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Efficiency ≠ Proficiency: College English as a Foreign Language Students' Perceptions on the Use of Generative AI

Chiu-Hui Wu*
Department of English, Wenzao Ursuline University of Languages, Kaohsiung, Taiwan R.O.C.
Shanmei Tseng
Department of English, Wenzao Ursuline University of Languages, Kaohsiung, Taiwan R.O.C.

Correspondence
Email: 99031@mail.wzu.edu.tw

Abstract
There is a growing concern that the increased efficiency of using Generative Artificial Intelligence (GAI) text in the completion of educational tasks related to English language learning may come at the cost of whether or not students develop real language proficiency. This study investigated the perceptions and usage patterns of ten English-majored university students - whose English proficiency levels ranged from A2 to C1 (as designated by The Common European Framework of Reference for Languages - CEFR) - in their use of ChatGPT and other AI tools for coursework and self-study. Findings from interviews revealed notable individual differences. However, while all students acknowledged improved efficiency through GAI use, their perceived impact on language proficiency varied. Some A2 or B1 learners used GAI for speaking practices. Other students, particularly C1-level, perceived AI generated text as a tool for improving efficiency rather than language proficiency. These findings highlight the need to distinguish proficiency from efficiency and account for individual differences. Implications are made for a pedagogy that includes GAI-integrated language instruction.

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[1]Introduction

In 2022, OpenAI, an artificial intelligence (AI) company, introduced the program Chat Generative Pre-trained Transformer (ChatGPT), a chatbot that uses a real-time processing system to generate text. This technology has significantly transformed the way all students learn, and English as a foreign language (EFL) learners are no exception to this trend, as they are increasingly interacting with Generative AI (GAI) in educational contexts (Li et al., 2025).

Among English language learners (ELLs), English-majored students represent a unique group because of their intensive engagement with academic and literary texts. However, even within this group that included students with different levels of English proficiency, digital literacy and learning goals influenced how students interacted with GAI. Some English majors—especially those with higher CEFR levels, were more likely to use ChatGPT in strategic and sophisticated ways such as refining academic writing, receiving stylistic feedback, or exploring nuanced language patterns (Lo et al., 2024). This was in contrast to other ELLs who might use GAI as a fast way to complete assignments without understanding the language learning process. This diversity suggests that students' engagement with ChatGPT is shaped by more than just having access to it; it is also influenced by personal, cognitive, and contextual variables. Understanding these differences is essential for educators who are seeking to integrate AI tools into language instruction in ways that are not just efficient but also encourage deep, proficiency-oriented learning. As GAI becomes increasingly prevalent in educational settings, exploring how it is used by language-focused students could offer potentially valuable implications for the future of teaching and language learning (Li et al., 2025).

While ChatGPT is perceived as a potential mind-tool, there is limited research on how EFL students, particularly those from English language-focused programs, utilize it (Gutai et al., 2024). Moreover, how these students differentially process and interact with large language models (LLMs) —whether as learning companions, feedback providers, or idea generators —warrants further exploration. This begs the following questions: (a) To what extent to do they perceive GAI as a resource to enhance their English language skills and proficiency? and (b) How do their individual characteristics affect their learning experience? Thus, the current study examined the experiences of Taiwanese English-majored university students who have used ChatGPT to support their English learning. By focusing on their perceptions, behaviors, and language goals**,** this research investigated how individual differences shape the use of GAI tools for language development.

[1] This paper is part of a special issue (2025, 3) entitled: Individual Differences in the AI and Digital Era: The Impact of ChatGPT and Beyond (edited by Zhisheng (Edward) Wen, Richard Sparks, and Hassan Mohebbi).

