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Investigating a Case Study of Self-Instructed Language Learning with ChatGPT

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Abstract

Based on the concept of "learner agency", this single case study examines the self-instructed language learning process of a language learner with ChatGPT since May 2024. To serve the purpose of the study, qualitative data were collected through a semi-structured interview, the participant's chat logs with the bot, and his learning diary. The analysis of collected data revealed (1) factors that led to the learner's informed decision to incorporate ChatGPT as a primary learning tool into his self-practice for an international standardized English test, (2) how the tool was utilized to serve different learning purposes, and (3) the main challenges the learner encountered during that process. The findings provide implications for language learning approaches with transformative artificial intelligence (AI) technologies while emphasizing the importance of open discourse on AI's integration into education and of training on self-study skills for learners.

Keywords: Informal language learning, ChatGPT, artificial intelligence, self-instructed language learning, learner agency, case study, qualitative research

Introduction

There has been a growing consensus among researchers and scholars on how emerging artificial intelligence (AI) technologies are transforming the landscape of language teaching and learning while raising critical questions about a transition in practice for educators, teachers, policymakers, and learners (Kostaka & Toncelli, 2023; Ma et al., 2024; Solak, 2024). Among the frequently mentioned

AI tools, ChatGPT, a product released in 2022 by OpenAI, has gainedmuch public attention due to its rapid evolution within a short period of time (Stockwell, 2024; Teng, 2024). In particular, compared with its predecessors, ChatGPT-4o—the latest version at the time of writing—can handle extremely complex tasks including analyzing data, creating images, and facilitating voice conversations, to name a few. Early research on ChatGPT's integration into language teaching and learning largely focused on the use of the chatbot in formal contexts to support teachers' practice with their students (e.g., Barrett & Pack, 2023; Kostka & Toncelli, 2023). However, recently, there has been a gradual shift toward incorporating ChatGPT into learning beyond language classrooms (e.g., Dizon, 2024; Z. Li et al., 2024; Liu et al., 2024). Although these preliminary works provided valuable insights into how innovative AI technologies could be employed in informal learning contexts, many were still narrow in scope or largely relied on self-reported data from surveys and interviews. Hence, there remains a demand for research examining how informal language learners with different backgrounds and learning needs can leverage one of the latest AI technologies to achieve particular learning outcomes. Further inquiries could contribute to the growing body of research on the language learning affordances of ChatGPT in diverse learning contexts (Chun, 2019; B. Li et al., 2024), offering a more "nuanced understanding" (B. Li et al., 2024, p. 11) of how ChatGPT and other AI tools can be effectively and purposefully implemented in one's learning endeavors.

To serve these purposes, this qualitative single case study aimed to investigate how a Vietnamese working adult learner of English self-practiced for an international standardized test with ChatGPT as the primary learning tool. Foregrounded by the concept of "learner agency" (Duff, 2013), this analysis of qualitative data is expected to (1) shed light on the participant's journey as a self-instructed language learner using ChatGPT, and (2) draw implications for language teachers, educators, policymakers, and language learners in the era of transformative AI technologies.

Literature Review

ChatGPT and Language Learning

With staggering improvements in its functions and performance since its introduction, ChatGPT's integration into language learning is an exciting research area for language teachers, researchers, and other relevant stakeholders (Ma et al., 2024). Previous studies on the use of ChatGPT have provided insights into how the tool can benefit and revolutionize but, at the same time, pose several challenges to language teaching and learning across various contexts.

Formal Learning Contexts

Benefits. In formal classrooms, as reviewed by Barrot (2024), ChatGPT can act as a catalyst for teachers to redesign their current teaching practices, enabling language learners to be more extensively involved in the learning process while receiving guidance and support from their teachers. In particular, learners can be encouraged to conduct self-assessments of their own work by exercising their judgment on the automated feedback given by ChatGPT. Besides promoting a more learner-centered teaching approach, ChatGPT can offer other significant pedagogical benefits, such as explaining and clarifying unknown learning terms, providing customized and personalized learning experiences, acting as a language partner, giving immediate feedback, generating texts and dialogues, and diversifying classroom activities (AI-khresheh, 2024; Kohnke et al., 2023; Ng et al., 2024). Moreover, ChatGPT, along with other generative AI tools, is expected to offer a new perspective on assessment practices that focuses on evaluating students on the basis of their demonstration of creativity and critical thinking throughout the process of learning rather than solely on their final products (Illingworth, 2023; Kostka & Toncelli, 2023; Shaikh et al., 2023).

Challenges. However, several studies have highlighted some challenges regarding the integration of ChatGPT into language learning. One of the most common concerns is academic integrity, due to the lack of reliable tools for detecting AI-generated content in students'work (Huang et al., 2023; Yang et al., 2021). Furthermore, the emergence of ChatGPT and other AI technologies could exacerbate the issue of digital divide, as teachers and learners from disadvantaged backgrounds might not have full access to these innovative tools (Adeshola & Adepoju, 2024). Last but not least, the responses provided by the bot could be inaccurate, unreliable, and biased (Ray, 2023), which intensifies the ongoing need for proper training to help teachers and students utilize transformative AI's technological tools effectively and ethically (Son et al., 2023).

Informal Learning Contexts

Benefits. When it comes to language learning outside formal contexts, ChatGPT can assist learners in locating learning resources tailored to their learning objectives, learning preferences, and proficiency levels (Chiu, 2024; Dizon, 2024; Kang & Sung, 2024; Z. Li et al., 2024; Liu & Ma, 2024). The participants in the studies referenced above greatly valued the use of ChatGPT to obtain more contextualized responses and felt that the chatbot could be employed in combination with other learning resources to enhance their self-study experiences. The participants in the research by Dizon (2024), in particular, held positive attitudes about the use of ChatGPT in conversation practice and lexical resource enhancement. Meanwhile, a study conducted by Z. Li and colleagues (2024) revealed that adult learners who were engaging in self-practice for a language may have benefitted from using ChatGPT as a complementary tool to reflect on their learning strategies and self-monitor their learning progress.

Challenges. Although language learners reported positive experiences using ChatGPT for their personal language learning outside formal classrooms, they remained cautious about the bot's reliability (Dizon, 2024; Z. Li et al., 2024). Most of them, therefore, emphasized the necessity of using multiple resources for reference and suggested combining ChatGPT with other learning tools as part of a learning ecosystem. While previous studies have contributed to research on the use of ChatGPT in informal language learning in particular and AI in general, gaps have been identified regarding their methodologies and research contexts. For example, the research by Dizon (2024) was conducted in 2023 as ChatGPT was just about to surge in popularity, and the data were only collected via an online survey. Meanwhile, a more recent study by Z. Li and colleagues (2024) targeted only learners of Spanish, so the authors suggested that future research should examine more diverse needs of language learners to construct a more comprehensive picture of learning with innovative AI technologies.

Self-Instructed Language Learning

The findings of early research on self-instructed language learning showed how individuals could teach themselves foreign languages using a range of resources, such as broadcast television (e.g., Umino, 1999) and literature in the target language (e.g., Jones, 1995). At the time, people generally favored this learning approach, claiming that their experience of acquiring a new tongue became more flexible and could be personalized according to their own pace and level (White, 1999). With the advent of the internet and the development of new communication media, it became easier for learners to access a wide range of resources that could satisfy their learning needs beyond institutional contexts, including cultural/entertainment material (e.g., books, music, movies), online forums, and international social clubs (Bailly, 2011; Murray, 2008).

In more recent years, the rapid development of transformative technologies has revolutionized the landscape of language learning in general and informal language learning in particular. Extensive research has examined how the new generation of learners have voluntarily adopted emerging

technological tools and online platforms to enhance and support their language learning experience in formal classroom contexts (Godwin-Jones, 2019). However, little is known about learners who choose to teach themselves a language by cultivating the available digital tools instead of registering for a language learning course. Efforts have been made by some scholars to delve into this line of research through various approaches. For example, a study by Chik and Ho (2017) investigated how three participants acquired a foreign language of their choice while enjoying complete freedom in selecting their learning materials. Findings revealed that these self-instructed learners could exercise their autonomy in choosing and adapting learning material, but their learning behaviors and preferences changed across different stages in their lives. Meanwhile, later research by Lowen and colleagues (2019) required nine participants use Duolingo to teach themselves Turkish. According to the researchers, this rigid research approach caused a later decline in the learners' motivation. Nishioka (2023), on the other hand, chose to focus on a working adult learner, pseudonymously named Jass, who aspired to pass a standardized Korean proficiency test. Realizing a lack of support in her immediate learning context for initial guidance and advice, Jass exercised her agency by employing different strategies to act on the language learning affordances provided by YouTube. However, due to some personal, social, and technological constraints, Jass's self-instruction journey ended before she managed to achieve her learning goals. Despite differences in their aims and findings, the previous studies appeared to agree on the positive impacts of technology on self-instructed language learning and the challenges learners might need to overcome to achieve the most favorable outcomes.

