

ChatGPT in Language Education: Perceptions of Teachers - A Beneficial Tool or Potential Threat?

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Abstract

The burgeoning advancement in artificial intelligence, particularly ChatGPT, has increasingly drawn attention among specialists and practitioners. This study investigates the perceptions of language teachers in Indonesia regarding ChatGPT's potential as a language learning tool and the concerns associated with its deployment. A quantitative approach was adopted, utilizing an online questionnaire comprised of 18 items rated on a four-point Likert scale and three open-ended queries. The sample included 100 educators, spanning English, Indonesian, and Mandarin language teachers and lecturers. Findings indicate that a significant proportion of respondents are familiar with internet-based artificial intelligence and recognize the applicability of ChatGPT in pedagogical contexts. Notably, 87% of language educators endorse initiatives to enhance understanding and integration of Artificial Intelligence in Education (AIED) to bolster instructional efficiency and efficacy. Consequently, a majority concur that ChatGPT can aid language learners in honing vocabulary, grammar, oral, and written competencies. Based on these insights, it is imperative for educational stakeholders to strike a judicious equilibrium between the deployment of AI tools and a pedagogical paradigm that emphasizes student engagement and critical cognitive development.

Keywords: ChatGPT, language teachers, Artificial Intelligence in Education (AIED)

INTRODUCTION

The rapid development of computer science has brought human civilization into the information age ([Deny & Andry, 2018](#)), making information technology unstoppable and impacting various aspects of life, including education ([Bernanda et al., 2019](#); [Stefanus & Andry, 2020](#)). Language education has long relied on the expertise and guidance of human teachers to facilitate effective learning experiences. However, the rapid advancement of artificial intelligence (AI) technology disrupts and inevitably brings about massive controversies and changes to conventional teaching patterns. Amongst the diverse tools in the ecosystem of AI, a new player has emerged in the educational landscape since November

2022: ChatGPT ([Rudolph et al., 2023](#); [Lund and Wang, 2023](#), [Terwiesch, 2023](#)). Developed by OpenAI, ChatGPT is an AI-based large language model (LLM) that utilizes deep learning techniques to generate human-like responses to text-based inputs ([Haque et al., 2022](#)). While ChatGPT has gained significant attention and adoption in various domains, its implications for language education remain a topic of debate. This article, thus, aims to examine ChatGPT from language teachers' perspectives all over Indonesia, exploring whether it offers merits more than demerits in the context of language teaching.

ChatGPT is an advanced AI system that has garnered widespread recognition for its remarkable language generation capabilities. It is part of the GPT (Generative Pre-trained Transformer) series, which is designed to generate human-like language output based on certain prompts. Trained on vast amounts of text data, it has demonstrated impressive proficiency in understanding and generating coherent responses ([Kung et al., 2023](#); [Murphy, 2019](#); [Lund and Wang, 2023](#)). Its purpose extends beyond simple information retrieval; ChatGPT aims to engage users in interactive conversations, mimicking human-like dialogue. Consequently, ChatGPT has found applications in customer service ([Subagja et al., 2023](#)), virtual assistants ([Shafeeg, 2023](#)), creative writing ([Shidiq, 2023](#)), and even language teaching and learning ([Kohnke et al., 2023](#)). The growing prevalence of ChatGPT in various domains raises intriguing questions about its potential utility in language education.

Within the realm of language education, language teachers and educational institutions have begun exploring the integration of ChatGPT into their teaching practices. For instance, ChatGPT can be used as a conversational partner to provide learners with additional practice and feedback personalization ([Murphy, 2019](#); [Chounta et al., 2022](#); [Lund and Wang, 2023](#); [Rudolph, 2023](#)). Some educators have employed ChatGPT to create interactive language learning applications or chatbots to engage students outside the classroom ([Munoz et al., 2023](#)) and establish learning motivations ([Ali et al., 2023](#)). Considering its positive impact on students' learning outcomes, [Ali et al.'s \(2023\)](#) study suggests that policymakers promote the incorporation of ChatGPT into the educational system. Nevertheless, not all teachers exhibit uniform enthusiasm for these initial endeavors, giving rise to various reactions and perceptions of the impacts of ChatGPT on language education.