Literature Review

Problems with English Proficiency

English proficiency is a buzzword - in the world of English language learning – that is widely used and often ambiguous. Proficiency is intellectually defined as "the skill and the experience for doing something" (Cambridge University Press, n.d.). When referring to English proficiency, the meaning is broadly referred to as the ability to speak, listen, read, and write in English in everyday contexts (Gottlieb, 2006). However, what constitutes "proficiency" and how it is developed can vary among individual learners. Students bring with them diverse levels of prior knowledge, language exposure, learning strategies, and motivations**,** all of which shape how they engage with English (Oxford, 2017). These individual differences influence how they approach language learning and how they engage with GAI tools such as ChatGPT. For example, one learner may demonstrate strong oral fluency but struggle with academic writing (Cummins, 2003), while another may excel in grammar but lack confidence in conversational English. These differences are particularly relevant in the age of GAI, where students' interactions with tools like ChatGPT may further diversify how they practice, demonstrate, or even bypass the development of certain language skills.

Because proficiency is multifaceted, the way studies examine the impacts of GAI on a language learner's English proficiency can be problematic for two reasons. First, proficiencies can easily be overgeneralized or misinterpreted (Chan et al., 2024; Shikun et al., 2024; Yeh, 2024). For example, Chan et al (2024) examined the feedback of GAI on students' English writing proficiency. In this case, using the term "English proficiency" was overgeneralized as it only referred to students' writing. In a similar vein, when examining the impacts of GAI on student's spoken English, a study by Shikun et al (2024) overgeneralized oral proficiency to represent overall English proficiency. Incidentally, findings indicated that when compared to higher-level or lower-level students, intermediate-level students benefited more from the use of ChatGPT with respect to improvement in their English fluency and confidence (Shikun et al., 2024). Such findings suggest that the impact of GAI is not uniform**,** but instead influenced by learners' proficiency levels, cognitive readiness, confidence, and learning goals**.** Therefore, when assessing whether GAI supports language development, it is essential to address how learners' proficiency and experiences with GAI are shaped by a range of individual factors**.**

Secondly, proficiency was examined through teachers' perceptions without presenting any actual test scores or the self-perceived proficiency of students (Yeh, 2024). Yeh's (2024) study proposed that the use of GAI could enhance students' English proficiency by creating immersive scenarios with programs such as ChatGPT . Teachers' perceptions were the only data reported. Students' proficiency was not measured by standardized tests and no data were collected on students' perceptions of their own proficiency. A theory based on teacher reported data risks overlooking the multifaceted nature of language competence and may lead to biased conclusions about learners' overall abilities.

Impacts of AI on English Proficiency: Promises and Pitfalls

Several studies have explored the impacts of GAI on college students' English proficiency, specifically in oral abilities (Karatay & Xu, 2025) and writing skills (Altamimi, 2024; Chan et al., 2024; Dong, 2024). Regrettably, listening and reading proficiencies have not been studied widely.

The way in which GAI enhances students' overall English proficiency, including spoken English, has been reported (Karatay & Xu, 2025; Shikun et al., 2024; Yu, 2025). Chatbot tools, such as voice functions for conversation practice in ChatGPT, have been found to develop or significantly improve oral English proficiency. Findings indicated that students were more willing to communicate with a Chatbot in a less stressful and non-competitive environment (Karatay & Xu, 2025; Shikun et al., 2024; Yu, 2025).

On the other hand, the writing proficiency of ELLs can be improved with AI as an aid or support (Altamimi, 2024; Chan et al., 2024; Yin & Dou, 2025). For example, Chan et al. (2024) reported how ChatGPT-generated feedback significantly improved the quality of university students' essays and resulted in higher scores on revised papers (Chan et al., 2024). This improvement is linked to increased student engagement and motivation during the revision process (Chan et al., 2024). The results also showed that not all students experienced the same level of benefit or emotional response from using GAI. While some students found AI feedback motivating and helpful, others expressed skepticism, frustration, or even anxiety about using the tool. These individual differences—ranging from language proficiency and confidence to familiarity with AI and self-regulation skills—can shape the extent to which students benefit from AI-assisted writing tools**.** Therefore, it is important to avoid assuming that AI tools affect all learners uniformly and to recognize that personal, cognitive, and affective variables influenced the learning outcomes of GAI-supported writing instruction.

