THE USE OF ARTIFICIAL INTELLIGENCE IN ENGLISH SELF-LEARNING AMONG STUDENTS AT TERTIARY LEVEL

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ARTICLE INFO	ABSTRACT
	In today's world, technological advancements have greatly transformed various aspects of life, including education. Both educators and learners benefit from modern technologies, especially artificial intelligence. However, integrating artificial intelligence tools into English self-learning poses challenges. This study explores the role of artificial intelligence in fostering self-learning among English language students at the tertiary level. The research was conducted on teachers and students at Posts and Telecommunications Institute of Technology, Ho Chi Minh City campus. Through a mixed-methods approach, quantitative data were collected from questionnaires (on 197 students) and qualitative data were obtained via interviews (with 3 English teachers) to assess the effectiveness of artificial intelligence interventions in promoting self-study strategies. The findings showed that artificial intelligence applications not only facilitate personalized learning experiences but also enhance learners' motivation in English self-learning. This study contributes to the body of literature on educational technology and offers insights into pedagogical strategies that leverage artificial intelligence for language learning. Implications for educators and curriculum developers are discussed, highlighting the potential of artificial intelligence to transform traditional approaches to language education.

VIỆC SỬ DỤNG TRÍ TUỆ NHÂN TẠO TRONG VIỆC TỰ HỌC TIẾNG ANH CỦA SINH VIÊN BẬC ĐẠI HỌC

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THÔNG TIN BÀI BÁO	TÓM TẮT
	Trong bối cảnh hiện đại, công nghệ phát triển mạnh mẽ đã ảnh hưởng sâu rộng đến nhiều lĩnh vực, đặc biệt là giáo dục. Giảng viên và người học đều hưởng lợi từ công nghệ mới, nhất là trí tuệ nhân tạo. Tuy nhiên, việc tích hợp trí tuệ nhân tạo vào tự học tiếng Anh vẫn còn nhiều thách thức. Nghiên cứu này nhằm khám phá vai trò của trí tuệ nhân tạo trong việc hỗ trợ tự học tiếng Anh của sinh viên bậc đại học. Đối tượng nghiên cứu gồm giảng viên và sinh viên tại Học viện Công nghệ Bưu chính Viễn thông – cơ sở Thành phố Hồ Chí Minh. Nghiên cứu sử dụng phương pháp hỗn hợp, thu thập dữ liệu định lượng từ 197 sinh viên và dữ liệu định tính từ phỏng vấn với ba giảng viên tiếng Anh, nhằm đánh giá hiệu quả của trí tuệ nhân tạo trong việc hỗ trợ chiến lược tự học. Kết quả cho thấy trí tuệ nhân tạo không chỉ cá nhân hóa việc học mà còn nâng cao động lực tự học tiếng Anh. Nghiên cứu góp phần mở rộng hiểu biết về công nghệ giáo dục và cung cấp chiến lược sư phạm khi tận dụng trí tuệ nhân tạo trong học ngôn ngữ. Các khuyến nghị dành cho giảng viên và người xây dựng chương trình được thảo luận, nhấn mạnh tiềm năng của trí tuệ nhân tạo trong việc đổi mới phương pháp giảng dạy ngôn ngữ truyền thống.

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1. Introduction

The integration of artificial intelligence (AI) in English language learning has emerged as a pivotal development, offering innovative methods to enhance teaching and learning experiences. As AI technologies continue to evolve, they hold the potential to transform how students acquire language skills and engage with educational content. AI-powered technologies have offered numerous advantages and opened up new pedagogical opportunities. First of all, the use of AI tools in education facilitates personalized learning experiences by addressing the unique needs and proficiency levels of individual learners. According to Viberg et al. [1], AI technologies are increasingly capable of tailoring educational content to accommodate diverse learning styles. This adaptability is essential because it allows the system to meet the varying needs of students, with some grasping concepts quickly and others requiring additional time and support. By integrating AI into educational environments, learners can engage with materials at their own pace and through various approaches, ultimately reducing stress and enhancing the overall learning experience. Halkiopoulos et al. [2], along with Wei [3], also emphasize the importance of AI in providing personalized learning pathways. They claim that AI-driven language learning platforms adapt to individual learners' proficiency levels, styles, and pace, making the learning process more effective and engaging. This level of personalization has been linked to increased motivation and significantly improved learning outcomes.

