Original Paper

China EFL Postgraduate Students' Perception of AI Chatbots in Preparing for an Oral English Presentation: The "Perfectly Imperfect" Assistant?

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Abstract

While Generative AI chatbots hold the potential to enhance EFL students' language learning opportunities, there is a need for more empirical studies on the actual application of such AI tools in students' daily learning practice. This research studied a group of EFL postgraduate students on their use of GAI chatbots when they prepared for their oral English presentation. Qualitative analysis of the interview data suggested AI played different roles at different stages of their learning, mainly as a linguistic assistant and a brainstorm facilitator. Besides, students held conflicting views on the effects of AI in improving their English proficiency. In addition, the effectiveness of student-AI interactions was perceived to be influenced by students' background knowledge of the topic (which was crucial for generating effective prompts), the timing when AI was introduced, and a trade-off between utility and intentionality. Based on the current findings, pedagogical implications have been provided concerning pedagogical design, the mediating role of teachers, student training and teachers' professional development.

Keywords

GAI chatbots, qualitative study, student-AI interactions, EFL learning, presentation

1. Introduction

The integration of artificial intelligence (AI) in education is a reflection of the profound technological progress witnessed over the past decade, promising to drive the next big digital transformation in various

aspects of our lives, including how we learn and communicate (Chaudhry & Kazim, 2022). UNESCO's sustainable development agenda underscores the importance of preparing young generations to address societal challenges and cope with rapid technological advancements and the influx of new knowledge (Carvalho et al., 2022). Thus, the ability to adeptly utilize AI technologies is becoming an integral part of digital literacy (Alharbi, 2023). In this context, AI in education is not just an option, but a necessity, to equip students with the skills to navigate the future.

Among various AI tools, GAI chatbots such as ChatGPT have attracted unprecedented attention. Currently, there is a consensus in academia on the potential GAI holds to provide timely, personalized, and convenient language learning opportunities (Huang et al., 2022). However, there is still insufficient knowledge about university students' actual use of AI tools for everyday academic communication (Chiu et al., 2023; Ou et al., 2024). The present study thus addresses this gap by studying a group of ESL postgraduate students' actual use of GAI chatbots during academic activities.

2. Literature Review

When GAI was first introduced to the public, debates around GAI and its impact on society focused largely on the fear of job replacements, while the implications for learning and skills development received comparatively little attention (Carvalho et al., 2022). Now, it has been more widely accepted and focus has been shifted to how to better embrace it for the benefits of the students. In fact, AI's role in education is expanding beyond a mere tool; it is becoming an integral part in the education ecosystem (Kim et al., 2022). AI tools have been used in automated writing evaluation, corrective feedback, machine translation, and text generation technologies increasingly supporting students' literacy development (Ou et al., 2024). AI is not just aiding language acquisition. It is also playing a pedagogical role by providing guidance, explaining complex subjects, and offering feedback, thereby facilitating knowledge construction through everyday academic communication practices (Ou et al., 2024).

Previous studies suggest that students' attitudes toward chatbots (mainly ChatGPT) are largely positive, but ambivalence persists. They generally appreciated chatbots' ability to generate ideas, check grammar, and support learning tasks especially writing activities (Harunasari, 2023; Mohammed et al., 2023; Yan, 2023). They found them helpful for brainstorming, planning, and improving drafts particularly when teachers provided strategies for responsible use. Besides, many students reported chatbots improved their productivity, language competence and motivation (Mohamed et al., 2023). Concerning the use of GAI for language learning, the following benefits are summarized from existing research (Huang et al., 2022): timeliness and accessibility with 24/7 availability for self-paced learning, personalized real-time feedback and content, interactivity with increasing learner engagement, reduced anxiety and motivating experience, and cognitive assistance.