AI tools (e.g., ChatGPT, Grammarly) have the *potential* to support students' academic language (CALP), particularly if used to scaffold academic writing (Oubibi et al., 2025). Non-native English-speaking postgraduate students developed writing confidence with the support of GAI (Oubibi et al., 2025). However, students' proficiency based on their fluent AI-assisted writing or conversation may be misleading. Just as with BICS, AI-generated fluency can mask deeper struggles with academic concepts and cognitive engagement. Students are generally aware of their actual level of English proficiency, especially when comparing their independent performances to AI-assisted tasks, which sometimes misrepresented their actual abilities. These individual differences shaped how learners perceived the benefits and limitations of GAI for their language development. Thus, the current study examined students' perceptions of using ChatGPT to enhance their English proficiency.

Impacts of AI on Learning Efficiency

Efficiency is defined by the dictionary as "the quality of working well in an organized way, without wasting time or energy" (Oxford University Press, n.d.). Generative AI such as ChatGPT can be viewed as the epitome of efficiency. When given a prompt, it serves as a guiding tool to produce multiple responses and perspectives tailored to the needs of its users within two to eight seconds! Hence, the system's real-time capabilities and user-friendly interface have contributed to increased efficiency for students completing academic tasks (Bedford et al., 2024; Tsai et al., 2024). In the study by Bedford et al., a non-native English speaking doctoral student became more confident in writing his dissertation with the assistance of generative AI. Moreover, Tseng and Lin (2024) developed a ChatGPT-embedded university-level writing curriculum. They reported that a well-designed instructional model enhanced the efficiency for undergraduate students to compose their writing. It also guided students to develop their logical thinking skills and provide peer feedback through the interaction with generative AI. Such studies have implied that ChatGPT may reduce the study time and increase work quality.

There appears to be, however, discrepancies between *efficiency* and *proficiency*, as quick results did not always reflect deep language competence. Efficiency in learning is often associated with processing cognitive loads but that may not be the case when proficiency can be enhanced simultaneously. For example, in Jamila et al.'s (2024) study which examined 235 high school students on the use of technology in developing their English proficiency, the results showed that students were engaged in learning English with technologies, such as YouTube, social media and other language learning application. However, their English proficiency did not significantly improve. In another study, Chan et al (2024) conducted research with an experimental group of students who received feedback from ChatGPT. Findings indicated that the students assisted by ChatGPT scored higher than the control group, who did not receive any feedback from ChatGPT. The findings of the study only showed that using ChatGPT-assisted feedback reduced the time for students to revise their work. There was no evidence to show that the use of ChatGPT improved writing proficiency.

To conclude, existing literature has predominantly focused on the efficiency of LLMs and their potential for enhancing English Foreign Language learners by providing what is perceived as a stress-free learning environment. However, few studies have explored the nuanced ways in which EFL students, particularly those majoring in English, perceived their use of GAI to enhance their English proficiency. Thus, this study investigated English-majored students' uses and perceptions of ChatGPT in English language learning.

Research Methodology

This research adopted a qualitative design which is an optimal way to investigate an emerging phenomenon in depth (Marshall & Rossman, 2011). It is valuable in this study to explore the emerging, complex use of innovative technologies like ChatGPT.

Rather than testing hypotheses, qualitative research helps develop theoretical frameworks grounded in actual experiences.

Qualitative researchers emphasize that knowledge is co-constructed between the interviewer and the participant (Charmaz, 2014). Interviews are not just tools for data collection but are interactive meaning-making processes. They uncover how participants interpret and assign meaning to experiences through social interactions. In this study, interviews allowed the researchers to explore English-majored students' experiences, perceptions, and interactions with GAI tools in depth. Through this approach, the study sought to uncover whether or not ChatGPT supported English learning (proficiency) from the students' perspectives and what ways it is beneficial. The second author, a student researcher, served as the primary interviewer. Her role as a peer-researcher helped create a more comfortable and relaxed environment for participants. This peer dynamic encouraged more honest and open responses.

The Study Context

The study was situated in a private university in Southern Taiwan that features foreign language education. Student participants were all English majors who had taken standardized English proficiency tests such as Test of English for International Communication (TOEIC) or International English Language Testing System (IELTS) (Table 1). Both tests provided CEFR alignments (ETS Taiwan, 2020; IELTS, n.d.) Participants were interviewed during the period between April and June of 2024.

