data, researchers used thematic analysis and then used content validity to support the research. The results of this research show that the majority of students agree that the use of AI in EFL classes is very helpful in the independent learning process and improves speaking, reading, writing, and giving ideas. So the researchers concluded that based on students' perceptions, these perceptions had a positive impact on the use of AI in EFL classes. Researchers hope that students and lecturers can use AI according to the role of AI. Researchers also hope that this research can become a reference for readers.

Keywords: AI, higher education, student perceive

Introduction

The advancement of technology has entered a period of revolution, especially in the EFL classroom. These advances allow teachers and students to learn online and rely less on physical classrooms. Compared to the previous ten years, university students are exposed to more online learning through online lectures, cyber campuses, and blended education (Arai et al., 2024). English language education is one area of human society that has seen machine learning. With AI, schools no longer need to rely on traditional classroom settings to offer their students personalized learning materials, interactive communication possibilities, assessments, and advice tailored to each student's unique needs (Seo et al., 2021). The majority of students use artificial intelligence (AI) apps in the field of English as a foreign language (EFL) to learn vocabulary, grammar, speaking, and writing. Furthermore, there is a mobile device version of this application, which increases students' accessibility and convenience of learning (Wang & Stockwell, 2023).

The AI technology generates real-world learning scenarios in a self-

controlled manner. From this viewpoint, AI can be viewed as a valuable ally for everyone, not just students, as it will render the process much simpler by having an extensive but individualized impact on each student (Persson & Nouri, 2018). Educators have ideas about the benefits and drawbacks of artificial intelligence (AI), even though artificial intelligence (AI) has been proven to be beneficial for language learners. However, little is known about the role of educators in implementing AI in the classroom. Some educators in EFL classes have a different view because some assignments must be created or completed to guide students. Students can always use applications or other forms of artificial intelligence (AI) technology, this creates a problematic factor, namely students underestimate the tasks given and are abandoned by educators. This problem can make students unable to explain their work when asked or present the results of what they have done (Cheng et al., 2020). In this research, it was found that student's perceptions of the use of AI were only sent by a few researchers because there are various ways how AI can be used in the classroom, making students confused and having difficulty with which direction is correct (Kim & Kim, 2022). This problem is almost the same as the problem in this research, namely that AI can change everything so that it affects students' development skills related to critical thinking and makes students feel lazy about studying so they ignore assignments and cannot develop skills.

The advantages and disadvantages of AI in the EFL classroom

In development, there are also hopes for the future that form the basis of all human behavior. Since it hasn't happened yet, the future is uncertain, but it can be created and brought about by applying the knowledge that humans currently possess. The better human understanding of the present and its historical context, the more completely human potential for the future can be realized. To understand artificial intelligence's (AI) advantages and disadvantages, humans must have a firm understanding of both what AI is today and what could happen if it is widely used in society. AI may open up new avenues for learning, teaching, and education, but it may also bring about societal changes that provide new challenges for educational establishments (Aljohani, 2021). Proficiency in utilizing artificial intelligence (AI) in the classroom is crucial. The next great thing in education may be artificial intelligence (AI) and its automation features. Technology advances have put teachers and students under greater pressure to meet new requirements. Recently, science and education have shifted their focus to the use of digital technology (ELT). Does digital media present a "friend or foe" situation? (Meyer & Volkmann, 2015). The unique abilities that educators must possess about AI in the classroom. AI gives educators new tools that might change how they educate in today's classrooms in all subjects, including English as a Foreign Language (EFL) which is one example that may be affected by the use of AI (Sumakul et al., 2022).

The future advances in AI

The recent advances in AI technology indicate that AI can assist instructors in instructing students in EFL classrooms. AI technology is available to assist in completing homework that educators assign by using student-helping AI-powered apps. The ability of computers, or computer-controlled robots, to perform jobs

normally performed by humans because they require human intelligence and judgment is known as artificial intelligence (AI). Artificial intelligence (AI) automation components could be the way education is delivered in the future. Technological advances have created new challenges and demands for students and educators. Meanwhile, the implications of ICT (information and communication to improve their skills (Sumakul et al., 2022). A comparative study of business administration and management and education students towards AI found that students in both fields had positive attitudes toward AI. Finally, research modeled English lecturers' behavioral intentions to use AI in secondary schools and found that EFL teachers found AI technology to be very helpful in their teaching and easy to use (An et al., 2023).