While impressed by the quality and efficiency of GAI tools, many students worried about their limitations such as factual inaccuracies and the genetic nature of AI-generated contents (Marschauer et al., 2023; Yan, 2023). They did not fully trust AI as a credible information source especially for higher-level

academic work. In addition, students' engagement with AI was found to remain largely superficial with limited opportunities for developing analytical or critical thinking skills (Almassaad et al., 2024; Blahopoulou & Ortiz-Bonnin, 2025; Hong & Luo, 2024; Zhai & Wibowo, 2023). For example, AI in those studies were used to serve shallow lower-order cognitive tasks such as summarizing, translating or generating ideas, but there were minimal higher-level tasks such as a deeper exploration of the learning materials or a reflection on the academic task. There have thus been calls to cultivate "critical AI literacy". (Bali, 2025; Ng et al., 2021). When applied to the teaching and use of AI tools, it means helping students to recognize both the potentials and limitations of AI so that critical thinking and the ability to critique the accuracy of AI generated contents can be developed (Gupta et al., 2024).

The fact that students who have mastered GAI could gain advantages poses another concern on educational inequality. A lack of familiarity or insufficient digital literacy often stops some students from taking full advantages of GAI tools (Mohammed et al., 2023). As early as 2018, in the "Artificial Intelligence Innovation Action Plan in Higher Education Institutions", China's Ministry of Education launched a strategic policy of leveraging intelligent technology to innovate educational approaches, transform teaching methodologies, and improve educational administration. It is crucial for educators to adapt and integrate AI tools in the classroom, providing guidance to students rather than outright banning these technologies. As such, the strategic and ethical integration of AI in education is a pivotal step towards achieving educational equity, quality, and modernization.

So far, there has been a critical gap between what AI technologies could do and how they are actually implemented in authentic educational settings (Bates et al., 2020; Kabudi et al., 2021; Zhang & Aslan, 2021). The rapid advancement of AI technology thus necessitates more empirical research to provide evidence-based guidelines for AI applications and benefits in education (Kim & Lee, 2023; Chiu et al., 2023; Rashid, 2025). In terms of language learning in ELL contexts, although studies have shown AI-assisted teaching can enhance students' vocabulary acquisition, speaking fluency, grammar, reading comprehension, writing skills, and motivation and confidence, the findings are mixed and even contradictory (Huang et al., 2022; Zhai & Wibowo, 2023).

To fill in the gaps in the literature, the current study aims to provide an in-depth qualitative investigation on the application of GAI tools by a group of postgraduate students in preparing for an English oral presentation, and on their perception of GAI's effects on improving their English proficiency.

3. Methods

The purpose of the current study is to contribute to the growing body of literature on ESL learners' experience with GAI tools in facilitating their oral English presentation with a group of postgraduate students in a research university. Employing a cross-sectional design to gauge the perspectives, attitudes, and experiences of students, the study was conducted at a research-intensive public university specializing in STEM fields in Shenzhen, a metropolis in Southern China.

Since the first author is responsible for teaching English classes to postgraduate students, participants

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were conveniently selected from among her students. The target number of students was 40 but 36 students eventually participated in this study (the other four dropped for personal reasons like business trips), an acceptable number for an exploratory qualitative study. Out of the 36 participants, there were 10 female students and 26 male ones, consistent with the demographic distribution of the university where the study was conducted. They mostly majored in natural science areas such as chemistry, physics, microelectronics, and computer science.

A qualitative approach is adopted here because of its exploratory nature and flexibility in data collection and analysis, and it is especially suitable for investigating complex, content-dependent phenomena (Rashid, 2025). The increasing incorporation of AI tools into education is a recent phenomenon of which we do not have an adequate understanding, as the literature suggests (Ou et al., 2024). While the current studies on AI assisted learning was dominated by quantitative designs (Zhai & Wibowo, 2023), researchers believe that qualitative research featuring individual student learning pathways can be quite helpful in sorting out learner differences that can affect the use of digital tools (Godwin-Jones, 2022).