Participant Recruitment

A total of ten student participants were recruited based on the following criteria (Table 1). For each level—A2, B1, B2, and C1 - two or three students were recruited, respectively. Student participants met the following criteria:

1. The student participants were English-majored, sophomore and juniors;
2. The student participants used ChatGPT to complete their English language learning tasks for a minimum of six months;
3. The student participants had an English proficiency level ranging from Common European Framework of Reference for Languages (CEFR) A2 to C1 with a proof of English proficiency test after 2022.

Table 1

Ten Participants' Background Information

Coding	Pseudo name	Gender (M/F)	Age	CEFR Level	Proficiency
A	Abby	Female	21	B2	IELTS 6.5
B	Betty	Female	21	C1	TOEIC 960
C	Cathy	Female	22	B1	TOEIC 675
D	Diana	Female	21	A2	TOEIC 480
E	Emily	Female	21	B1	TOEIC 650
F	Fiona	Female	21	B2	TOEIC 810
G	Gavin	Male	20	B2	TOEIC 860
H	Harry	Male	21	B1	TOEIC 600
I	Ivy	Female	21	B2	IELTS 5.5
J	Judy	Female	21	C1	TOEIC 900

Data Collection and Analysis

Data collection included semi-structured interviews. The interview questions (see Appendix 1) focused on how students used ChatGPT to support their English learning, their perceptions of its role, and how often they engaged with it. Participants were asked to describe their process of using ChatGPT for tasks, whether they preferred Google or ChatGPT for uncertain content, and how they verified the accuracy of AI-generated information. The questions also explored changes in learning strategies, self-learning abilities, and the impact on their English proficiency. Finally, students were invited to give feedback on the benefits they experienced by using ChatGPT.

The qualitative data were collected from interviews and analyzed by thematic analysis (Boyatzis, 1998). The interview data were transcribed by AI-powered voice-to-text software and edited by the researchers. Next, the data analysis included becoming (a) familiarized with the transcript, (b) coding, (c) identifying themes, and (d) drafting the findings.

Ethics

Participation in this study was voluntary. Both the informed consent and interview protocols were provided for the ten student participants to sign prior to the study. Additionally, participants' names were changed to guarantee confidentiality.

Findings

Perceptions of the Use of ChatGPT to Enhance Language Learning Efficiency

Interviewees pointed out that ChatGPT could significantly reduce study time, accelerate the learning process, and improve the efficiency of information processing. Several interviewees explicitly stated that ChatGPT's greatest benefit was "*speed*" or "*time-saving*" (Betty, Judy and Gavin). For example, interviewee Betty mentioned that for her, ChatGPT primarily made her "*more efficient*." Being "*super impatient*," she thought this tool "*is very suitable" for her, allowing her to learn "faster*." Diana considered ChatGPT a "*very efficient tool*" that allowed her to "learn something new faster," avoiding the need to read numerous articles, but rather "*immediately getting the desired answer*."

The notion of "*efficiency*" implied a reduced investment of time in reading and writing tasks. Participants were less likely to read long texts because ChatGPT could "*summarize*" thesis content or essays key points (Abby). It presented information in a "*summarized, bulleted*" format, making it easier for users to "*absorb this information*" and "*grasp key points*" more efficiently than reading long articles (Abby). ChatGPT helped them condense articles, implying that they did not have to "*read very long articles*" but they felt like they had met the goal of reading long articles (Fiona and Gavin). Gavin stated that in the past, he had to "*write step by step*" himself, but with ChatGPT, he could finish his assignments it at a faster speed. He admitted that only 30% to 50% of the submitted writing reflected his own voice. Rather than proficiency, his words implied that efficiency was the goal for him to use GAI.

Perceptions of the Use of ChatGPT to Enhance their English Proficiency

Based on the responses from the ten interviewees regarding whether AI (specifically ChatGPT) could improve English proficiency, following is a breakdown of their opinions. Three students believed that ChatGPT was helpful for language learning, particularly for looking up unfamiliar vocabulary and professional terms, as it provided more explanations (Abby, B2). She explicitly stated that the tool helped improve her English ability. She also noted that ChatGPT's voice function allowed for conversations similar to that with a real person, which aided her English speaking skills.