Artificial intelligence (AI) has significantly changed various aspects of society, including education, and AI-based applications have been developed for teaching and learning processes, including in English as a Foreign Language (EFL) classrooms. Based on initial observations made by researchers in the EFL classroom environment, there is a gap faced by EFL students because before AI existed, lecturers did not understand and master how to use AI and now EFL students must master AI more and be able to use AI wisely. AI also has a positive influence on lecturers and students, where AI can help lecturers and students in the teaching and learning process, AI can also make it easier for lecturers and students to find teaching and learning references.

Method

This research is qualitative. In this type of research, the researcher collected, classified, analyzed, and drew conclusions based on the data analysis without generalizing. Inductive in nature, qualitative research typically involves the researcher examining meanings and insights in a particular context. A method for investigating and comprehending the meaning that individuals or groups assign to a social or human situation is qualitative research (Creswell & Creswell, 2018). The approach used in this research is a narrative approach because it took the case of students' perceptions of using artificial intelligence in the EFL classroom. In this context, students' perceptions are very important because currently, artificial intelligence has become very widespread in the world of education, especially in EFL classrooms

Research setting and participant

This study focused on investigating of the perceptions of EFL Students of using artificial intelligence in EFL classroom. The researcher explored the perception and challenges of the lecturers of using artificial intelligence in higher education EFL classrooms. According to interpretations of participant responses to the interview, the researcher gathered the data to analyze the research questions and used a frame of reference to better comprehend this study. The result of the study allows the researcher to grasp the occurrences in detail through descriptions and explanations.

Data collection method

The data in this study were interview. The technique of collecting data is the way the researcher does for collecting data in research. In this research, the researcher chooses a technique for collecting the data that is interview.

The speaker used to obtain information is called an interview. In a research interview, both the interviewer and the interviewee participate in the conversation and answer the interviewer's questions. Interviews can be conducted in person or online (Young et al., 2018). The interviews were conducted after researchers found several students using artificial intelligence in class. This interview was conducted on 13, 14, and 15 May 2024 with 6 students at Universitas PGRI Adi Buana Surabaya. This research only took 6 respondents to be interviewed because according to the researchers they represented the diversity of reactions from the results when the researchers made observations. This interview was conducted to find out directly what their perceptions are regarding artificial intelligence and what challenges students face.

Data analysis

Thematic analysis is the analysis method used. A qualitative research method called thematic analysis is used by researchers to methodically arrange and examine huge, complex data sets. It entails searching for themes that encompass the stories found in the accounts of data sets. It involves going over the data transcribed several times to look for themes (Dawadi, 2020). Finding themes, or important or fascinating patterns in the data, is the aim of a thematic analysis. These themes are then used to analyze the research or make a point. Beyond merely summarizing the content, a strong thematic analysis comprehends and makes sense of it. A common error is to make the theme of the interview the main interview questions (Stranges et al., 2014).

Six steps were devised by Braun and Clarke (2006) after the researcher determined that theme analysis was the best method for data analysis and after the researcher considered the approach they were going to take. Below are the elaboration of the steps:

Familiarization

The researcher has started by getting to know the data; it's critical to obtain a complete picture of all the information the researcher has gathered.

Coding

The researcher coded the data in the following stage. Encoding is the process of emphasizing specific textual elements, usually phrases or sentences. and produce "codes" or acronyms to express the idea.

Creating theme

After looking over the generated codes, the researcher looks for trends among them and starts to come up with themes. Generally speaking, themes are larger than code. A theme has been created by combining multiple codes.

Examining the themes
The themes' utility and accuracy in representing the data were checked by the researchers in the following phase.

Defining and naming themes
At this point, the researcher had a final list of themes and needed to give each one a name and definition. Clearly defining each topic and determining how it aided in the researcher's understanding of the data are the two aspects of defined themes. Choosing a succinct and understandable name for every topic was the first step in naming themes.