The participant students went through four stages in this study: first of all, in early September 2024, basic information was collected through a questionnaire about the participants' demographic information, their major and research focus, frequency of using AI tools and main use of AI. Participants were selected through purposive sampling, ensuring to include both active and inactive users of chatbots for possible comparison. Secondly, in two weeks, the first author gave a very brief AI training on all students demonstrating some sample usage of AI tools especially for academic purposes. Students were encouraged to think about the both the potentials and limitations of GAI apps as well as working concept of AI ethics. Thirdly, students were given a list of topics to choose from for their English oral presentation in early October. They were allowed to turn to AI for assistance when preparing for their oral presentation, and in four weeks they delivered their presentation. Then, semi-structured interviews were conducted at the end of the semester in late December with 36 students on their experience of interacting with the chatbot, their evaluation of AI's role in terms of preparing for the oral presentation task. The interviews were conducted via video conferencing platforms at the students' convenience, and each lasted for approximately 30-40 minutes. The participants' informed consent were obtained before interview data was audio-recorded and then transcribed. To keep the confidentiality of the participants, they remained anonymous and were assigned with numbers during the research process.

Qualitative data from the interviews are examined using thematic analysis (Braun & Clarke, 2013) for deeper insight into the subjective experiences and perceptions of the participants. The first author and a trained coder independently and systematically categorize student responses to generate initial code and then identify recurring themes, patterns, or emerging trends. To enhance the credibility and trustworthiness of the findings, member checking was also conducted and any discrepancies were further negotiated until the consent was reached. Inter-coder reliability was acceptable at 89%.

4. Results

4.1 The Function of AI at Different Stages of Oral Presentation

The utilization of AI for English oral presentation by the participants in this study could be divided into three stages: early stage of data collection, mid stage of structure outlining, and late stage of slide design and script writing. In fact, as Participant 21 noted, "AI may assist you throughout the whole process of preparing for your oral presentation, but you have to be clear in what way exactly AI can be helpful."

At the early stage of working on their oral presentation, especially for those who knew very little about the topic of the presentation, participants would rely on AI agents to brainstorm on the topic for background information, possible perspectives to address the topic and to present. There were inspired and successfully collected solid evidence, examples, and data for their presentation. AI tools thus saved their time and made the whole process much more efficient. For instance, Participant 32 explained how AI helped him gather materials for his presentation on water pollution, a topic he was not very familiar with, "When I came up with the angle of 'excessive animal release', I asked it to locate recent Chinese news reports on similar incidents and to explain how such releases can worsen pollution. Its response was detailed and logically structured, offering actionable suggestions from the perspectives of policy, industry, and individuals, which greatly expanded my own thinking."

It is noted that demonstrations and encouragement from the instructor would greatly motivate students to make use of AI tools especially for those who rarely turned to AI for help. Prompted by the instructor's suggestion, some students deliberately experimented with AI-assisted oral presentations. Participant 11, who came to know ChatGPT for the first time during AI training provided by the instructor/researcher in this study, commented her improved productivity due to her exchange with AI assistant: "For my presentation on 'AI and the Future of Disease', the AI sketched out a clear roadmap: it listed current problems in medical AI, mapped out its prospects, and offered targeted recommendations. That scaffolding let me draft the script and design the slides far more smoothly, saving me a huge amount of time." Some students' interactions with AI-powered instrument were limited to the functions demonstrated by the instructor during AI training. According to Participant 03, "During the AI training session, the instructor demonstrated several representative ways to use AI in academic research such as brainstorming and generating research questions, all with English-language case examples. I found them so professional that I stuck to those exact models when preparing my presentation and didn't venture beyond the provided templates."

Meanwhile, participants came to recognize one of AI's limitations, realizing that the news reports, examples, and famous quotes it supplied might all be fabricated and must be verified firsthand. Participant 04 explained, "the specific content provided by AI still needs my own second-round judgment and fact-checking. If you're sensitive to numbers, numerical slips are relatively easy to catch and correct. However, factual claims such as news reports or academic references that the AI lists must be verified through search engines like Google Scholar."

For those who would like to have more control over their presentation, for example Participants 19, 20,

23 and 36, they assigned the AI engine to summarize and interpret relevant news links and supplementary reading materials provided by the instructor or by students themselves. Participant 12 described how she exerted control over AI-powered helper: "Since the instructor had already provided ample background material, clear guidance, and a well-defined topic, and I'd done my own reading, I didn't ask the AI to search for more sources. Letting it roam freely felt like losing control; instead, I fed it the exact articles I'd studied and had it summarize and re-narrate strictly within these materials."