In terms of positive impacts, firstly, technological tools with transformative functions allowed self-instructed language learners to connect virtually via forums or discussion threads, forming extended online learning communities of people who share a mutual interest in self-studying foreign languages (Chik & Ho, 2017), and to seek feedback on their linguistic outputs (Nishioka, 2023). Additionally, technologies were utilized to construct personalized learning contexts that suited different learning needs emerging at different life stages. The participants in those studies also agreed on the usefulness of the technologies in creating an immersive digital learning environment.

However, the technologies were sometimes claimed to restrict learning. For example, Lowen and colleagues (2019) argued that the Duolingo app that primarily relied on decontextualized grammar translation tasks, and the audiolingual drills could have limited the linguistic gains made by learners. Meanwhile, in some cases, the self-learning process was disrupted by factors pertaining to learners' personal and social contexts. For instance, while the participants in the study of Chik and Ho (2017) showed less engagement with the learning material as they had to deal with more personal commitments in their new life stages, the working adult in Nishioka's (2023) study, Jass, decided to stop self-learning Korean altogether once she realized the unreliability and unfairness of the assessment process.

With the emergence of transformative technologies whose functions and features may greatly exceed those adopted in the previously cited works, there should be more research examining current self-instructed learners' interactions with these innovative tools. Such studies can shed light on the current complex picture of technology's integration into varied language learning contexts while providing significant implications for the relevant stakeholders.

Learner Agency

As defined by Duff (2013), agency is "people's ability to make choices, take control, self-regulate, and thereby pursue their goals as individuals leading, potentially, to personal or social transformation" (p. 417). Agency plays a significant role in one's process of building a new identity, improving self-efficacy, sustaining motivation, and practicing metacognitive thinking and actions, which are all essential components determining the outcomes of language learning (Xiao, 2014). Although learners'

actions and some of their intrapersonal factors, such as emotions, perceived learning beliefs, and personality, may be closely related to their agency (van Lier, 2008), some scholars have suggested that agency is not a property of individuals. Instead, it is extensively mediated and co-constructed in a sociocultural manner involving social, international, cultural, institutional, and contextual elements (Larsen-Freeman, 2019; van Lier, 2008). Employing an ecological view, other researchers have referred to learner agency as one's capability to control, perceive, and act upon certain affordances provided by the environment (e.g., Gao, 2010; Liu & Chao, 2018). However, each learner may perceive those affordances differently, depending on the relationship they establish with the environment (Ahn, 2016; Gibson, 1979; van Lier, 2000).

Within the context of research on technology's integration into language learning and teaching, defined by Stockwell (2022) as "the possibilities that can arise from the properties of a device that may or may not have been intended by the developers" (p. 194), the concept of affordances and how language learners cultivate those available in their environment have been widely investigated (e.g., Chen, 2013; Lyrigkou, 2018; Vurdien, 2011). Vurdien (2011) examined how advanced Spanish learners of English in a formal classroom context leveraged the affordances of blogging to develop their writing skills. Meanwhile, targeting the use of technology in informal language learning, Chen (2013) highlighted the use of tablets outside class among participants to foster an interactive and collaborative learning environment.

However, in some cases, learners refused to act upon technological affordances, and their choice of disengagement, rather than coming from the technologies, stemmed from personal and social factors (Gao, 2010; Liao, 2019; Zeng, 2018). Personally recognizing their limited information and communication technology and metacognitive knowledge for meaningful use, some participants lacked the confidence to adopt technologies for language learning. Meanwhile, some learners were reluctant to abandon their established conventional learning habits. Socially, in the learners' contexts, technologies were sometimes perceived to be deficient and unnecessary for language learning, which resulted in negative discourse about this approach among some social agents such as teachers and peers.

These findings unequivocally supported the previous notion that learner agency is socially embedded, dynamic, and context-dependent. Extensive research on technology's integration into language learning and teaching has investigated the potential of emerging digital innovations and how learners in formal classrooms cultivate those affordances to enhance their learning experience (Nishioka, 2023). Nevertheless, little attention has been paid to self-instructed language learners, especially those leveraging sophisticated AI technologies. To address this gap, this current study aimed to examine how a Vietnamese learner of English has used ChatGPT to facilitate his self-instructed language-learning process since May 2024. The study addresses the following questions:

1. Why did the learner choose ChatGPT for self-instructed language learning?
2. How did the learner use ChatGPT to serve different learning purposes?
3. What obstacles did the learner have to overcome during the process of self-instruction for language learning with ChatGPT?

Methodology

The Participant

This research focused on a single case study of a Vietnamese adult learner of English who experienced using ChatGPT as the main learning tool to self-practice for the International English Language Testing System (IELTS) exam. The purpose of the study was to gain in-depth insights into the learning process

of the participant, examine how he managed to exert his agency in acting upon the affordances provided by the chatbot to achieve personal learning goals, and provide insights into some challenges the learner encountered as a solo language learner. Considering the intricate, contextually mediated nature of learner agency, as discussed previously, a case study is a sound approach for the current research. This method can assist researchers in gaining a dense description of a complex social issue (Dörnyei, 2007; van Lier, 2005). When applied rigorously, case study research can "become a key method for researching changes in complex phenomena over time" (van Lier, 2005, p. 195). One common negative aspect of case studies is their generalizability (Dörnyei, 2007). However, as argued by Dörnyei (2007), generalizability is not the ultimate goal of qualitative research as long as the researchers can ensure that the case examined can offer the research community ground-breaking insights.

The participant in this study is Daniel (pseudonym), a Vietnamese 32-year-old working adult living in Hanoi, the capital city of Vietnam. Daniel is a full-time software developer in a technology company based in Germany. Working in a foreign company, Daniel usually has to join internal meetings with both English and Vietnamese used for communication, write emails in English, and have English conversations with his colleagues from Germany. English plays an important role in his professional context. However, as remarked by Daniel, all the job-related tasks are very IT-specific and people can understand each other without a high proficiency in English once they become familiar with common terminologies in the field. Besides, his conversations with foreign colleagues tend to be very casual, so he can easily get by even with a limited language repertoire.

In March 2024, via mutual social connections, Daniel first reached out to the researcher online to ask for some advice on learning English. As shared by Daniel, his company was selecting an employee for relocation to the office in Germany, and one of the selection criteria was a good command of English, demonstrated by strong results on any certified standardized English test. Attracted by the opportunity of working in Germany, Daniel was motivated to put effort into practicing English and decided to choose the IELTS test as a means to validate his English proficiency. This choice stemmed from his observation of the growing popularity of the IELTS test in Vietnam and his preference for the test's coverage of speaking skills compared with other tests such as TOEFL (Test of English as a Foreign Language) or TOEIC (Test of English for International Communication). As the first step, Daniel registered for a placement test at an IELTS test center and achieved an overall band score of 5.5. At the test venue, he also attended an orientation session about the format and other general information of the IELTS test. After seeking advice from his supervisor at work, he decided to aim for an overall band score of 6.5, which was believed to be sufficient for him to demonstrate his English proficiency to the Board of Directors in Germany and to live comfortably in a European country. After their first conversation online, the researcher kept in touch with Daniel only by following him on social media. In August 2024, the researcher had another opportunity to meet Daniel in person and became aware of his experiences using ChatGPT as a main tool to self-practice for the IELTS test starting from early May 2024. It should be noted that at the time, Daniel only used the standard free version of ChatGPT. In late October 2024, the researcher contacted Daniel and received his agreement to join the current study.