In addition, AI helps students access a wealth of educational resources [4]. For example, one widely used AI-based educational tool is Quizlet, which offers quizzes and study materials created by educators worldwide. This allows students to select resources that best suit their needs. Also, Owan et al. [5] noted that AI can generate personalized learning materials by analyzing students' behavior and learning styles. As a result, learners can access a wide variety of engaging and relevant content tailored to their individual preferences.

Furthermore, AI platforms can promote interactions in learning through various features like discussion forums, AI-driven chatbots, and interactive content, which allow students to ask questions, share insights, and collaborate on projects. This increased interaction not only fosters a sense of community but also encourages active participation, enabling learners to engage more deeply with the material. According to Vu et al. [6], the integration of AI in learning can create an interactive environment which encourages learners to take part in learning activities more actively and enthusiastically. Also, AI has the ability to analyze student data and predict behaviors. As a result, educators can identify early warning signs of students disengaging or struggling in their studies. This allows for timely interventions and the provision of necessary support to help students succeed.

Last but not least, AI technology can significantly reduce the cost of learning activities and save time in several ways. By automating administrative tasks such as grading, attendance, and scheduling, AI lightens the workload for educators, allowing them to focus on more meaningful activities [7]. It can also provide instant feedback, helping students quickly identify and resolve challenges, which can accelerate their understanding of concepts. Besides, students can be supported simultaneously by AI platforms, reducing the need for extra teachers and physical resources, which ultimately lowers overall costs [6]. Through these optimizations, AI enhances learning efficiency, leading to savings in both time and money for institutions and learners.

While there are many advantages to integrating AI into language learning, this approach also presents several challenges. Li et al. [8] highlight concerns about the digital divide, which can exacerbate educational disparities resulting from unequal access to technology. Students from marginalized or low-income backgrounds often face barriers to acquiring essential digital tools, such as computers or tablets, and reliable high-speed internet. As a result, they may struggle to engage fully with educational materials, participate in online classes, and complete assignments, placing them at a distinct disadvantage compared to their more affluent peers.

Another problem raised by Huang [9] is data privacy. Student data can be gathered through various platforms, raising concerns about how much personal information is collected and for what purposes. Therefore, a mindful and deliberate integration of AI in educational settings is essential to ensure that its benefits are maximized while addressing potential ethical concerns.

Moreover, AI tools can present moral concerns due to their ability to generate intellectual products that resemble those created by humans, often doing so more quickly and efficiently. It becomes a significant challenge to control the quality of education, as it is very difficult to distinguish between work done by humans and that produced by machines. As a result, this can lead to mistakes and injustices in educational assessment, as the outcomes may not accurately reflect the true abilities and efforts of learners [10].

According to Gallacher et al. [11], AI is not a reliable tool for learning. AI systems are designed to continuously update their knowledge from the Internet, regardless of whether the sources are credible. This knowledge is global in scope; information that is accurate in one country or region may not hold true in another, especially when considering various political, economic, and cultural differences. As a result, the information and insights offered by AI can be highly risky [10].

Also, reliance on AI can lead to increased dependence and laziness among students. Bui and Nguyen [10] mention in their study that despite the advantages of utilizing artificial intelligence effectively. Many students exploit these tools to avoid completing assignments and engaging in critical thinking, particularly with a powerful resource like ChatGPT. Students can request that ChatGPT write essays in either English or Vietnamese, and it can even generate English exam essays in just a matter of seconds.

Finally, a widespread and persistent challenge when learning with AI tools is digital distraction. Pérez-Juárez et al. [12] suggest that learning with digital devices can be distracting in several key ways. They can significantly hinder learning by overwhelming students' attention and increasing cognitive load. Besides, learners may use devices for non-academic activities, and constant notifications make it difficult to focus on the task at hand. This leads to poorer academic performance, as students struggle to retain information and connect new knowledge to meaningful contexts. The constant presence of technology disrupts attention, reducing learning efficiency and making it harder for students to stay engaged and productive. Over time, these distractions also prevent students from forming meaningful connections with the content, weakening both memory and comprehension.

Overall, previous studies show that while AI tools offer benefits, their challenges warrant careful consideration. Therefore, this study investigates the current situation of using AI in students' English self-learning at Posts and Telecommunications Institute of Technology (PTIT), and explores both students' and teachers' perceptions. It aims to answer the following questions:

1. What is the current situation regarding the use of AI in students' English self-learning?
2. What are the students' and teachers' perceptions of using AI in English self-learning?