Writing
The researcher wrote the data analysis as the last stage. Writing an introduction to clarify the researcher's goals, approach, and research topic is necessary for any academic publication, including thematic analyses. Furthermore, a methodology section detailing the methods used (e.g., semi-structured interviews, open-ended survey questions) to collect the data and perform the thematic analysis has been included by the researcher.

Data validity
A validity assessment technique called content validity is used to make sure that the items or questions in a measurement tool accurately reflect the idea or subject under investigation. Making sure that the questions and responses are pertinent to the research topic and can yield valuable insights helps enhance the content validity of the study. Making sure that questions or items are neither unclear nor overly vague is another way to increase content validity. To collect interview data and create questionnaires, content validity is frequently employed (Roebianto et al., 2023). The researcher gets information or data from interviews. It emphasizes the use of techniques to get the data. Finally, the researcher gets valid information about perceptions and challenges those students faced in higher education EFL classrooms.

Findings and Discussion
The results of the research explain students' perceptions regarding the use of AI in classroom learning. The results of this research were obtained from interviews conducted on May 29 20224 with 6 English students at PGRI Adi Buana University, Surabaya. The findings from the research show the results of EFL students' perceptions of the use of Artificial Intelligence in higher education EFL classes. The students were asked to answer questions related to the use of artificial intelligence in EFL classes. After collecting data, researchers analyzed the data to get students' perceptions about the use of artificial intelligence and what challenges they face. The research findings are presented below:

Artificial intelligence that EFL students often used
Extract 1: *Gemini, Gemini is the same as ChatGPT, but if I have used ChatGPT, ChatGPT doesn't match what I'm looking for and can't provide references with many of the advantages that Gemini has.*
Extract 2: *ChatGPT and Gemini*

Extract 3: *ChatGPT*
Extract 4: *ChatGPT and DeepL*
Extract 5: *Usually I use AI such as Google Translate, online grammar, WPS Office, and other AI which makes learning easier for me*
Extract 6: *I usually use ChatGPT*

Based on the explanations provided by EFL teachers, EFL teachers use ChatGPT, Gemini, DeepL, Google Translate, Online Grammar, and WPS Office. As stated by (Moybeka et al., 2023), there are a lot of digital resources available these days to help EFL students overcome this challenge and improve their learning abilities. Zhao (2022) states that effective and efficient use can assist users in the process of writing clearly, such as by expressing ideas clearly and concisely both in written and spoken forms.

The effects of using AI in the classroom
Extract 1: *Certainly, there is, it allows me to improve my writing or reading skills.*
Extract 2: *more helpful to learn individually to improve skills gradually.*
Extract 3: *The effect is to make things easier and the effect is to become dependent on the AI.*
Extract 4: *I think the effect I got was that it made me learn about writing and translation.*
Extract 5: *The impact that I can have using AI is that it makes it easier for me to understand learning that I didn't know before.*
Extract 6: *I think the effect of using AI makes me learn to generate ideas for writing*

From the explanation that EFL students have given, EFL students get a good effect in using AI in the classroom because it helps eliminate learning obstacles. According to (Jeon et al., 2021). Language barriers are eliminated via speech recognition, text-to-speech apps, and language translation technologies. This makes English education more equitable and inclusive. Students might be extrinsically motivated by AI technology, but they can also become intrinsically motivated by the simple joy of learning. By leveling the playing field, artificial intelligence (AI) enables students of different backgrounds and language proficiency levels to access and use high-quality language.

Disadvantages and advantages of using AI in learning
Extract 1: *The advantage of good AI is that we know more about the various things we can look for in this AI, so it's like an assistant, we have an assistant but the downside is that if, for example, people use it continuously, it will create dependency and thinking at night, which is fatal.*
Extract 2: *In my opinion, the advantage of using AI is to lighten the burden on students. If there is a lack of it, it makes us lazy*
Extract 3: *In my opinion, the advantage of using AI is that we can ask AI for help to find ideas or information, but the disadvantage of AI is that it makes us more dependent on AI and makes us lazy to think critically.*
Extract 4: *In my opinion, in terms of benefits, it can help students learn easily. If there are shortcomings, it could be a dependency, and Ai is not all correct but there are also some wrong words so you have to check again.*