Another B2 learner, Student Ivy, was an advocate for using GAI to learn. She stated that, *"AI is definitely becoming more and more advanced, so using it is certainly helpful—it makes things more efficient and convenient*." She could use ChatGPT to leverage vast amounts of information to help her find data and answers, generate articles, and practice questions, all of which contributed to improving English proficiency. She emphasized that using ChatGPT for English language learning "*is a big plus*" as she shared her use of ChatGPT to learn. "*I believe vocabulary is very important for learning English. I pick out unfamiliar words, enter them into ChatGPT, and then ask it to generate an article as a practice exercise.*"

In addition to ChatGPT, student Harry, a B1-level learner, used several types of GAI software, including Monica.

> *AI Monica is said to be more accurate, and its responses feel more ready to use directly, without the need for much editing. I mainly use it to make PowerPoint presentations. I usually ask it to help me by writing a script first. I just find the main points, but I don't really know how to expand on them, so I ask it to write a speech for me based on those key ideas.* (Harry, B1)

Harry's quotes indicated that he used GAI to complete his school assignment rather than using it as a self-study tool for learning English.

Cathy, a B1 learner, acknowledged that ChatGPT was helpful for speaking practice and vocabulary but implicitly stated that the learning effect may not be as good as real-life interactions with foreigners (Cathy, B1).

> *As for speaking, the way it [*ChatGPT] *talks sounds more like a native speaker, and that gives me more of a sense of interacting with a foreigner. So it does help improve my skills, but probably not as much as actually interacting with a foreigner in real life. (Cathy, B1)*

Cathy preferred practicing with real teachers to practicing with ChatGPT although the latter offered a stress-free environment:

> *With ChatGPT, it's more like I just suddenly think of practicing a bit—it's not a regular or consistent practice routine. It makes learning feel more relaxed. But personally, I prefer in-person practice with a teacher. The teacher can give you immediate feedback, like pointing out your mistakes or suggesting better ways to say things, whereas ChatGPT doesn't really correct you in that way. (Cathy, B1)*

As previously mentioned, efficiency held more weight than proficiency for Gavin (B2). He believed that ChatGPT's impact on English proficiency was "*there but not much*." He primarily learned some unfamiliar words that he would not normally use. He also noted that the grammar used by ChatGPT was mostly common.

Perceptions of the Use of ChatGPT not to Enhance their English Proficiency

Four interviewees did not believe that ChatGPT enhanced their English proficiency. The purpose for Judy, a C1 learner, to use ChatGPT was "*efficacy and better score*" rather than a language learning tool. She noted,

> *I don't actually use ChatGPT as a main source for learning a language. Instead, I mostly use it for doing my college assignment especially doing academic papers. Brainstorming some ideas and structures before refining it into my own work.*

She disagreed as she explicitly stated: "*It doesn't help me so much in terms of learning English.*" Similarly, another C1-level student, Betty, considered that the intention to use ChatGPT was efficiency rather than proficiency. She noted "*the biggest benefits of ChatGPT is speed—speed is number one*" She used ChatGPT to explore an academic terminology or concept. "*I usually use it when I'm doing reports. For example, if I have a topic like overconsumption, I'll type in that keyword and ask it to explain what it roughly means.*"

Furthermore, Fiona, a B2 learner, had language needs in translation. However, she felt that ChatGPT was not suitable for learning English, especially its translation function. Instead, she preferred professional translation tools.

> *I don't use it to learn English, because I feel like its translations are sometimes a bit off. I think there are better tools—ones that provide more accurate translations—so I'm more likely to use those. I wouldn't really use ChatGPT for translation. (Fiona)*

Moreover, she added that the improvement in English ability may not be significant for those with lower English proficiency because of its efficiency to get a quick answer.