More creative use of the AI soft suite by a couple of participants was to create a lead-in story or a "hook" to attract the audience's attention, demonstrating that students learned to integrating AI tools with presentation strategies learned in classroom, applying them flexibly to achieve their goals. For instance, Participant 08 introduced the topic of water pollution by opening with a news story about a city's river filled with dead fish, and Participant 12 started her presentation by comparing the wave of university closures to endangered species. Both of them effectively sparked reflection on the subject, and both of these engaging news hooks and analogies were generated by AI.

At the mid stage of working on their presentation, students found AI helpers played a much less significant role. While quite a number of participants mentioned asking AI to generate an outline of their presentation, such AI-generated outline was found to be largely unimpressive. While it demonstrated "acceptable logical structure" that helped students to "clarify their thoughts" (Participant 16), other aspects proved unsatisfactory: the content tended to be "overly broad and vague" (Participant 02 and 35), the examples "lacked specificity and relevance to general audiences" (Participants 04 and 14), and constant guidance was required such as "repeated and more detailed prompting" (Participants 25 and 06), "follow-up questions" (Participant 17), and "adjustments of focus" (Participant 20). Although AI provided assistance, the overall efficiency of the organizing process fell short of expectations, as "substantial additional effort was needed" to search for and incorporate more concrete details (Participants 07 and 14).

In fact, at the late stage of preparing for the presentation, the major function of AI tools, to many participants, was limited to translating the Chinese script into English and polishing it for a better version, in other words, as a language assistant. Such text-processing capabilities of AI gained widespread recognition among students. "In most cases it captures exactly what I mean" (Participant 25). "To my satisfaction, it corrects grammar with uncanny accuracy" (Participant 35). Participant 09 further explained, "AI outperforms traditional translation tools in tracking down the most precise wording by linking it to the surrounding text. While Youdao (a popular translation app in China) provides me with 'international chess' for '国际象棋' (literally international chess), ChatGPT asserts that 'chess' is simply more native." It also helps students to write in an academic style. "With AI's help, you can rewrite your papers in a more formal and academic way", added Participant 10. Only one student in this study, Participant 11, stated her dissatisfaction with the outputs from AI aide linguistically. Semi-structured interview with her indicated that it was largely caused by technical difficulty due to a lack of practice with AI tools.

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Despite their attempts to create presentation slides and draft presentation scripts with the aid of AI apps, participants mostly excluded the outputs of AI from their final performance. From the students' point of view, slides generated by AI often "lack aesthetic appeal" (Participants 10 and 14) due to "rigid layouts and poor visual hierarchy" (Participant 10), and their generic templates were "ill-suited to pedagogical contexts" (Participant 01). An additional problem was with the graphics in AI-generated slides. "Half of the time the visuals were missing or messed up, and the text in images frequently didn't match the context", said Participant 33. As to scripts drafted directly by AI agents, students often found them "overly broad and superficial" (Participants 05 and 14). Stylishly they carried "distinct artificial tones" which means "overly formal, impersonal, and devoid of natural conversational qualities" (Participants 09, 19, and23). As Participant 21 stated, "It sounds obviously robotic, not how real people talk. And the language is so needlessly complicated that neither I nor my audience would understand it if I just read it verbatim." Participant 33 tried it another way by using AI to turn his finished slides into a speech script, but only to find it more problematic: "The AI basically just parrot back my slide titles without really expanding on them or providing any proof. The examples it gave were super generic too. I was pretty disappointed." As a matter of fact, many students realized that adapting AI-generated scripts to align with their English proficiency would be time-prohibitive (Participant 22). It led them to compose original drafts in Chinese independently before employing AI for translation. This hybrid approach leveraged their efficiency by allowing them to take intellectual ownership and enhancing retention, as Participants 10 and 32 maintained, "When we build the presentation logic ourselves in writing, it sticks in our memory better when we present."