Extract 5: *The advantage of using AI is that we quickly get answers to the questions we need and also speed up our learning which shortens time. The disadvantages of AI can make students dependent on using AI and technology.*
Extract 6: *In my opinion, the advantage of using AI is that it makes me learn independently and can improve my writing skills well and the disadvantage of using AI is that I am addicted to using AI so my critical thinking ability decreases.*

From the explanation that has been given by EFL students, EFL students think that the advantage of using AI is that AI can help lighten the burden of learning and the weakness is that students can depend on AI. As stated by (Kim et al., 2021) the use of AI in English classes seeks to do this by creating a learning system in the classroom that is more responsive, efficient, and a student-centered environment. This allows educators to personalize teaching to meet the unique needs and learning styles of individual students, but it can have a serious impact if students rely too much on AI, then students may become lazy and think less critically and innovatively.

EFL students perceive that AI cannot replace the role of lecturers

Extract 1: *Oh no, in my opinion, AI is just an assistant helping us, but lecturers and teachers have had experience in teaching us for a long time, so in my opinion AI is just an assistant who helps a little.*
Extract 2: *No, because during teaching and learning the role of the lecturer is very important because we also need a companion to study and direct us.*
Extract 3: *In my personal opinion, it cannot replace teachers or lecturers because every AI only provides information, not necessarily like a lecturer who can direct us.*
Extract 4: *You can't because we still have to have someone to direct us when learning in class.*
Extract 5: *In my opinion, AI will not replace the role of teachers or lecturers because the role of teachers and lecturers is as an intermediary in explaining the material and AI is a supporting system.*
Extract 6: *In my opinion, it's not possible because even though you learn with AI, you also need a companion to learn and direct learning activities like in class, and not all AI explanations are right, some are wrong.*

From the explanation that has been explained by EFL students, the role of AI is only as an assistant and cannot replace the role of the lecturer, and students need the role of the lecturer in learning. As said (Doris & Brennan, 2018), even though the learning system uses AI, it can only be used as an automatic assessment tool for language translation and conversation agents, but the role of lecturers in teaching is still needed because students still need appropriate and correct direction and feedback. After all, AI does not everything can be correct.

Discussion
Students' perceptions about the use of artificial intelligence
Based on interviews conducted with students, some students have the perception that artificial intelligence is very helpful in learning, but we must still know what the essence of artificial intelligence is, lecturers and students must

know that artificial intelligence is only an assistant, not a substitute. Because if AI completes our task, then instructors and students are useless, and because we are overly reliant on AI, instructors, and students lack the necessary abilities (Aljohani, 2021). Some students also believe that issues led to the development of artificial intelligence and that AI's purpose is to help solve these issues and facilitate human labor. Additionally, this respondent believes that there are drawbacks to AI, but it all depends on how we mitigate them Sumakul, (Sumakul et al., 2022). According to the view of other students, to stay up to date with the latest advancements in artificial intelligence, both lecturers and students must be abreast of these breakthroughs. And need to become knowledgeable about the advantages and applications of AI in general. Additionally mentioned by this respondent was the drawback of AI, which is that it cannot be utilized to its full potential because it must be carefully chosen to meet your requirements. The drawback of artificial intelligence, according to respondents, is that it will eventually replace the need for lecturers and teachers in the next generation since it can already do some tasks. It is therefore necessary for instructors and pupils to be able to judge when to use artificial intelligence and when to do tasks by hand. (Aljohani, 2021). From the discussion above, researchers can see that many students said that artificial intelligence is very helpful in their work, both in teaching and learning. Although from the discussion above, the students also mentioned the negative side of artificial intelligence, where the negative side comes back to us again. How do we use AI wisely and know when to use AI and when we have to work manually.