Data Collection

Semi-Structured Interview

A semi-structured interview was employed as the primary data collection method. The interview was conducted online via Zoom on 29 October 2024 in Vietnamese and lasted nearly 2 hours. The interview questions were guided by the following themes: Daniel's reasons for choosing ChatGPT as a main tool to practice English in preparation for the IELTS test, his methods of using ChatGPT to teach himself English, and the challenges he encountered during that process.

Chat Log on ChatGPT

The chat history between the participant and ChatGPT until the time of the interview was provided as a supplement to the interview data. All chat logs were in English, as Daniel believed it was important for him to take every opportunity to use the target language. During the interview, the participant shared his computer screen to show the researcher examples from his conversation history with ChatGPT that best represented his practices of self-instruction. After the interview, the participant took screenshots of the chat logs, compiled them into one folder, and emailed it to the researcher.

Learning Diary

The learner was also willing to provide both his handwritten and digital notes in his learning diary. As with the chat log, English was also the only language used by Daniel to take notes. After sharing his learning diary in the interview, the participant took pictures of all the selected notes and sent them to the researcher along with the chat log folder.

Data Analysis

Data analysis was divided into four main phases, as follows:

- Phase 1—Data overview: The researcher listened to the interview recording, which was later transcribed in Vietnamese and read alongside Daniel's chat log with ChatGPT and his learning notes.
- Phase 2—Analysis of interview data: Using thematic analysis (Creswell & Poth, 2018), the researcher broke down the learner's responses into appropriate themes that aligned with the research questions. Crucial extracts were then translated into English. Importantly, the analysis and the translation of the interview data were conducted simultaneously by the researcher and a Vietnamese trainer of the IELTS test who also has experience in research. The researcher and the trainer held two meetings to discuss their results and resolve differences in their interpretation.
- Phase 3—Analysis of the chat log history and learning notes: The researcher analyzed these two supplementary data sources to understand the learner's actual use of ChatGPT to practice for the IELTS test. The analysis focused on what prompts the learner gave to the bot, for what purposes, and how his actual learning with ChatGPT was recorded in his learning notes.
- Phase 4—Triangulation and finalization of the results: The researcher triangulated the results of the analyses in the previous phases to finalize the findings. As the Vietnamese trainer was unavailable for this phase due to her personal schedule, to ensure the rigor of the study, member checks were employed. Daniel was invited to read the results of the data analysis and provide any feedback or adjustments to any interpretations that did not accurately capture his experience of using ChatGPT for self-instructed language learning.

Ethical Considerations

The study was conducted with strict adherence to ethical principles. Firstly, the participant was adequately informed of the study's purposes and data protection policies before joining the interview and submitting his data. Secondly, prior to this study, all the conversations between the researcher and the learner were about general topics of language learning, and the researcher did not purposefully suggest that the participant should use ChatGPT or any other forms of technologies in his practice for the IELTS test. As shared by Daniel, his agreement to participate in this study was due to his interest in language learning and technology integration. During the interview, he asked the researcher for some advice and opinions on language learning strategies. However, to minimize any influences on the

participant's responses, the research only provided some guidance informed by general pedagogical approaches and did not show any preferences for any particular technical tools, especially ChatGPT.

Results

RQ1: Why Did the Learner Choose ChatGPT for Self-Instructed Language Learning?

Analyzed data from the interview revealed three themes regarding the driving factors leading to Daniel's final decision to use ChatGPT for his self-instructed language learning process, including: (1) his personal context, (2) the perceived shortcomings of other alternative resources, and (3) personal experience with the chatbot, as described in detail below.

Personal Context

According to Daniel, the main reason he had to resort to self-instruction was his working schedule, claiming: "My working schedule does not follow a set pattern. The time I show up at work and leave my office can vary depending on each project and my team's progress". He considered joining an offline class but soon realized that "self-study is the only option" that suited him back then.

Perceived Shortcomings of other Alternative Resources

Upon this realization, Daniel drew a list of some online alternatives but did not choose any of them due to some of their perceived shortcomings. In detail, when Daniel searched for some self-study online courses, he was annoyed by how unreasonably expensive those courses were. Moreover, learners in those courses only received feedback on a limited number of essays and they had to pay extra if they wished to receive one-on-one feedback from the tutors. Another resource considered by Daniel was YouTube channels featuring content about English language learning in general and about the IELTS test in particular. He acknowledged: "I know there are many useful videos on YouTube posted by language teachers and learners who achieved a high score in the test and telling people how to study English and how to get an impressive test result". However, Daniel emphasized one major concern regarding the authenticity of the content: "Those videos have been commercialized too much. When people shared their learning strategies and introduced some materials and apps, I could tell that they were all advertisements". Besides, the abundance of English learning content on YouTube made him feel puzzled, saying "On one channel, you can see a lot of videos and they can cover various topics in the IELTS test. I don't know when to start and which will be suitable for me".

Personal Experience with the Chatbot

Daniel's first thoughts about using ChatGPT as a primary tool to support his self-practice for the test were ignited by his positive experience at an AI-themed conference and some conversations with his supervisor at work. Specifically, as remarked by Daniel, in the conference about the future integration of AI into human workflow, he was inspired by some suggestions on how AI could collaborate with humans and be leveraged to support an efficient and productive lifestyle. He soon realized: "I have been using ChatGPT for some daunting tasks at work like writing emails to customers. Now I know that I can actually use it to facilitate my critical thinking and other skills". Daniel later shared his experience at the conference with his boss and they had several insightful discussions about how to use ChatGPT to learn a skill and not over-rely on the bot. All those discussions stimulated Daniel to incorporate the tool into his self-directed English practice to achieve a favorable outcome on the IELTS test.

RQ2: How Did the Learner Manage to use ChatGPT to Serve his Learning Purposes?

Data gathered from the interview, combined with evidence from the chat logs with ChatGPT and Daniel's study journal, showcased how the learner cultivated the language learning affordances of ChatGPT to (1) draft and improve learning strategies, (2) generate additional goal-specific learning resources, (3) obtain tailored feedback on linguistic outputs, and (4) assist in brainstorming ideas. These four themes are discussed in the parts below.

Drafting and Improving Learning Strategies

Drafting learning strategies. As a self-instructed language learner, Daniel emphasized the necessity of having a customized learning pathway to help him achieve his desired learning outcome. He reported having spent the first week of his self-learning journey generating two study plans. One focused on a general learning schedule, while the other specifically targeted his English listening skills. His process of using ChatGPT to create these plans is detailed subsequently.

In the first prompt sent to ChatGPT for language learning, Daniel asked the bot to generate a study plan for him by keying in his personal background (age), daily time allocated for English learning, and his targeted IELTS band score (Figure 1). On the basis of the responses from ChatGPT, Daniel later designed his own study timetable (Figure 2). Although Daniel informed ChatGPT that he intended to spend three days a week learning English, his journal showed that he scheduled language practice tasks for every day throughout the week. This was later explained by Daniel as his attempt to increase the frequency of practice and exposure to linguistic inputs. On Monday, Wednesday, and Friday, Daniel spent around 15 minutes before work watching short English videos on YouTube. On the remaining days, the lessons would last for around 2 hours and Daniel would aim to finish two tasks, including: (1) listening to a short YouTube video on any topic as a warm-up, and (2) practicing one of four linguistic skills using sample exam questions from the Cambridge IELTS books. During the interview, Daniel elaborated on his approach to each skill. For listening and reading skills, in one lesson, Daniel normally spent around 25 minutes[1] completing one listening section/reading passage in the books. He would then check the correct answers in the key sections of the books before using the listening transcripts/reading passages to learn useful vocabulary and phrases. Meanwhile, his practice section for writing skills involved brainstorming ideas, writing full essays, and revising his work. However, to diversify his approach, sometimes Daniel would instead analyze essays from the Cambridge books by examining the vocabulary used and the articulation of ideas. When practicing speaking skills, Daniel answered the sample questions from the Cambridge books and made attempts to improve his performance via feedback from ChatGPT. How ChatGPT was incorporated in Daniel's process of conducting some of those tasks will be described further in the subsequent sections of the paper.

In early October 2024, when the voice chat function of ChatGPT was introduced, Daniel extended the current 2-hour study sessions, adding "15-minute speaking practice with ChatGPT" into his study plan. Those speaking practice sections, which normally followed the warm-ups of watching YouTube videos, targeted casual conversation rather than specifically focusing on the IELTS test. After each study week, Daniel would spend the following week reviewing his notes. This was not indicated in his study plan but was shared by the learner during the interview.