2. Methods

This study employed a mixed-methods design. It combined quantitative data from student questionnaires with qualitative data from teacher interviews to examine the current use of AI in self-learning among PTIT students and how it is perceived by both students and teachers. The first part of the questionnaire aimed to investigate the situation of using AI in self-learning, focusing on the frequency of use, types of AI tools, and the areas of English that AI tools are used for. The second part explored the students' perceptions of using AI in English self-learning. This section was developed based on the key themes identified in the literature review, including personalization, motivation, feedback, accessibility, interaction, and challenges such as distraction, dependence, and reliability of AI tools. There were 14 items with response options ranging from 'Strongly disagree' to 'Strongly agree'. After finalization, the questionnaire was

distributed via Google Forms to 197 non-English major students who were selected through convenience sampling to collect data on their AI usage habits, perceived benefits and challenges, and suggestions for effective use. The Cronbach Alpha calculated for this part was 0.875, indicating the high level of reliability of the questionnaire.

To complement these findings, semi-structured interviews were conducted with three English lecturers to triangulate the survey results and gain deeper insights into strategies for effective AI-supported learning. Interviews were recorded with participants' consent, allowing them to freely share their perspectives and recommendations. Quantitative data from the questionnaires were analyzed using descriptive statistics to identify general trends, while qualitative data from the interviews were transcribed for analysis.

3. Findings and discussion

3.1. The situation of using AI in self-learning of PTIT students

Among the 197 participants in the study, an overwhelming majority - approximately 99.5% - reported using AI tools in their English self-learning. In contrast, only 1 student (0.5%) stated that he had never utilized AI for this purpose. These findings underscore the significant role and growing popularity of AI-driven applications in supporting independent English language learning (see Figure 1).
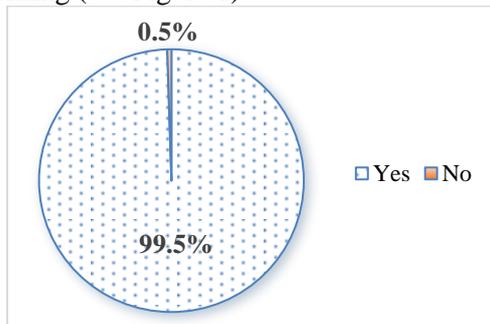

Figure 1. *The use of AI tools in English self-learning*
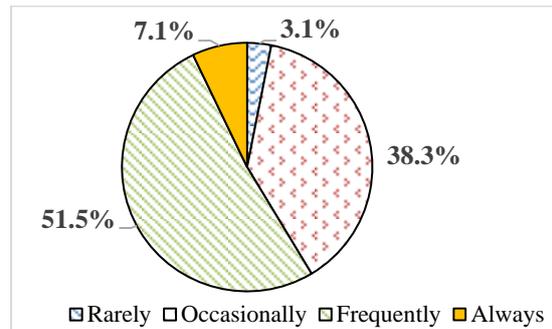

Figure 2. *The frequency of using AI tools in English self-learning*

Figure 2 illustrates that out of the 196 students who had experience using AI tools in their self-directed learning, approximately 38.3% reported occasionally using these tools while studying English on their own. Moreover, more than half of the participants indicated that they frequently depend on AI-powered tools in their learning process. In contrast, only 3.1% mentioned that they seldom make use of such tools in their English studies.

Figure 3 shows that ChatGPT is the most popular AI tool for independent English study at PTIT, used by 84.2% of students. It is followed by Duolingo (43.4%), Grammarly (31.1%), and AI platforms with virtual tutors (30.6%). Other tools mentioned include Gemini, Study 4, Google Translate, TFlat Dictionary, and MochiVocab. These findings reflect a growing trend in AI adoption, highlighting learners' proactive use of digital resources and the significant role of AI in supporting English self- learning at PTIT.
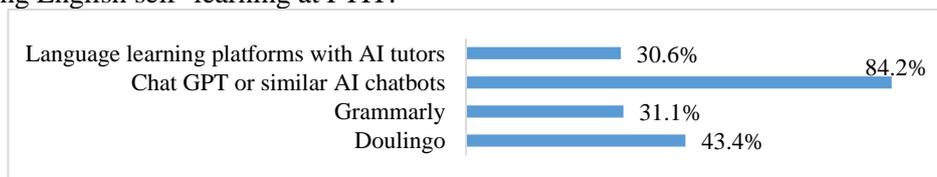