Although the presentation task also involves speaking skill, technical and practical barriers limited students' utilization of AI as a speaking tool. Six participants reported no access to voice-assisted AI due to technical issues or time constraints. Participant 15 explained, "My GPT version doesn't support voice chat, and the payment's a hassle. My account is not linked to any credit card." Participant 12 added, "I consider practicing oral English with ChatGPT, but my Huawei phone can't download a compatible version." Even aware of conversation function of certain AI tools, Participants 06 and 24 chose not to engage. "I know GPT's app does voice chat, but I use the web only. For a PhD student like me, my research comes first," said Participant 24. Participant 06 agreed, "I have no time to explore AI voice assistant. Language learning isn't my priority now." Among a few who tried this voice function, some deemed AI inadequate for authentic oral English practice. Participant 20 critiqued, "AI can't replicate a natural English environment." Participant 30 hesitated, "I haven't tried AI to practice speaking. Maybe it'll feel robotic." Participant 35 dismissed it entirely, "Maybe it's my bias, but chatting with AI is no real conversation. Real improvement comes from talking to humans." Participant 29 concurred, "I improve my spoken English mainly by chatting with international students, not with AI."

4.2 Effects of AI on Students' English Proficiency

Half of the participants confirmed the improvements in their English proficiency through AI-assisted English oral presentation preparation. The most frequently cited benefits included discipline-specific

vocabulary expansion, enhanced grammar accuracy, and acquisition of advanced syntactic structures. For instance, Participant 09 emphasized, "The biggest game-changer for me was how AI boosted my vocabulary." Participant 15 echoed this, "Thanks to AI, my presentation scripts now pack way more sophisticated, native-like words and sentence structures. Memorizing these drafts for me became a language practice." Besides, a few students relied on AI to improve their pronunciation by making AI apps to read aloud the script, as Participant 12 put it, "I'd ask AI to read passages aloud in specific tones so that I can record it and mimic the delivery. This polished my intonation and fixed my pronunciation errors, not to mention teaching me how to say advanced words." Only two participants (Participants 26 and 28) reported improved reading speed. As Participant 28 explained, "Interacting with AI in English forced me to think about phrasing and boost my expression skills. What's more, reading its responses sharpened my comprehension as well."

On the contrary, the other half of the participants recognized little measurable improvement and even negative impacts on their English proficiency and learning motivation. The interview showed that a product-oriented view prevented them from taking full advantages of AI tools. For many, AI was a "shortcut" to a perfect English draft without all the pains of foreign language learning. That was why many participants reported themselves conveniently switching to Chinese in their interactions with AI. As Participant 01 admitted, "I just use AI for convenience. Most times I copy and paste the answers. That's it." "There's zero language growth. That's true. Using AI to translate is to avoid English. Even if it edits my essays and generates better English drafts, I rarely engage with the target language itself. That critical step is simply conveniently missing," added Participant 18. Participant 20 highlighted the need for proactive effort in order to receive grammar correction, "When chatting with AI in English, it won't correct your mistakes unless you specifically ask. Your grammar only gets improved if you demand it." Without such initiatives, AI's linguistic benefits remained negligible. Participant 36 extended this concern to broader cognitive consequences: " When stuck on a sentence, your first instinct becomes AI rescue rather than mental wrestling. What's worse, since AI excels at language tasks, it might replace jobs like translation. So if tech can cover our needs, why bother mastering English?" Thus, AI which was supposed to facilitate English learning, ironically turned out to be hindering linguistic growth for some participants.

4.3 Other Factors Influencing the Effectiveness of AI Use

Several interesting observations emerging from further interviewing with students were related to the factors influencing the effectiveness of AI use. To begin with, the background knowledge the students possessed about the presentation topic mattered. Generally speaking, the less familiar students were with the topic chose for their presentation, the more pronounced their gains would be, although not really in their English proficiency but in knowledge acquisition. At least five participants (i.e., Participants 02, 03, 05, 06, and 07) explicitly stated that selecting presentation topics in completely unfamiliar fields would have made AI's assistance "significantly more impactful" for their comprehension. As Participant 06 explained, "GPT is an excellent tool for acquiring new knowledge in domains you know nothing about."