[1] As explained by Daniel, this is the average length of a listening section in the IELTS test. Regarding the reading skills, as IELTS test takers must complete three passages within 60 minutes, Daniel decided to spend around 20–25 minutes on each one during his practice.

Upon reflection, Daniel appreciated the help of ChatGPT for giving him an initial framework on which he could design his study plan. However, he emphasized the flexibility he allowed for himself, saying:

> Sometimes, if several learning tasks, such as ideas brainstorming or analyzing sample essays, took me longer to finish, one lesson could be extended to the next day. So far, this has happened a few times. I am OK with this, as my goal is to dig deep into each task rather than counting how many tasks I can finish. However, my study plan is still helpful, as it helps me to keep track of the next tasks or skills I have to tackle. The most important thing is I have to study on the days I plan to.

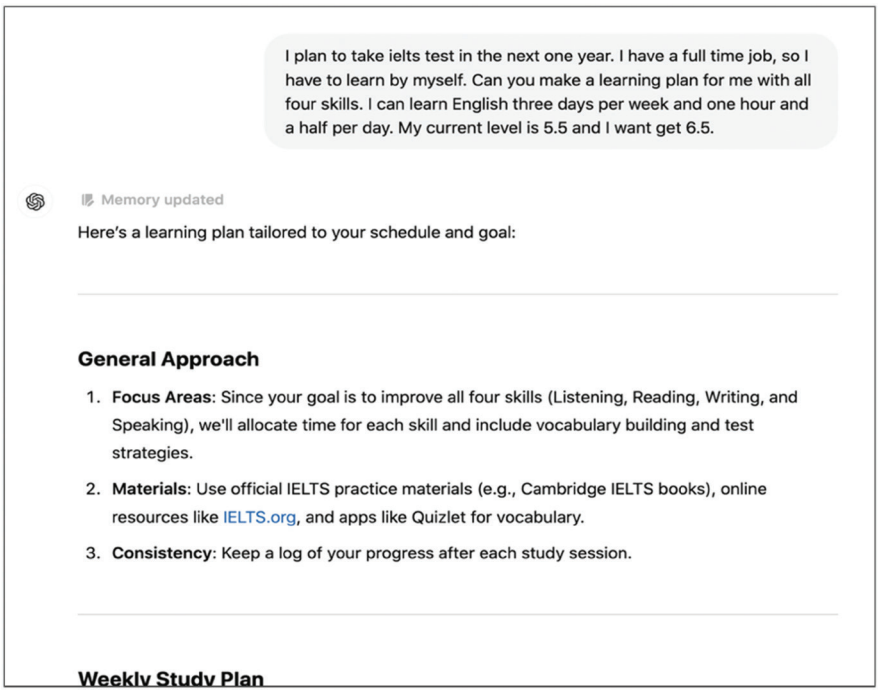


Figure 1 *Chat Log Between the Learner and ChatGPT About Designing a General Learning Path.*

Figure 2 *The Learner's Personal Notes for a Study Plan.*

During the first week of his self-study journey, Daniel also used ChatGPT to craft some learning strategies for particular skills covered in the IELTS test. As shown in Figure 3, he sent a prompt informing ChatGPT of his age and the band score he was aiming for, and requesting some strategies to practice listening skills as a solo learner. According to his learning diary (Figure 4), Daniel personalized his own study plan by comparing suggestions from ChatGPT and his own ideas. For example, as the bot suggested he "practice with IELTS materials", Daniel detailed in the journal that he would purchase the IELTS practice books published by Cambridge. Similarly, when ChatGPT recommended he pay attention to various accents of English, Daniel customized his study plan by specifying the movies he planned to watch. In the interview, Daniel further explained this approach, saying that the suggestions from ChatGPT were rather general, which was "understandable because it is still a chatbot", so he "had to make it something of myself, something that really aligns with my learning preferences, for example, watching English movies".

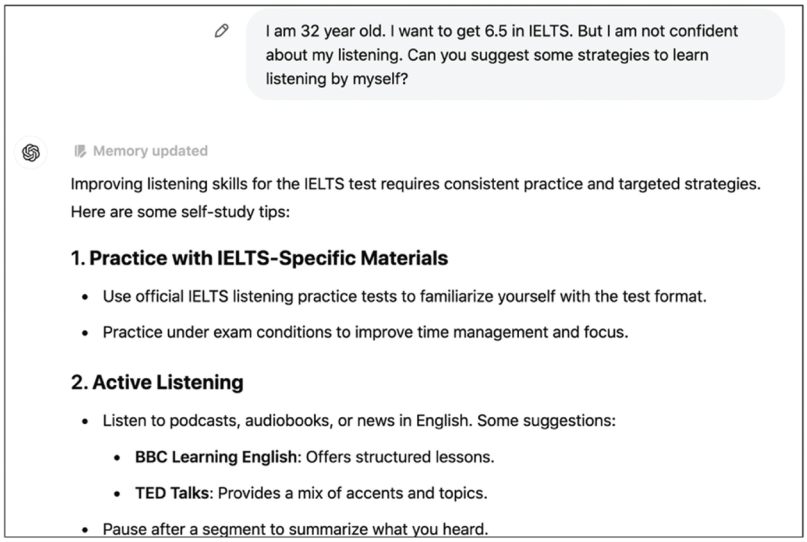


Figure 3 *Chat Log Between the Learner and ChatGPT About Strategies to Improve His Listening Skills.*

Suggestions of chatGPT	My plan
• **Practice with IELTS materials** - Use IELTS listening practice tests to familiarize yourself with the test format - Practice under exam conditions to improve time management and focus	- I will buy practice books of Cambridge this weekend - I will do one mock test a week for listening
• **Active learning** - Listen to podcasts, audiobooks, or news in English (BBC Learning English, TED Talks) - Pause after a segment to summarize what you heard - Use subtitled videos - Start with videos that have subtitles in English - Watch once with subtitles, then re-watch without them	- I will listen to one Ted Talk in the gym every morning and use the subtitle way - (I still don't know how to summarize. I just want to practice listening (?))
Focus on different accents Listen to content from diverse English-speaking regions, such as Australian news, British shows, Canadian podcast	- Watch The Modern Family (for America accent) - Watch The Crown
Build vocabulary and predict words - Familiarize yourself with common topics in English (education, travel, environment, etc…) - Practice predicting missing words in sentences while listening	- I can do this with the practice books of Cambridge

Figure 4 *The Learner's Personal Notes Onstrategies for Improving Listening Skills.*

Improving learning strategies. A few weeks into his journey of self-practice for the IELTS test, Daniel recognized his consistently low performance on particular question types in the listening and reading tests in the Cambridge practice books. He remembered: "I noticed I kept having wrong answers when it came to certain question categories, such as True/False/Not Given in the reading section, and multiple choices in the listening part". He therefore decided to spend a weekend asking ChatGPT for some suggestions to improve his performance. Figure 5 illustrates how Daniel recorded ChatGPT's suggestions in his learning journal. What was interesting was how the learner also provided reflections on his current practice and indicated his future actions for improvement**.** Daniel emphasized the necessity of this approach, saying: "ChatGPT can give me tips on how to avoid mistakes, but I really need to take a step back and observe my own practice to see where the problems come from and figure out the solutions." Similar to his approach to general learning strategies discussed above, Daniel only selected some of the suggestions that resonated with him.

Suggestions of chatGPT	**What I am doing**	**What I will improve**
Ensure you understand whether you need to write "True/False/Not Given" or "Yes/No/not Given"	I thought they are same!!!!	I will notice this next time
Avoid assumptions: Base your answer strictly on the text, not on your background knowledge	I usually choose T/F/NG if I think it fits with the content of the passage. I never choose because I see evidence in the text I always try to understand the text and guess T/F/NG	Next time, I will know something is wrong if I can not find the evidence in the text.
Paraphrasing is key: IELTS questions often rephrase ideas. Practice recognizing paraphrased statements	I dont have many vocabulary, so I cannot see where words in text and questions have the same meaning	I will try to learn **more vocabulary** and their definition in English
Use a process of elimination: If you can confirm the statement is True or False, it is not "Not Given" If you find no evidence after thoroughly searching, choose Not Given	I tend to overthink too much!	I should not think too much, just find the evidence. If I can not, just use this method.
Analyze the sentence carefully: Look for qualifiers like always, some, never, only	I usually don't notice these words when I read questions	I should be more careful if the words appear in the question

Figure 5 *The Learner's Personal Notes on Strategies for Enhancinghis Performance on The True/False/Not Given Questions.*

Generating Additional Goal-Specific Learning Resources

As shared by Daniel, at the beginning of his self-study process, he was swamped by the abundance of available resources for the IELTS test. He therefore decided to be creative and use ChatGPT to generate learning content out of conventional materials. Using ChatGPT to generate learning resources was "liberating" for Daniel, considering some difficulties he used to anticipate while searching for materials for the IELTS tests: "There were just too many of them, and I didn't know when my shopping for learning materials would finish. It cost me time and money".