Traditional language teaching methods have predominantly relied on the presence of a skilled language teacher. They employ pedagogical strategies tailored to individual learners, adapting their teaching approaches to meet diverse linguistic needs. These teachers play a crucial role in fostering language acquisition by providing guidance and feedback and creating meaningful student interactions. However, the digital age has introduced new challenges for language teachers, which could indicate how AI-based tools could benefit instructors by enhancing their pedagogical capacity ([Murphy, 2019](#); [Kasneci et al., 2023](#)). Teachers nowadays are expected to quickly adapt, innovate, adopt, and implement new ways of teaching and learning in the digital age ([Harmer, 2021](#); [Afrianto, 2018](#); [Erstad, 2015](#)) not only to keep up with the rapidly changing era but also lighten the workload. The integration of technology in classrooms and the increasing availability of online resources have altered the dynamics of language learning, prompting educators to rethink their roles and challenge conventional ways of teaching without embracing AI in education.

While integrating ChatGPT in language education presents potential benefits, it has concerns and criticisms. One of the primary apprehensions is the accuracy of the chatbot's

outputs ([Kohnke et al., 2023](#)). [Sallam \(2023\)](#) adds that the concerns regarding ChatGPT include ethical, copyright, transparency, and legal issues, the risk of bias, plagiarism, lack of originality, inaccurate information, limited knowledge, incorrect citations, cybersecurity issues, and the risk of infodemics. In the scope of language education, students are often asked to do writing tasks in connection with writing skills, such as academic papers. In addition, the misuse of ChatGPT could obviously lead to serious consequences of violations of scientific research ethics, including damage to the writers' reputations and institutions involved ([Mijwil et al., 2023](#)).

Furthermore, the authenticity of language interaction becomes another issue. ChatGPT, being an AI system, may struggle to replicate the nuances and cultural contexts inherent in human communication ([Şentürk et al., 2023](#)). In consequence, the reliance on ChatGPT could hinder students' ability to engage in authentic language use and impede their understanding of cultural subtleties. Ethical considerations arise regarding the appropriate balance between AI-mediated language learning and the indispensability of human interaction in the language acquisition process ([Goldenthal et al., 2021](#)).

Given the academic debates surrounding ChatGPT's role in Artificial Intelligence in Education (AIEd), this research seeks to understand the views of Indonesian language educators on its utility and potential pitfalls. The intent is to deepen our insight into ChatGPT's varied influences on language instruction, guiding more informed educational choices and strategies. Through gauging teacher perspectives, the study aims to harmonize the advantages of AI tools such as ChatGPT with the indispensable richness of human touch and cultural understanding in language education

METHOD

This study employed a quantitative method to analyze the language teachers' perspective regarding the use of ChatGPT in their classes. The language being taught is not merely Indonesian but two other foreign languages, including English and Mandarin. The researchers used an online questionnaire consisting of 18 four-point-Likert-scale statements and three open-ended questions regarding three main themes, namely, Familiarity with ChatGPT in the Academic Context, ChatGPT and Its Relation to Language Acquisition, and Acceptance of the Use of ChatGPT in an Academic Context. The scale is made horizontally unidirectional to get better responses on relative judgments ([Maeda, 2014](#)). The questionnaire also provided open-ended questions to accommodate further critical elaborations on relevant issues.

This study used a random sampling method to ensure the population had an independent and equal chance ([Ary et al., 2010](#)), there were 100 respondents who filled out the questionnaire. They were lecturers (25%), in-service teachers (15%), and preservice teachers (60%). The data from the questionnaire were analyzed by calculating the mean of each statement. Table 1 establishes the benchmarks for interpreting perception levels through mean values. These benchmarks are grouped into four distinct classifications: scores ranging from 3.01 to 4.0 are labeled as "Very high"; those from 2.01 to 3.0 are designated as "High"; values between 1.01 to 2.0 indicate a "Low" perception level; and scores from 0.01 to 1.00 are marked as "Very low." This framework provides a clear method to gauge the data based on the relative strength of perception.

Table 1. The Criteria of Perception Level Analysis

No	Mean	Criteria
1	3.01-4.0	Very high
2	2.01-3.0	High
3	1.01-2.0	Low
4	0.01-1.00	Very low

The data was gathered from 100 observations to determine its distributional characteristics. The analysis showed that the data had an average value (mean) of 75.02, with a central value (median) of 76. The dispersion around this mean, measured by the standard deviation, was found to be approximately 13.03. Furthermore, the skewness of -0.494546 indicates a slight leftward tilt, suggesting that there are some lower values pulling the mean down, but it's relatively mild. The kurtosis value of 0.164189 indicates the data has a shape close to a normal distribution, with tails neither too thick nor too thin. Crucially, using the Kolmogorov-Smirnov test, a p-value of 0.69504 was obtained. This high p-value indicates that the data doesn't significantly deviate from a normal distribution. Hence, it can be confidently stated that the data is approximately normally distributed.