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Participant 07 expressed the same through with the example the topic "entrepreneurship", a topic of which he had only superficial knowledge. Planning to use ByteDance as a case study, with Kimi's assistance, he efficiently gathered materials, generated a detailed outline, enumerated TikTok's business divisions, and even received cited references (e.g., comparative articles and infographics from Zhihu, a popular Chinese platform for in-depth discussions and crowdsourced knowledge), saving substantial time while compensating for his knowledge gaps. He said, "Seriously, I'd be doomed without AI!" Thus AI helped learners with knowledge acquisition in a new field.

However, as Participant 20 observed, AI might not be able to "compensate for absolutely zero background knowledge". Additional background knowledge was necessary to generate more specific prompts and improve response quality. This was illustrated through the case of Participant 20: "For the topic of robotics, when I asked general questions to AI, it gave generic answers without any concrete examples or justification of necessity. But then a friend of mine suggested rescue robots and some possible models of such robots. With the help of such specific domain understanding, I could eventually refine my prompts to get more specific and useful outputs… AI is an amplifier, not a creator. It may help you go from 0.8 to 1, but not from 0 to 1." Participant 21 confirmed the importance of background information: "Vague prompts often lead to chaotic results. To get useful responses from AI, you need to refine your requests. But this only works if you already have a clear goal in mind. For example, for my English presentation on the game Black Myth: Wukong, I knew from the very beginning that I was going to focus on the game's soundtrack. My existing music theory knowledge on genre and instrumentation allowed me to ask targeted questions. Through AI dialogue, I was able to expand and refine my presentation framework with game-specific details AI provided, but this process depended on my initial understanding of music concepts."

Another noteworthy observation is that the participant students developed their own understanding about the timing when AI should be introduced into English class. Although the participants were only asked to interact with AI after class, most of they had experience employing it in class. To the researchers' surprise, some of them explicitly stated their preference of using AI outside of class to using it during class. As Participant 25 suggested, while one could "use AI as a learning assistant in class and occasionally clarify your doubts on some concepts mentioned in class slides," class time was ultimately limited. Simultaneously interacting with AI while trying to follow the teacher's lecture could easily "distract students and reduce learning efficiency" (Participant 15). Instead Participant 09 suggested students should be encouraged to put away their computers and actively participate in genuine classroom activities." Two other students, Participants 11 and 24, also believed that "as long as you actively participate in class interactions and follow the teacher's pace, your language skills can improve. There's actually no need for AI during class."

Last but not the least, due to time and motivation constraints, student-AI interactions were not always in-depth, yet participants managed to strike a pragmatic balance between utility and intentionality. Participant 15 articulated this trade-off, "My field covers an overwhelming range of specialized

knowledge and attempting comprehensive mastery would be exhausting. After weighing the effort required, I found it more rational to use AI selectively. I don't need to master chemical characterization systematically. Even if AI's accuracy is just 50% or lower, I can cross check its outputs with domestic search engines and other apps, followed by iterative real-world testing. Such multi-step validation makes it sufficiently reliable for practical use. … While AI might not be able to perfectly replace the instructor, it is good enough as a learning assistant. For me, AI is perfectly imperfect."

5. Discussion

The results of this study demonstrate the role AI served at different stages when the participants prepared for their oral English presentation. At the early stage, AI mainly functioned as a brainstorm facilitator providing background information to shorten knowledge gap in a new research field and also different perspectives from which to address the target topic; then it was primarily employed as a translating or editing tool to translate and polish students' scripts for presentation. In addition, students held divergent views on the impact of AI on their English proficiency, with only half acknowledging its major contribution to vocabulary acquisition, grammar accuracy, and sentence pattern development. In addition, the interviews highlighted three further observations on the factors affecting the effectiveness of student-AI interactions. Students noted that background knowledge was crucial for generating effective prompts and securing higher-quality responses. As to the appropriate timing for using AI, some students preferred out-of-class to in-class application. Finally, while limited time and motivation constrained in-depth interactions with AI, students generally struck a balance between utility and effort.