As explained by Daniel, during the main lessons, after finishing one listening test practice section in the Cambridge book, he exploited the transcripts for further learning resources. An example of this approach is illustrated in Figure 6. It shows how Daniel copied the transcripts from the digital version of the book to ChatGPT and asked the bot to select and provide examples of lexical items suitable for learners aiming for a 6.5 IELTS band score. Daniel then had the responses narrowed to 10 lexical items to suit his learning capacity. The conversation continued when Daniel asked the system to evaluate his own examples of those words. All the suggested lexical items, their example sentences, the learner's own example, and feedback from ChatGPT were carefully noted in the learning journal (Figure 7).

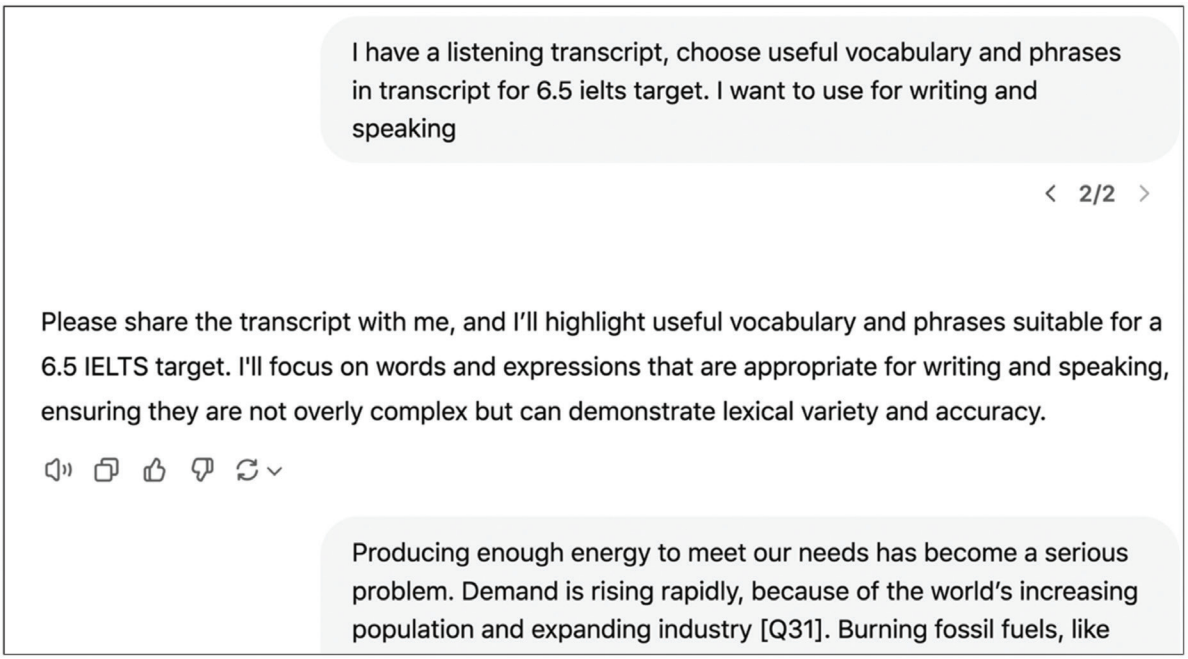


Figure 6 *Chat Log Between the Learner and Chatgpt on the Use of Listening Transcripts as Further Learning Resources.*

Suggestions of ChatGPT	My examples
Demand is rising rapidly: – Useful for discussing trends or changes in various contexts. • "The demand for renewable energy is rising rapidly as more people become aware of environmental issues."	The demand for public transport is rising rapidly as more people become aware of their benefits⇒ its benefits: public transport is a single noun
Renewable sources – Essential for environmental and energy-related topics. • "Solar and wind energy are two common renewable sources that are increasingly being used worldwide."	Renewable energy can help to solve environmental issues⇒ Help solve: help + V is a more common expression

Figure 7 *The Learner's Personal Notes on Lexical Items Suggested by Chatgpt and Their Examples.*

Meanwhile, as mentioned before, during the writing practice sessions on Thursdays, Daniel sometimes chose to learn from sample essays instead of completing a writing task in the Cambridge book. Figure 8 illustrates how he communicated his request to ChatGPT. One example from his journal (Figure 9) shows how he exploited a 6.5-level sample essay to understand the articulation of the main arguments and some lexical items.

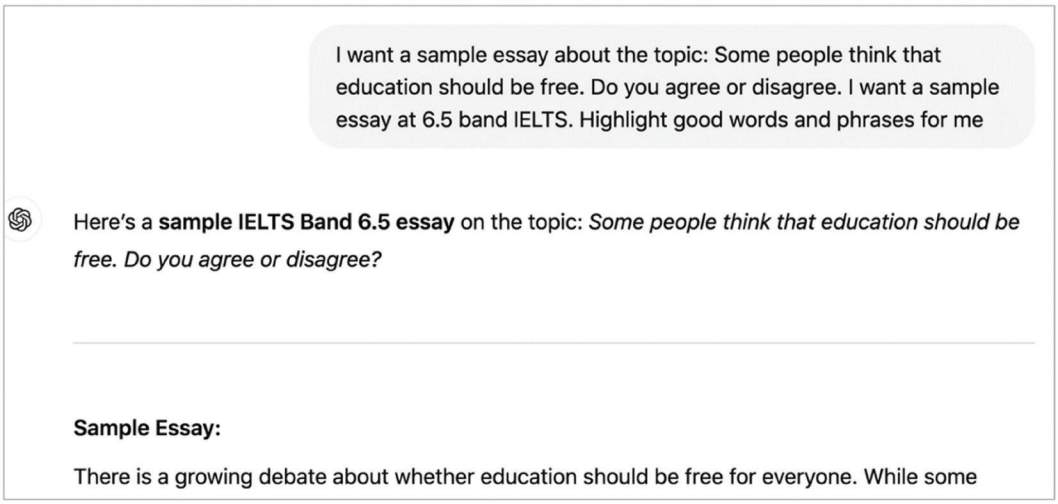
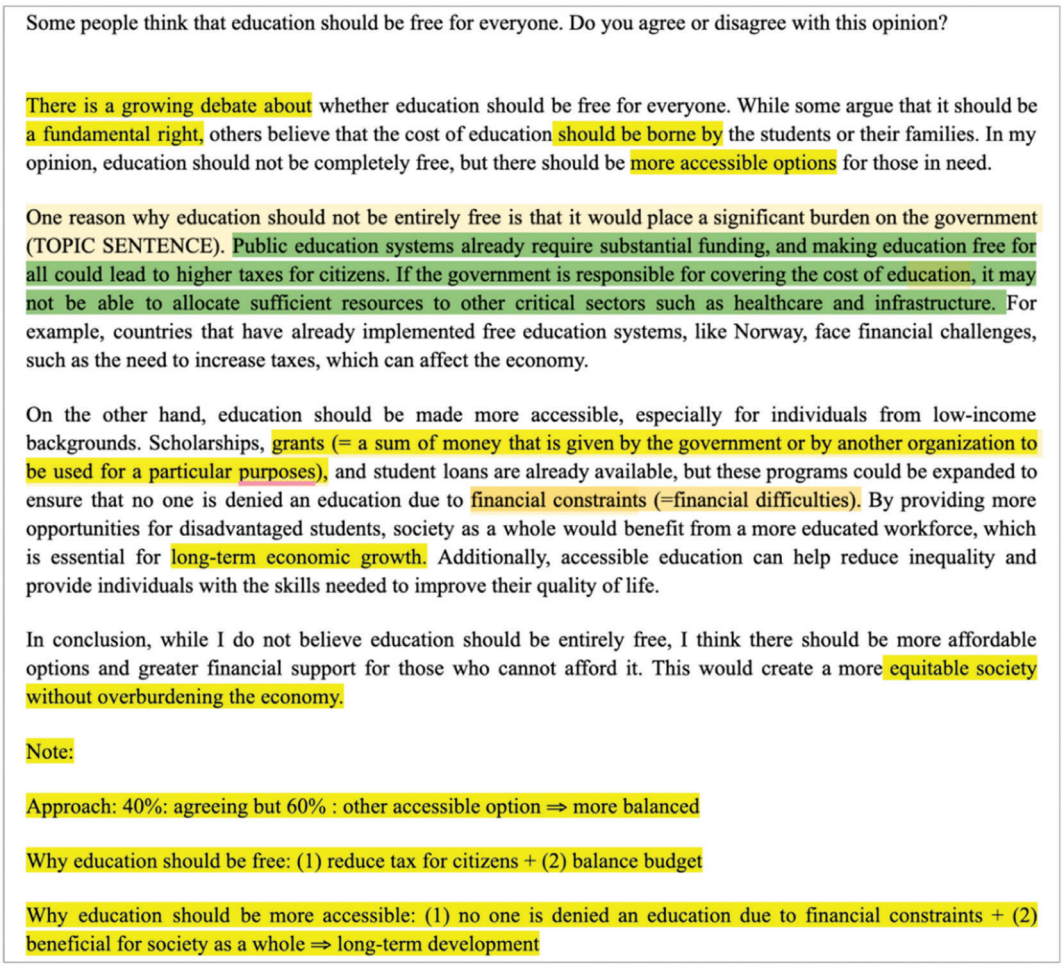