> *I think this is only helpful when your English proficiency is already at a decent level—it can help you speed up your work. But I don't think it can*

> *really help people with lower English proficiency improve their skills. It's kind of like a Q&A machine: you put in a question, and it just gives you the answer. It doesn't really help you learn anything. (Fiona)*

Although some student participants assumed that ChatGPT benefited lower-level English learners, Diana, an A2 learner, had a different opinion. She noted that her English was "*getting worse because there's so much information provided*" when using ChatGPT for vocabulary explanation and language learning inquiry.

In summary, all the students agreed that the use of ChatGPT reduced their time in completing tasks. Its impact on English proficiency, however, was still lacking a consensus with some students just being uncertain. Student participants with better English proficiency did not use it as a tool for learning English. Instead, they used it for academic purposes. The next section will discuss the implications of the findings from a pedagogical perspective.

Discussion

English-Majored Students Use GAI for Efficiency more than Proficiency

The results of the study illustrated that English-majored students were positive about the use of GAI software such as ChatGPT, Monica, Gemini, etc., to complete their course tasks. They believed it was a more efficient way to do their assignments. They used it for both academic English coursework, particularly in writing, presentations, and translation. Beyond coursework, they also used ChatGPT for self-directed learning, such as vocabulary expansion, grammar correction, and topic exploration.

The findings have been aligned with Jamila et al. (2024), which showed that the use of technology made it more efficient for students to learn English but did not have a significant improvement on their English proficiency. The current study suggests that this discrepancy may be due to individual learner differences—in particular, how students integrate AI into their learning process. For some learners (Abbey, Harry), GAI tools functioned as mindtools that supported active learning and strategic thinking; for others (Judy, Betty, Fiona and Diana), they served more as shortcuts, reducing the depth of language processing and critical engagement.

Efficiency Was a Universal Consensus, but Opinions on Proficiency Differ

A predominant theme that emerged from the data was the widespread agreement that ChatGPT significantly enhanced efficiency in learning because of its functions of quickly finding and organizing information, providing writing inspiration, or speeding up assignment completion. The findings have been aligned with current studies that explored the GAI effects on efficiency more than proficiency. For instance, when using "efficiency" and "AI" as the search word in the Web of Science database, the results showed a total of 292 studies whereas only thirty studies focused on proficiency. The limited research findings on English proficiency suggested a need to focus on the relationship between efficiency and proficiency when using GAI to learn English.

In the current study there was a clear divergence of opinion on whether AI truly improved students' English proficiency. While some (like Abbey and Ivy) believed it was beneficial for improving English proficiency, others (like Judy, Betty, Fiona and Diana) felt that its effect on overall ability improvement was minimal, with the main benefit being efficiency. One interviewee (Fiona, B2) suggested that ChatGPT might be more beneficial for individuals with higher English proficiency, primarily for accelerating assignment completion. However, for students with lower English proficiency, it might provide direct answers, leading to a missed opportunity for foundational learning, thus offering limited benefits.

The findings also showed that C1-level students and A2-level students did not perceive that the use of GAI enhanced their English proficiency. These findings were patricianly aligned with the literature, which examined the lower- and intermediate-level EFL students' spoken English with the use of AI chatbots, such as TalkPal AI, Bard AI, Dou Bao (Shikun et al., 2024). Lower-level students' spoken English was improved in terms of pronunciation, intonation, and stress but not in fluency. However, what was absent from the literature was the experience of the advanced English language learners.

Although students frequently used ChatGPT for coursework and self-study, several reported no noticeable improvement in their English skills. A plausible explanation is that students engaged with the tool passively—copying responses or using it for grammar checks—without critically reflecting on or revising the output. This tendency aligned with existing research on active language learning, which stresses that meaningful language acquisition requires active engagement, like problem-solving, critical thinking, and reflection—not just passive consumption (Yin & Dou, 2025).