The use of AI by the current participants as a language assistant is consistent with previous studies that AI tools are most commonly used for language support in academic settings, especially among non-native speakers (Zawacki-Richter et al., 2019). Moreover, the participants' conflicting perception on the effects of AI on their English proficiency mirrors the mixed findings from previous research (Huang et al., 2022; Zhai & Wibowo, 2023; Zou et al., 2020). From the participants' explanations, we may conclude that in order for AI tools to help develop English skills, students should be discouraged from over relying on AI for ready-to-use answers and instructors should design learning activities in a way that learning process is prioritized over outcomes so that students will internalize into their output the superior linguistic features generated by AI. The fact that AI functioned as linguistic assistant as well as background knowledge provider may indicate that it is a useful tool for content-based language teaching to enable both knowledge acquisition and English learning.

The discovery that vocabulary and grammar knowledge were "easier marks" even without constant guidance from instructors probably indicate that such skills might be perfect target if instructors are to design out-of-class intervention with the sole help of AI. On the other hand, learning programs targeting other skills especially listening, writing and speaking should be better accompanied by the combined efforts of systematic teaching in class and AI-assisted learning after class.

The fact that the current participant postgraduates were aware of the limitations of AI-generated contents

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and capable of them not only by cross-referencing with search engines and authoritative databases but also by relying on their domain knowledge, signals a crucial shift in educational priorities from traditional digital literacy to critical AI literacy (Bali, 2025; Laupichler et al., 2022). The participants' ability to critically evaluate AI outputs, rather than accepting them at face value, signifies a move beyond operational competence towards critical AI literacy (Bali, 2025). This encompasses not only the skills to use AI but also the ability to critically assess potential limitations and biases of AI, which is now recognized as central to the AI literacy framework in higher education (Laupichler et al., 2022). In a landscape flooded with AI-generated information, critical AI literacy becomes the ultimate line of defense against misinformation, biases and algorithm hallucinations.

To the authors' knowledge, students' preference of using AI outside of class has not been reported by previous research. Such preference can be firstly attributed to students' English proficiency. Students of lower proficiency level may face a cognitive overload when they have to deal with interactions with the teacher and with AI at the same time. To reduce the cognitive load and distraction from AI, they prefer to fully participate in class activities. Technical barriers might be another contributing factor which prevents less competent users from using AI as effectively especially during limited class period. These barriers are often conceptualized as a form of "second-level divide" (Attewell, 2001; Van Dijk, 2005) that distinguishes more access to technology from using it effectively. This divide is particularly pronounced among learners who lack regular exposure to AI in their daily lives.

In addition, second-level divide in AI literacy may lead to "Matthew Effect" or the phenomenon of "the rich getting richer". Effective prompts with sufficient context or specificity generally produce superior instead of irrelevant responses. However, as students have observed, such contextual or specialized knowledge comes from their background knowledge. This presents a critical paradox for AI in education. That is, while we aim at equal educational opportunities with the implementation of AI, AI itself may in fact amplify pre-existing knowledge disparities. Teachers could help to mitigate these potential biases by providing AI training and background knowledge of the new field. As the current research findings indicated teachers' demonstration of AI use cases could help minimize the gap in AI literacy.

Building upon these findings, several pedagogical implications can be drawn integrating AI tools into English language teaching especially in tertiary settings. To start with, the timing of AI integration deserves careful considerations. Given the students' preference for using AI outside of class, instructors should refrain from imposing lengthy AI-mediated activities during limited class hours. Instead, AI should remain a supplementary tool for after-class reinforcement or exploration. This approach not only respects students' learning preferences but also preserves valuable in-class time for teacher-facilitated language practice and peer collaboration. Besides, when integrating AI chatbots into their teaching, instructors should take students' proficiency levels into consideration to avoid cognitive overload. For those less proficient students that have difficulty understanding basic knowledge delivery from the instructor, involving AI may tempt them to over rely on AI and even switch to their native language to reduce cognitive load.