Figure 8 *Chat Log Between the Learner and Chatgpt on Generating a Sample Essay.*


Some people think that education should be free for everyone. Do you agree or disagree with this opinion?

There is a growing debate about whether education should be free for everyone. While some argue that it should be a fundamental right, others believe that the cost of education should be borne by the students or their families. In my opinion, education should not be completely free, but there should be more accessible options for those in need.

One reason why education should not be entirely free is that it would place a significant burden on the government (TOPIC SENTENCE). Public education systems already require substantial funding, and making education free for all could lead to higher taxes for citizens. If the government is responsible for covering the cost of education, it may not be able to allocate sufficient resources to other critical sectors such as healthcare and infrastructure. For example, countries that have already implemented free education systems, like Norway, face financial challenges, such as the need to increase taxes, which can affect the economy.

On the other hand, education should be made more accessible, especially for individuals from low-income backgrounds. Scholarships, grants (= a sum of money that is given by the government or by another organization to be used for a particular purposes), and student loans are already available, but these programs could be expanded to ensure that no one is denied an education due to financial constraints (=financial difficulties). By providing more opportunities for disadvantaged students, society as a whole would benefit from a more educated workforce, which is essential for long-term economic growth. Additionally, accessible education can help reduce inequality and provide individuals with the skills needed to improve their quality of life.

In conclusion, while I do not believe education should be entirely free, I think there should be more affordable options and greater financial support for those who cannot afford it. This would create a more equitable society without overburdening the economy.

Note:

Approach: 40%: agreeing but 60% : other accessible option ⇒ more balanced

Why education should be free: (1) reduce tax for citizens + (2) balance budget

Why education should be more accessible: (1) no one is denied an education due to financial constraints + (2) beneficial for society as a whole ⇒ long-term development

Figure 9 *The Learner's Personal Notes on the Analysis of the Sample Essay.*

Obtaining Tailored Feedback on Linguistic Outputs

How to receive feedback on the productive skills of writing and speaking is a major concern for Daniel while practicing for the IELTS test by himself. He therefore employed ChatGPT as a "teacher" to provide him with feedback on his essays and his responses during speaking practice sessions.

Daniel's experiences of practicing speaking skills with ChatGPT were enhanced significantly with the roll-out of the voice function around early October 2024 as he reflected on his previous practice:

> Before, I was still concerned about how to practice speaking as a solo learner. I used to record my responses, have them transcribed, send them to ChatGPT, and ask for feedback on ideas, the flow of the talk, and the vocabulary used. However, I did not know what to do with pronunciation and intonation.

Figure 10 is an example of how the voice chat function was employed by Daniel to improve his performance in speaking skills, with a focus on pronunciation and intonation.

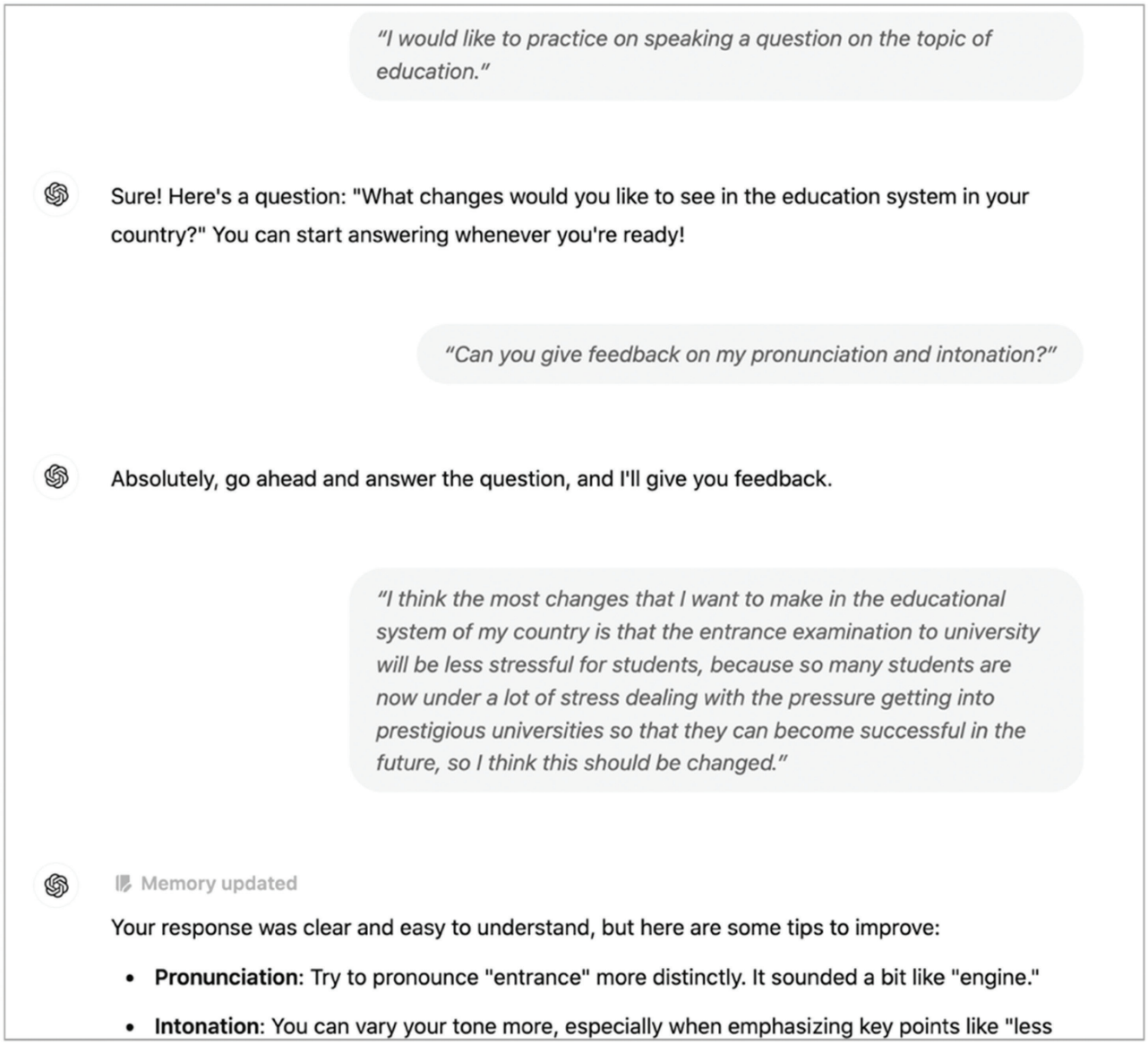
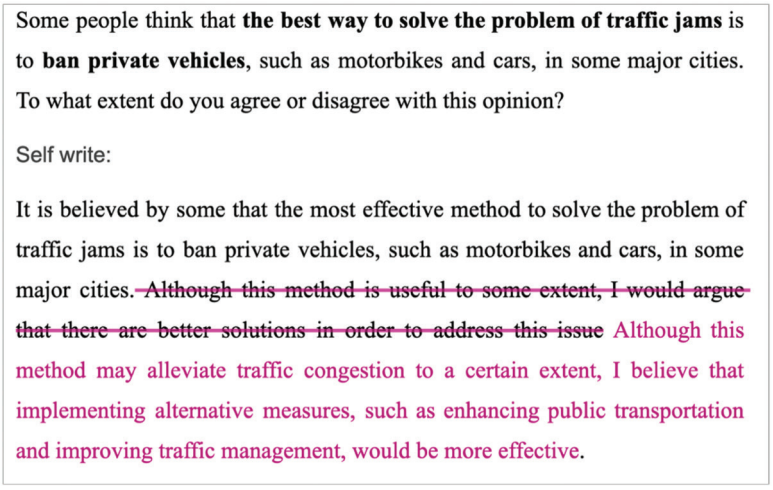