Table 2. Kolmogorov-Smirnov test result

No	Parameter	Value
1	Count	100
2	Mean	75.02
3	Median	76
4	Standard Deviation	13.03219
5	Skewness	-0.494546
6	Kurtosis	0.164189
7	p-value	0.69504

FINDING AND DISCUSSION

FINDINGS

Through a questionnaire, 100 respondents' perceptions of the use of ChatGPT in language teaching contexts are divided into three segments: Familiarity with ChatGPT in the Academic Context, ChatGPT and Its Relation to Language Acquisition, and Acceptance of the Use of ChatGPT in an Academic Context. Table 3 demonstrates to what extent preservice and in-service language teachers in Indonesia are familiar with ChatGPT.

Table 3. Familiarity with ChatGPT in the Academic Context

No.	Questionnaire Items	Scale				Mean
		SD	SA	A	SA	
1	I am familiar with artificial intelligence applications that can be used in an academic context, such as ChatGPT, Perplexity AI, Otter.ai, and others.	7	20	43	30	2.96
2	I understand the basic concept of artificial intelligence in ChatGPT in the context of teaching and learning.	7	23	54	16	2.79
3	I understand how ChatGPT works in responding to its users.	9	18	54	19	2.83

4	I use ChatGPT for teaching purposes, such as creating Lesson Plans, creating practice questions, or giving feedback on student work.	28	38	30	4	2.1
5	I feel the need to improve my knowledge and understanding of artificial intelligence in an academic context.	1	9	41	49	3.38
6	I understand the importance of introducing artificial intelligence, especially ChatGPT, in the current education curriculum.	1	20	46	33	3.11

According to Table 3, most respondents were familiar with the Artificial Intelligence [O'shea \(1986\)](#). available on the internet and understand how ChatGPT can be utilized in the context of teaching and learning with mean scores of 2.96 and 2.79 respectively. In addition, respondents (87%) agree that they need to improve their knowledge and understanding of artificial intelligence in an academic context and respondents (77%) also consider the importance of introducing AI in their curriculum. Respondent A further elaborated:

“It is a must to keep up with the advancement of tech and constantly rethink the teaching approach to make effective use of this technology” (Respondent A)

Despite the positive perceptions towards AI in the academic context, it is astounding to note that most respondents have a quite negative perception of the use of ChatGPT for teaching purposes, such as creating lesson plans, practice questions, and feedback (M=2.1). Less than half of the total respondents (33%) have adopted ChatGPT in their teaching and learning practices. In regard to the statement, respondent B added:

“As a teacher, I try my best to avoid using AI to serve as an example we can use our brain capacity as much as possible”.

Table 4. ChatGPT and Its Relation to Language Acquisition

No.	Questionnaire Items	Scale				Mean
		SD	D	A	SA	
7	ChatGPT expands the vocabulary and language skills of its users.	1	16	57	26	3.03
8	ChatGPT helps its users improve their speaking skills in the target language.	5	33	45	17	2.75
9	ChatGPT helps its users improve their writing skills in the target language.	6	31	45	18	2.82
10	The use of ChatGPT reduces the interest of its users to learn languages conventionally, such as through private courses or tutoring.	6	23	54	17	2.85
11	ChatGPT helps its users better understand grammar as it can provide confirmation and explanation of grammatical errors.	2	29	47	22	2.97
12	As it can be used privately, ChatGPT helps facilitate personalized language learning according to the needs of its users.	4	19	53	24	3.1

13	ChatGPT helps improve language accuracy as it can provide suggestions for writing (such as essays).	1	14	59	26	2.97
14	ChatGPT creates a motivating language learning environment where the learner feels comfortable that no one else knows when he or she makes a mistake in the learning process.	2	18	61	19	2.92

As seen in Table 4, most respondents agreed that ChatGPT brings positive impacts on students' language acquisition process. As ChatGPT can respond to prompts in various languages, most respondents believed it can help language learners with vocabulary (M=3.03) and grammar (M=2.97). It happens the same way to improve language skills such as speaking and writing skills, which can be seen from the average score of 2.75 and 2.82 respectively. Over 80% of the respondents agreed that the personalized-instructional feature that allows users to use the AI tool privately and autonomously is another supporting factor to consider (M=3.1). It is a consequence that 64% of the respondents think there is a decline in interest in learning languages with private tutors because of the advantages offered by the chatbot.