The fact that student-AI interactions are not always in-depth explorations probably aligns with the "satisficing principle" (Simon, 1956) where learners prioritize adequate solutions over exhaustive mastery when facing cognitive overload. To be specific, learners in this study face the dual task of knowledge acquisition and linguistic mastery. Time constraints or workload pressure make them prioritize short-term utility over deeper mastery. They choose to stop refining their use of AI once a basic level of functional utility is achieved (e.g., acceptable translation, or understandable explanation of the topic to bridge knowledge gap). In other words, they manage to "strike a pragmatic balance between utility and intentionality." As a result, they would stop pursuing a more comprehensive understanding of the whole research area or go further to internalize the linguistic features of the target language involved. This could be used to explain why in some studies students of higher ESL proficiency benefited more from interacting with chatbots (Huang et al., 2022). Those of lower proficiency are probably burdened with a higher cognitive load, and such overload possibly diminishes their learning outcome.

This satisficing principle suggests an important pedagogical implication in AI-assisted learning that instructors may need to adjust the cognitive demand and focus of learning tasks accordingly. Since there exists a parallel in students who strategically switch between AI tools based on task language and domain needs, ESL teachers, especially those in content-based learning context, may shift between domain knowledge acquisition and language mastery when designing class activities. In early stage of learning, students, especially those of lower English proficiency, may face a high cognitive demand with both limited background knowledge and restricted language skills at the same time. In this case, domain knowledge acquisition should be the primary cognitive goal. Tasks should be designed to reward domain understanding over linguistic perfection. Instructor would explicitly encourage students to use AI as a reference library for domain knowledge. Of course, instructors could facilitate such student-AI interactions by providing students with some basic background information for them to generate more specific prompts and then improved responses from AI. In later stage of learning when solid domain expertise has been established, students' cognitive load is significantly lowered, they are ready to focus on the "form" or the linguistic features. The primary cognitive goal is set at language mastery and precision. Students will be encouraged to achieve professional communication standards in the target language with the specific domain knowledge they acquire earlier. Teachers could instruct them to produce output of all forms (e.g., oral presentation, essay writing, summary) in the target language to show their understanding of the domain. After all, most GAI tools are optimized for general conversation rather than targeted language learning (Huang et al., 2022). Without such deliberate efforts to address linguistic features, students may not be able to achieve language learning goals.

6. Conclusion

This study reveals striking differences in students' understanding and use of AI for academic purposes, or to be specific, for an English oral presentation task. While some participants already were approaching critical AI literacy, others still struggled with basic operations. This disparity suggests that AI-assisted

pedagogy cannot be implemented as a one-size-fits-all model. Instead, differentiated support and targeted training for learners are necessary to reduce potential educational inequalities and to ensure that all of them may benefit from technological integration.

The disparity between AI's considerable potential to support language learning and its limited pedagogical impact in practice might suggest teachers play a pivotal mediating role during student-AI interactions. To achieve optimal learning outcomes, when designing AI-assisted learning activities, instructors should take into consideration students' linguistic proficiency and cognitive levels and adjust learning objectives accordingly so that AI can support students effectively instead of overloading them. In classroom settings, where students at current stage may value human interactions and emotional connections, teacher-student communications should remain central; in after-class settings, AI can be positioned as a supplementary tool to support independent study and enhance efficiency, with or without frequent guidance from the teachers. Equally important is to provide teachers with professional development programs so that they can be equipped with the most up-to-date knowledge on AI in educational context.

Effective integration of AI in foreign language education therefore depends on sensitivity to learner diversity, thoughtful pedagogical design, AI literacy training for students, and teacher professional development. Considering the limited generalizability of the current participants and the subjective nature of student self-reports, future students should be extended to students with a wide range of academic backgrounds, language proficiencies, and cognitive profiles. Observational data should also be collected, for instance through field notes or screen-recording of student-AI interactions, to verify the actual effects of AI on students' learning. Finally, further investigation is needed about how teachers' guidance may help enhance AI-student interactions after class.

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