Figure 10 *Chat log Between the Learner and ChatGPT on Practicing Speaking Skills.*

The learner's writing skills also benefited from the affordance of ChatGPT for providing feedback targeting the four assessment criteria indicated in the IELTS test. For each writing practice session, after completing an essay writing task in the Cambridge book, Daniel used the remaining time to seek feedback from ChatGPT and make the necessary revisions. Figure 11 illustrates how Daniel improved his introduction for an essay after receiving suggestions from the bot ("You introduction is clear, but it could be made more engaging by briefly outlining the main solutions you will propose").



Some people think that **the best way to solve the problem of traffic jams** is to **ban private vehicles**, such as motorbikes and cars, in some major cities. To what extent do you agree or disagree with this opinion?

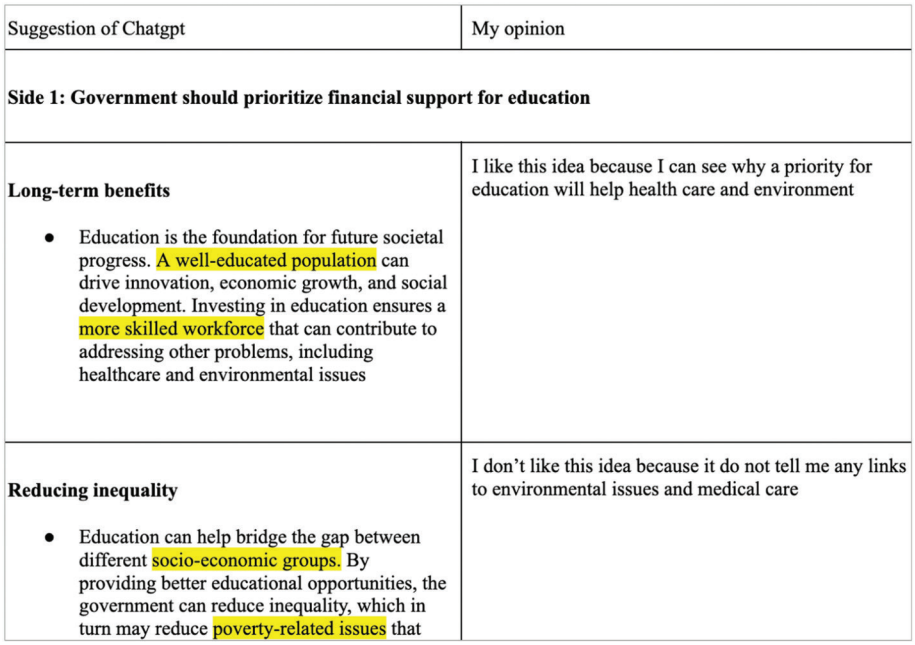
Self write:

It is believed by some that the most effective method to solve the problem of traffic jams is to ban private vehicles, such as motorbikes and cars, in some major cities. ~~Although this method is useful to some extent, I would argue that there are better solutions in order to address this issue~~ Although this method may alleviate traffic congestion to a certain extent, I believe that implementing alternative measures, such as enhancing public transportation and improving traffic management, would be more effective.

Figure 11 *The Learner's Personal Notes About Revised Writing Outputs.*

Assisting in Brainstorming Ideas

According to Daniel, he sometimes struggled with forming and articulating his on for some very unfamiliar topics in writing and speaking skills, such as politics and social welfare. Therefore, the massive data repertoire of ChatGPT made it an excellent tool for him to tackle this problem. However, what was fascinating was how the learner, rather than merely adopting the ideas generated by ChatGPT, managed to exploit them to gain better insights into language use (key vocabulary and useful phrases). Moreover, the learner critically evaluated the responses from the chatbot by explicitly noting the reasons why he preferred—or excluded—certain ideas. This process is demonstrated in Figure 12.



Suggestion of Chatgpt	My opinion
Side 1: Government should prioritize financial support for education	
Long-term benefits • Education is the foundation for future societal progress. A well-educated population can drive innovation, economic growth, and social development. Investing in education ensures a more skilled workforce that can contribute to addressing other problems, including healthcare and environmental issues	I like this idea because I can see why a priority for education will help health care and environment
Reducing inequality • Education can help bridge the gap between different socio-economic groups. By providing better educational opportunities, the government can reduce inequality, which in turn may reduce poverty-related issues that	I don't like this idea because it do not tell me any links to environmental issues and medical care

Figure 12 *The Learner's Personal Notes on Using ChatGPT for Brainstorming Ideas.*

RQ3: What Obstacles did the Learner Have to Overcome During the Process of Language Learning Self-Instruction with ChatGPT?

Thematic analysis of the interview data revealed two major challenges that the learner encountered while self-practicing for the IELTS test, which were (1) contextual discourse on the use of ChatGPT for language learning and (2) perceived insufficient self-study skills.

Contextual Discourse

As shared by Daniel, since the beginning of his journey to self-practice for the IELTS test using ChatGPT, people's discourse in his surrounding environment was relatively discouraging. The learner remarked:

> Many of my friends and colleagues did not show any interest in my employment of the chatbot to teach English to myself. Instead, the idea confused them and most of them insisted that I needed to learn with an actual teacher; otherwise, it would be hard for me to achieve a good result.

In addition, Daniel reported feeling discouraged while listening to stories told by his friends about how they used ChatGPT and AI to just make shortcuts in tasks that were expected to contain a certain level of authenticity:

> All those stories of how they have been using ChatGPT to write a graduate scholarship essay or how they just copied and pasted responses from ChatGPT made me upset and irritated sometimes. My boss is the only one I can share my self-instructed language-learning process and he keeps me sane.

Perceived Insufficient Self-Study Skills

When it comes to the issue of inadequate self-study skills, this was Daniel's realization after engaging in self-study for the first time in his life. Having to be responsible for the learning process in which he had to tackle various tasks, ranging from planning study to material selection, he noticed how he lacked the skills and knowledge to manage his own learning**.** This was felt to challenge his experience of self-studying English with the support of ChatGPT, and the whole experience was still a "trial and errors [sic] process":

> Until now, learning for me is to go to school, listen to my teachers, do my homework, review assigned material, and take a test. The ultimate aim is to get high scores rather than receive training on learning strategies. If I had had a chance to train my self-study skills or receive any guidance on them, I believe now I would better facilitate my current self-study experience with ChatGPT.

Discussion

This single case study investigated the process of self-instructed language learning using ChatGPT used by a Vietnamese working adult learner of English. The results shed light on the driving factors leading the learner to make informed decisions to integrate ChatGPT into his practice for the IELTS test, how he strategically and critically employed ChatGPT to serve different learning purposes, and the main obstacles encountered by the participant during his endeavor to practice for an international standardized English test by himself. Several implications drawn from those findings will be subsequently discussed in detail.