However, the perspective of respondent C took a view opposite to that of the general viewpoint on grammar and writing skills development with regards to ChatGPT. He stated:

“As a teacher, I asked students to write an essay or just a short story to learn grammar, The emergence of such an AI tool, however, makes them even lazier to think because everything has been instantly done by AI”. (Respondent C)

Addressing the originality of work, respondent D added:

“ChatGPT is a time marker that the teacher's responsibility will be heavier. Teachers should know their students better to be able to question, in terms of written work for example, whether the content is authentically their thoughts or instant AI-generated which will eventually affect writing assessment”. (Respondent D)

While ChatGPT is largely believed to help improve students' language competency, respondent E criticized its effect on mentality:

“The use of Artificial Intelligence-based applications can make users less confident with their original writing results because they feel the answers given by AI are better than theirs. They are forgetting the process of learning which sometimes takes longer”. (Respondent E)

Table 5. Acceptance of Use of ChatGPT in a Language Teaching Context

No.	Questionnaire Items	Scale				Mean
		SD	D	A	SA	
15	I believe that ChatGPT can help improve the efficiency and effectiveness of the language teaching process.	8	29	46	17	2.85
16	ChatGPT saves my time in making lesson plans, looking for teaching materials, and reviewing student work.	6	21	55	18	2.91
17	I feel that the use of ChatGPT can help increase students' understanding of language learning material.	7	29	45	19	2.78

18 I accept the use of ChatGPT as a teaching aid and feel that 5 18 58 19 2.91
it is a positive step toward improving the quality of
language learning.

Table 5. indicates that the utilization of ChatGPT in the language teaching process has yielded positive outcomes from the lens of language teachers. More than 50% of respondents believed that it contributed to enhancing the efficiency and effectiveness of their teaching approach. Notably, ChatGPT was found to significantly save time by automating tasks such as lesson planning, resource searching, and student work review (M=2.91). Nevertheless, this claim is contrary to the results of questionnaire item number 5, where only 33% of respondents use ChatGPT for teaching purposes, such as creating lesson plans, creating practice questions, and reviewing student work (M=2.1). Moreover, the integration of ChatGPT in language instruction was largely perceived to have a positive impact on students' comprehension of language learning material. On the other hand, having a belief that ChatGPT could offer drawbacks too, Respondent E showed aversion to it by responding:

"Immediate answers, solutions to problems, and easy access by ChatGPT will lead to over-dependency on young people, creating a massive decline to critical thinking and creativity". (Respondent E)

DISCUSSION

The research findings on 100 language teachers' perspectives regarding the use of ChatGPT reveal several interesting insights. The first segment of the questionnaire, which focuses on familiarity with ChatGPT in the academic context, indicates that the majority of respondents were acquainted with artificial intelligence available on the internet and understood how ChatGPT could be utilized in teaching and learning ([Kohnke et al., 2023](#)). They also expressed a need to enhance their knowledge of artificial intelligence in an academic context and recognized the importance of introducing AI into the curriculum. While some teachers are distracted by the disruption of ChatGPT, this paper shows 87% of language educators support the decision to improve familiarity and comprehension of the use of AIED. Therefore, the language teachers in Indonesia are open to embracing Artificial Intelligence in their teaching practices and willing to keep up the advancement of tech. Moreover, students these days are impressed, interested, motivated, and optimistic about ChatGPT ([Shoufan, 2023](#)), therefore, educators need to investigate how to make the best out of this interest to improve learning quality and outcome.

ChatGPT, in this case, as an intelligent tutor, can help teachers by providing personalized feedback to students on each assignment ([Hwang et al., 2021](#)), offering a more-time efficient task. However, despite the positive perceptions and role in the academic context, it is surprising to note that most respondents (66%) had a rather negative perception of using ChatGPT for teaching purposes, such as creating lesson plans, practice questions, and feedback. The low mean score (M=2.1) in this aspect indicates a lack of acceptance or willingness among teachers to adopt ChatGPT as a tool in their language instruction. Some teachers expressed the view that relying on AI tools could hinder the development of critical thinking and creativity. Additionally, the comment from one respondent highlights the desire to maximize human cognitive capacity rather than relying on AI. These findings suggest that there may be resistance or skepticism among language teachers when it comes to fully embracing AI technologies for teaching purposes and they

confirm other studies such as [Cooper \(2023\)](#), [Gregorcic and Pendrill \(2023\)](#), and [Rudolph et al. \(2023\)](#) which show teachers or instructors are reluctant due to its potential impact to the teaching and learning processes.