Challenges faced by students

While AI offers many advantages for education, it will also provide some never-before-seen difficulties. It will be easier to plan and make better use of AI in education in the future if people are aware of the potential issues that could arise. These difficulties primarily relate to the following areas: The priority when integrating AI in education should be given to ensuring equity. As AI develops, there's a chance that new technologies will exacerbate educational divides. Since the majority of AI algorithms originate from rich nations, they are unable to directly address or fully account for the circumstances of emerging nations (Knox, 2020). To establish the fundamental circumstances for artificial intelligence (AI) to enhance learning, the education sector must overcome significant challenges like a lack of essential infrastructure and technology. Second, using AI to provide pupils with tailored advice has brought up a number of ethical concerns. AI can also be incorrect or improper inquiries that align with desired outcomes (Jain & Raghuram, 2024). Therefore, the usage of AI must be restricted because the data is not entirely reliable and accurate, necessitating additional student discussion. Third, use AI to assist teachers in planning their lessons. To effectively employ AI to drive classroom transformation, educators must acquire new digital teaching techniques. To design a plan for utilizing teaching goods that instructors are comfortable with, makers of AI teaching products also need to have a thorough understanding of how teachers operate. Fourth, the ability of students to learn independently is under more pressure due to shifts in learning approaches. According to (Cheng et al., 2020), education in the AI era would be student-centered, with students holding a prominent role in learning activities. According

to (Walkington & Bernacki, 2020), students can create tailored learning plans using intelligent teaching systems, choose learning materials on their own, track their progress, and participate in group cooperative learning. Since individual learning approaches place more demands on students' capacity for self-regulation and self-management (Tseng et al., 2019), educators also need to focus on helping students develop their capacity for independent learning throughout the teaching process.

Further research could explore how the use of AI affects EFL (English as a Foreign Language) student learning outcomes. This could involve measuring improvements in language skills, such as speaking, listening, reading, and writing abilities before and after the implementation of AI technology in the learning process. On the effectiveness of Different AI Tools in Learning EFL has different types of AI tools used in language learning, such as AI-based learning applications, chatbots, and automatic grammar correction platforms. Student perceptions of the use of AI in English language learning. This can include perceptions about effectiveness, ease of use, and challenges faced when integrating AI technology into the curriculum. AI influences student motivation and engagement so researchers suggest looking at the long-term impact of AI integration in EFL learning so that it can provide an idea of how the use of AI affects learning over time.

Conclusion

Artificial intelligence in education has been gradually implemented, and its depth has increased with the technology's rapid progress. Artificial intelligence (AI) enables teachers and students to use better AI technology in the teaching and learning process, enhancing teachers' abilities, the quality of their instruction, and the methods that students use to learn. AI also helps students' learning styles become more varied and customized. However, this also raises some ethical problems that are indisputable. To create opportunities for technological innovations to better serve humanity, we should embrace their accomplishments while avoiding their flaws and staying away from counter-ethical phenomena. To ensure that artificial intelligence serves mankind while preventing data breaches and other ethical transgressions, we should also focus on enhancing oversight of this technology.

References
Aljohani, R. A. (2021). Teachers and students' perceptions on the impact of artificial intelligence on English language learning in Saudi Arabia. *Journal of Applied Linguistics and Language Research*, *8*(1), 36–47.
An, X., Chai, C. S., Li, Y., Zhou, Y., Shen, X., Zheng, C., & Chen, M. (2023). Modeling English teachers' behavioral intention to use artificial intelligence in middle schools. *Education and Information Technologies*, *28*(5), 5187–5208. https://doi.org/10.1007/s10639-022-11286-z.
Arai, M., Tejima, K., Yamada, Y., Miura, T., Yamashita, K., Kado, C., Shimizu, R., Tatsumi, M., Yanai, N., & Hanaoka, G. (2024). REN-A.I.: A video game for ai security education leveraging episodic memory. *IEEE Access*, *12*, 47359–47372. https://doi.org/10.1109/ACCESS.2024.3377699.

Cheng, C. T., Chen, C. C., Fu, C. Y., Chaou, C. H., Wu, Y. T., Hsu, C. P., Chang, C. C., Chung, I. F., Hsieh, C. H., Hsieh, M. J., & Liao, C. H. (2020). Artificial intelligence-based education assists medical students' interpretation of hip fractures. *Insights into Imaging*, *11*(1), 119. https://doi.org/10.1186/s13244-020-00932-0.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks: Sage.