Conclusion

This current study provides two suggestions for university EFL teachers. First, although all students reported using GAI tools to improve efficiency, they differed in how—and whether—they used these tools to enhance their language proficiency. Some students, especially those with higher language proficiency (like Betty and Judy), were skeptical of how their English could be improved due to their concerns about overreliance and unethical uses. In contrast, lower-proficiency students (like Diana, A2) were more likely to depend on GAI for task completion without fully understanding how to use it as a language-learning aid. What was absent from students' voices in this study was that students tended to explore GAI tools on their own rather than in the classrooms. Although some teachers encouraged their students to use GAI, they seldom learned from the teachers how to use AI tools effectively and ethically. For teachers who are proficient in the use of AI, GAI should not be seen as a threat but rather an opportunity to engage EFL learners. As new emerging AI software continues to be released, including Google's Gemini, Descript, DeepSeek, and others, students' interactions with GAI will increasingly diverge depending on their needs,

goals, and backgrounds. Teachers' attitudes and decisions are critical in navigating students' use of GAI and supporting differentiated instruction (Scarparolo & MacKinnon, 2022). This demonstrates how a teacher's attitude toward AI technologies impacts the use of these in the classroom. It is important to consider how AI technologies can be used as mindtools to facilitate critical thinking. Furthermore, if students are overusing AI, particularly in a foreign language class, they are not accurately demonstrating any new language abilities. The role of the teacher is crucial and cannot be replaced since if used properly technology can determine learning outcomes. Banning or forbidding students from using GAI may no longer fit the learning needs of the younger generation, not to mention the fact that it is unrealistic. Students are now, and will continue to be engaged with GAI and other technologies. Hence, universities need to prepare teachers to assist students in the use of GAI tools strategically and ethically.

Secondly, developing students' AI literacy requires a differentiated and inclusive approach to instruction. Students vary in their uses with AI, their critical awareness of its limitations, and their capacity to integrate it meaningfully into their learning. Therefore, AI literacy education must be scaffolded according to learners' needs and levels of proficiency. Teachers, as key facilitators of this literacy, need both technical training and pedagogical support.

AI Literacy - defined as the ability to understand, evaluate and responsibly use AI—is essential for all learners in the digital age (UNESCO, 2022). Literacy is multifaceted and the integration of technology as well as other modes of learning is necessary for the development of an effective literacy pedagogy (Kong et al., 2023). Fyfe (2023), who is a professor from the Department of English, required his classes to use AI tools to do their own writing assignment with a reflection on how it impacted them. His research invited teachers to consider AI as a new form of literacy, which both teachers and students are required to master in this age of technology. The learning context should focus on social interactions and teachers also need to be trained to assist students who have new literacy demands. Ultimately, developing students' AI literacy, like any new learning strategy, cannot adopt a one-size-fits-all model; rather, it must address individual student differences in experience, language ability, and educational background to ensure equitable and effective learning outcomes. The study is limited by its reliance on interviews with only ten students. Future research should consider conducting a large-scale survey to analyze potential differences between EFL learners' efficiency levels versus their English proficiency levels with the use of generative AI tools.

ORCID

 https://orcid.org/0000-0002-7683-5712

 https://orcid.org/0009-0000-7453-7503

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CRediT Authorship Contribution Statement

Chiu-Hui Wu: Conceptualization, Writing - Original Draft, Writing - Review & Editing, Supervision
Shanmei Tseng: Investigation, Writing - Original Draft, Funding Acquisition

Generative AI Use Disclosure Statement

During the preparation of this work the author used ChatGPT in order to edit the language. After using this tool/service, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

Ethics Declarations

World Medical Association (WMA) Declaration of Helsinki–Ethical Principles for Medical Research Involving Human Participants

Informed consent was obtained from all individual participants included in the study.

Competing Interests

The authors do not have any conflicts of interest to declare.

Data Availability

The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request.

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Appendix 1

Semi-Structured Interview Protocols

1. Please describe how you use ChatGPT to assist you to learn English.
2. What do you perceive the role of ChatGPT to be as an English language learning tool?
3. How often do you use ChatGPT?
4. Please describe the process of how you use ChatGPT to complete your English language learning task.
5. Do you think using ChatGPT has changed your learning strategy? Why or why not?
6. How do you think using ChatGPT helps you improve your English language proficiency? Please give an example.
7. As an English learner, how do you think ChatGPT benefited you the most?
8. How well do you receive feedback on the work you've done with ChatGPT?
9. Do you have any thoughts to share?