Moving on to the second segment of the questionnaire, which explores the relationship between ChatGPT and language acquisition, the majority of language teachers agreed that ChatGPT had positive impacts on students' language acquisition process. They believed that it could assist language learners in areas such as vocabulary, grammar, speaking, and writing skills. Furthermore, the personalized-instructional feature of ChatGPT, which allows users to utilize the tool privately and autonomously, was seen as a beneficial factor, as students can make and learn from mistakes without anyone noticing. This proved that ChatGPT is considered an intelligent tutor for its adaptive/personalized learning systems ([Hwang et al., 2021](#)). However, there were contrasting perspectives on the impact of ChatGPT on grammar and writing skills development. Although some research found that ChatGPT could help students' grammar and writing ([Ali et al., 2023](#); [Fitria, 2023](#); [Huang & Tan, 2023](#); [Su et al., 2023](#); [Yan, 2023](#)), some teachers expressed concerns that students might become overly reliant on AI, which could lead to violation of academic integrity such as the practice of plagiarism and losing the opportunity to develop their own critical thinking and writing abilities. These findings highlight the potential benefits of ChatGPT in language acquisition, while also emphasizing the need for a balanced approach to ensure students' active engagement in the learning process ([Munoz et al., 2023](#)).

The third segment of the questionnaire, which explores the acceptance of ChatGPT in an academic context, indicates that more than half of the teachers believed that the integration of ChatGPT in the language teaching process enhanced the efficiency and effectiveness of their instruction. The time-saving aspect of ChatGPT, such as automating tasks like lesson planning, resource searching, and student work review, was particularly appreciated. However, it is worth noting that the percentage of teachers who reported using ChatGPT for teaching purposes was considerably lower. This suggests that despite recognizing the potential benefits, a significant portion of teachers have yet to fully adopt ChatGPT as a teaching tool to serve as a good example for their students. Here, the role of ChatGPT as an AIEd is emphasized particularly as an intelligent teaching/learning partner that provides a crucial issue from the viewpoints of constructivism and gathers data in a quick and efficient manner. Concerns about the originality of students' works and the potential decline in critical thinking skills were raised by some respondents, indicating the importance of maintaining a balance between AI support and promoting students' independent thinking and creativity as what [Trust and Whalen \(2023\)](#) found in their study.

CONCLUSION

AIEd (AI for Education) has opened up new avenues for producing more productive learning activities and better technology-enhanced learning applications or settings. However, it remains a problem for most language teachers to adopt appropriate AI-based activities or systems in class. As an advanced AI system, ChatGPT has garnered widespread controversies in language classrooms and, therefore, the study is a report that looks at the utilization of ChatGPT from the perspective of language educators.

Language teachers in Indonesia have a certain level of familiarity with ChatGPT and acknowledge its potential benefits in language teaching. However, there are varying levels

of acceptance and adoption of ChatGPT among teachers. While many recognize its positive impact on language acquisition and appreciate its time-saving capabilities, concerns regarding over-dependency on AI, the decline in critical thinking skills, and the need to preserve originality and authenticity, as an endeavor to avoid violation of academic integrity, in students' work are also voiced. These findings highlight the importance of striking a balance between utilizing AI tools and maintaining a pedagogical approach that fosters students' active engagement and critical thinking skills. Further research and professional development efforts are warranted to address the concerns raised and support teachers in effectively integrating ChatGPT into language instruction.

While this study provides insights into language teachers' views, it's important to note that a significant proportion of respondents were preservice teachers. These educators, typically having briefer teaching experiences than their in-service counterparts, might offer distinct viewpoints on professionally engaging students and integrating technology, specifically ChatGPT, in instructional settings. Furthermore, the survey's design might not comprehensively capture the multifaceted ways in which language teachers incorporate ChatGPT into their practice. Hence, it would be beneficial for future researchers to undertake field studies, offering a more nuanced understanding of ChatGPT's classroom utilization.

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