Dawadi, S. (2020). Thematic analysis approach: A step-by-step guide for ELT research practitioners. *Journal of NELTA*, *25*(1–2), 62–71. https://doi.org/10.3126/nelta.v25i1-2.49731.

Grimm, N., Meyer, M., & Volkmann, L. (2015). *Teaching English*. Tübingen: Narr Francke Attempto Verlag.

Jain, K., & Raghuram, J. N. V. (2024). Unlocking potential: The impact of AI on education technology. *Multidisciplinary Reviews*, *7*(3), 2024049. https://doi.org/10.31893/multirev.2024049

Jeon, Y., Jin, S., Shih, P. C., & Han, K. (2021). Fashion: An AI-driven creativity support tool for facilitating ideation in fashion design. *Proceedings of Conference on Human Factors in Computing Systems,* 1-18. https://doi.org/10.1145/3411764.3445093.

Kim, H. S., Cha, Y., & Kim, N. Y. (2021). Effects of AI chatbots on EFL students' communication skills. *Korean Journal of English Language and Linguistics*, *21*, 712–734. https://doi.org/10.15738/kjell.21..202108.712.

Kim, N. J., & Kim, M. K. (2022). Teacher's perceptions of using an artificial intelligence-based educational tool for scientific writing. *Frontiers in Education*, *7*, 1–13. https://doi.org/10.3389/feduc.2022.755914.

Knox, J. (2020). Artificial intelligence and education in China. *Learning, Media and Technology*, *45*(3), 298–311. https://doi.org/10.1080/17439884.2020.1754236

Merkl-Davies, D.M., & Brennan, B. (2018). *The Irish Journal of Psychology*, *1*(1), 25–34.

Moybeka, A. M. S., Syariatin, N., Tatipang, D. P., Mushthoza, D. A., Dewi, N. P. J. L., & Tineh, S. (2023). Artificial intelligence and English classroom: The implications of AI toward EFL students' motivation. *Edumaspul: Jurnal Pendidikan*, *7*(2), 2444–2454. https://doi.org/10.33487/edumaspul.v7i2.6669.

Persson, V., & Nouri, J. (2018). A systematic review of second language learning with mobile technologies. *International Journal of Emerging Technologies in Learning*, *13*(2), 188–210. https://doi.org/10.3991/ijet.v13i02.8094.

Roebianto, A., Savitri, S. I., Aulia, I., Suciyana, A., & Mubarokah, L. (2023). Content validity: Definition and procedure of content validation in psychological research. *TPM - Testing, Psychometrics, Methodology in Applied Psychology*, *30*(1), 5–18. https://doi.org/10.4473/TPM30.1.1.

Seo, K., Tang, J., Roll, I., Fels, S., & Yoon, D. (2021). The impact of artificial intelligence on learner–instructor interaction in online learning. *International Journal of Educational Technology in Higher Education*, *18*(1), 54. https://doi.org/10.1186/s41239-021-00292-9.

Stranges, M. K. W., Ul Haq, S., & Dunn, D. G. (2014). Black-out test versus UV camera for corona inspection of HV motor stator endwindings. *IEEE Transactions on Industry Applications*, *50*(5), 3135–3140. https://doi.org/10.1109/TIA.2014.2306979.

Sumakul, D. T. Y. G., Hamied, F. A., & Sukyadi, D. (2022). Artificial intelligence in EFL classrooms: Friend or foe? *LEARN Journal: Language Education and Acquisition Research Network*, *15*(1), 232–256.

Tseng, H., Yi, X., & Yeh, H. T. (2019). Learning-related soft skills among online business students in higher education: Grade level and managerial role differences in self-regulation, motivation, and social skill. In *Computers in Human Behavior, 95*, 179-186. https://doi.org/10.1016/j.chb.2018.11.035.

Walkington, C., & Bernacki, M. L. (2020). Appraising research on personalized learning: Definitions, theoretical alignment, advancements, and future directions. *Journal of Research on Technology in Education*, *52*(3), 235–252. https://doi.org/10.1080/15391523.2020.1747757.

Wang, Y., & Stockwell, G. (2023). Social justice and technology in second language education. *Iranian Journal of Language Teaching Research*, *12*(1), 1–18.