First of all, it was evident that Daniel ended up employing ChatGPT as a tool to self-practice for the IELTS tests by carefully considering his personal context, other available options for learning resources, and his personal experience with ChatGPT. This decision-making process illustrates the learner's agency and how his agentic actions were co-constructed and mediated by different factors, confirming the description of agency as an extensively socioculturally mediated concept (van Lier, 2008). Moreover, Daniel exerted his agency by creatively and strategically acting upon the affordances of ChatGPT to create study plans, improve learning strategies for specific question categories in the IELTS listening and reading tests, generate additional goal-specific learning content (lexical items at a 6.5 IELTS band level, sample essays)**,** obtain tailored feedback on his linguistic outputs, and assist in brainstorming ideas. Most of his approaches seem to align with how participants in previous studies leveraged ChatGPT for informal language learning by utilizing the bot to generate language learning materials, craft their own vocabulary resources, receive real-time feedback, engage in English conversations revolving around a specific topic, and practice for the speaking section of an English test (e.g., Dizon, 2024; Z. Li et al, 2024; Liu et al., 2024). However, Daniel demonstrated a distinct practice of using ChatGPT to draft a learning pathway and to improve test-specific learning strategies. Experiencing self-study for the first time, Daniel's use of ChatGPT for these purposes was understandable, as he understood the importance of established metacognitive strategies as determinants of success during the initial phase of one's self-instructed learning endeavors (Bailly, 2011). Similar to Jass, the solo Korean language learner in the study by Nishioka (2023), Daniel was aware of his learning constraints as a self-instructed learner and made agentic actions to cultivate ChatGPT to exercise metacognitive strategies by planning, self-evaluating, and reflecting on his learning process (Cook, 2016). Findings from those "highly competent self-instructed learners" (Nishioka, 2023, p. 369) could make valuable contributions to previous suggestions made by other researchers on how ChatGPT can be beneficial for those with limited access to formal language learning instruction (see Barrot, 2024). Additionally, systematic analyses of such case studies of informal self-motivated individual learners can help teachers and researchers advance their understanding of what language learners are doing when they are not immediately observed (Stockwell, 2022). This can be useful in constructing "a solid foundation on which to build pedagogies that would be appropriate for learners who are in formal contexts, informal contexts, or a combination of the two" (Stockwell, 2022, p. 185).

Another noticeable pattern emerging from the examination of Daniel's self-instructed language learning with ChatGPT was how the learner not only gathered responses from ChatGPT but also engaged cognitively with the bot (e.g., making his own examples of words/phrases suggested by ChatGPT and having the bot the evaluate them, and evaluating the ideas generated by ChatGPT and selecting those that were most relevant to him). This practice stemmed from Daniel's awareness of possible flaws and biases in the responses produced by the chatbot, which have been extensively discussed in the extensive body of research on ChatGPT and emerging AI technologies, as outlined in the Literature Review section. Daniel's critical approaches to ChatGPT align with participants in studies by Liu et al. (2024), and Z. Li et al. (2024) as they extolled the benefits of ChatGPT as a tool for learning but also acknowledged its limitations**.** Moreover, the participant's usage strategies are also consistent with what was suggested by Almanea (2024) and Teng (2024) regarding how learners can compare the similarities and differences between their knowledge with ChatGPT's "knowledge" to strengthen the reliability and relevance of the acquired responses. It was emphasized that an innovative use of ChatGPT and other AI tools should involve a negotiation of the affordances and constraints. This notion underscores the increasing significance of a critical approach to ChatGPT and generative AIs to avoid the pitfall of false engagement where the learners merely conduct learning activities "as a means to an end" (Stockwell, 2024, p. 4).

As shared by Daniel in the interview, with his critical approaches, he did not consider ChatGPT's limitations such as generating unreliable and inaccurate responses major concerns while using the tool for

self-study. Instead, Daniel had to tackle demotivating comments from people around him who were unsupportive of his new learning approach and insisted that he pursue formal classroom education to achieve a good outcome for his test. In addition, the participant reported feeling frustrated as he became aware of people's current approach to ChatGPT as a tool to help them avoid putting effort into tasks that deserve a certain amount of cognitive investment. All of those negative experiences were challenges the learner had to overcome while engaging in self-instructed language learning with ChatGPT. However, at the same time, Daniel also emphasized how the encouragement from his supervisor at work helped him to adhere to his own principles in using ChatGPT for educational purposes. It should be noted that this person also played an important role in Daniel's decision to employ the bot to self-practice for the language test in the beginning. It could be seen that, despite some frustration, Daniel still received the necessary support and encouragement to sustain himself throughout his self-instructed language-learning process. These findings highlight the importance of contextual discourse on learner agency with technology affordances, which was discussed in the study by Zeng (2018). Investigating the factors leading to nonuse of technology among Chinese students of English, Zeng concluded that learners devalued the affordances available in the environment due to negative discourse regarding the use of the technologies in their context. This negative discourse could stem from the learning beliefs and learning history that were ingrained in the learners' mindset (Lai & Gu, 2011), which, in this study, was the preference of Daniel's friends and colleagues for familiar conventional language classrooms. Meanwhile, positive contextual discourse from the AI-themed conference and discussions with the supervisor enhanced the learner's motivation to creatively and strategically use ChatGPT in language learning self-practice. These insights emphasize the need for teachers, educators, and policymakers to facilitate and encourage open and constructive dialogues about the use of AI technologies in language learning so that learners can be informed about the pedagogical value brought by these transformative tools and receive guidance on how to embrace them with a discerning eye.

This research also observed that Daniel's perceived inadequate self-study skills challenged his self-instructed language-learning process. As a first-time self-study learner, Daniel found it challenging to independently facilitate his own learning. This was, according to him, the result of the conventional learning process that he had become familiar with during his school time. These findings bring to the forefront the necessity of training learners on the skills facilitating self-study. As Erdem (2019) argued, considering the constant nature of change, learning becomes an activity that learners have to engage in many times during the course of their lives. Therefore, support for self-instructed learning is crucial, and educational institutions should equip learners with the necessary skills and knowledge to tackle learning by themselves throughout their professional and personal lives.

Limitations

While this research offers valuable insights, considering the nature of a case study, some findings have to be interpreted with caution. First of all, as with the participant in Nishioka's (2023) study, Daniel's agentic use of ChatGPT to self-practice for the IELTS test was likely due to his high digital literacy skills as a software developer and his awareness of learning strategies as an adult learner. For these reasons, other studies that target learners at different ages and levels of digital literacy skills may produce different research outcomes. Moreover, throughout his self-study process, Daniel only used English to interact with ChatGPT, which could have been attributed to his relatively high level of English proficiency at the time and his motivation to use the target language as much as possible. Further studies can explore and compare how language learners with different proficiency levels and learning motivations make choices about the language they use to communicate their learning needs to the bot. Considering the overwhelming dominance of certain major languages, especially English, in prevalent AI technology (Lai et al., 2023; Park, 2024), the findings from such studies may uncover whether and how language choices can make an impact on the experience of language learners with generative AI

tools, especially for those whose primary language or target language is under-represented in large language models. Furthermore, as the participant in this study aimed to achieve a high band score on a particular English test for career advancement, future research could follow the approach of Chik & Ho (2017) and encourage learners to use ChatGPT, or any other AI tools of their own desire, to try learning foreign languages for general purposes. This may help to broaden and diversify the picture of implementing AI in self-instructed language learning outside classrooms. In addition, during the interview, Daniel claimed that he still needed to engage longer with ChatGPT to thoroughly evaluate the concrete impacts of the bot on his English learning experience and any other challenges that may arise during the learning process. Therefore, in order to construct a more comprehensive picture of Daniel's self-study journey with ChatGPT, the author will aim for a follow-up study to observe any changes in his perspectives, learning trajectory, and the ultimate outcome of the learning process.

Conclusion

This case study examined an adult learner of English using ChatGPT as a primary learning tool to practice for an international standardized English test. The investigation advances our understanding of how a learner used his agency in making informed decisions to implement the chatbot into his learning and strategically acted upon the affordances of the tool to meet his learning needs. There are also insights into several obstacles the learner had to tackle while embarking on this new learning endeavor. The findings suggest several implications for language teachers, educators, policymakers, and language learners, with the goal of a critical and meaningful approach to ChatGPT and other AI technologies for learning purposes. This aligns with the vision of the "human in the loop" (Cardona et al., 2023) where human beings should remain the central actors who exercise judgment and control throughout the process of technology's integration.

Disclosure Statement

The author reports there are no competing interests to declare.

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