Figure 3. *Types of AI tools*

The survey results from Figure 4 reveal the diverse ways in which learners at PTIT utilize AI tools to support various aspects of English language acquisition. Vocabulary building emerged as

the most common use, reported by 79.1% of respondents, followed closely by grammar correction at 70.9%. Writing improvement (62.2%), test preparation (55.1%), and reading comprehension (52.6%) also ranked highly among participants. In contrast, skills such as listening (45.9%), pronunciation (37.2%), and speaking practice (36.7%) were less frequently supported through AI tools. Overall, the result from this figure shows the usefulness of AI in various aspects of learning. However, these figures indicate that learners tend to favor AI for receptive and written language skills more than for oral communication practice.
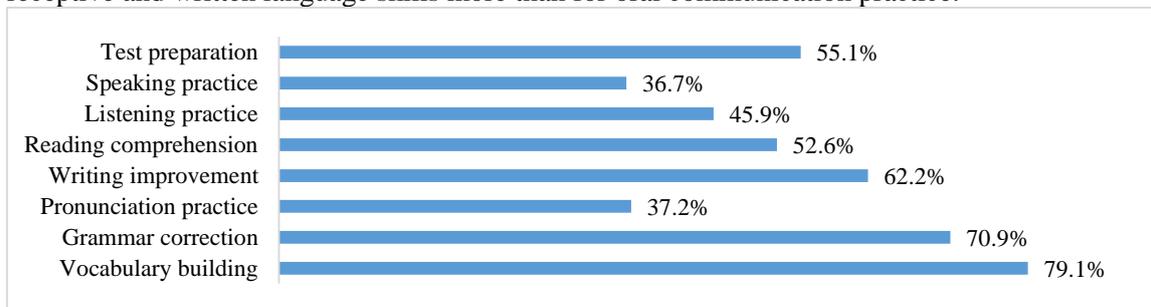

Figure 4. *Areas of English AI tools are used for*

3.2. Benefits and challenges of using AI tools in English self-learning

3.2.1. Students' perceptions of using AI in English self-learning

As shown in Table 1, the descriptive statistics reflect generally positive learner perceptions regarding the role of AI in their English self-learning. In particular, it was reported by most English learners that AI provides helpful feedback to improve their English (M=3.93, SD=0.79). Hence, AI can contribute to learners' improvements in English skills (M=3.86, SD=0.72). These results align with conclusion documented by [2] and [3] that AI can increase learners' motivation and significantly improved their learning outcomes.

It also offers practical benefits by saving time and money in the learning process (M = 3.87, SD = 0.82). This result is consistent with finding from the studies conducted by Saha et al. [7] and Vu and Luu [6] in indicating that AI enhances learning efficiency, leading to savings in both time and money for institutions and learners.

Additionally, with the support of AI tools, learners are allowed to learn English at their own pace (M=3.71, SD=0.85). As stated by the studies in literature [1]-[3], with the integration of AI into educational environments, learners can engage with materials at their own pace and through various approaches, ultimately reducing stress and enhancing the overall learning experience.

Regarding learners' attitudes towards AI tools, the majority of surveyed students agreed that AI tools are easy to use (M=3.98, SD=0.76). They not only find the experience of studying with AI to be interesting (M=3.69, SD=0.79) but they also feel more confident when learning English by themselves through AI tools (M=3.73, SD=0.82). This finding is supported by the study carried out by Vu et al. [6] in stating that the integration of AI in learning can create an interactive environment which encourages learners to take part in learning activities more actively and enthusiastically.

With the purpose to figure out potential drawbacks of using AI in English self-learning, some reversed items were added to the questionnaire. First of all, the respondents were asked whether or not they felt the suggestions or corrections provided by AI tools were sometimes inaccurate or irrelevant. A large number of learners agreed that the suggestions or corrections provided by AI tools were sometimes inaccurate or irrelevant (M = 3.78, SD = 0.82). This result is in line with what Gallacher et al. [11] concluded about AI's unreliability in learning.

However, while the authors of [10] asserted that the reliance on AI can lead to increased dependence and laziness among students, the majority of respondents in this study had neutral

opinion (M=3.07, SD=0.86) towards the item "I become less independent when learning through AI". This means they do not really think that the use AI - driven tools can make them more reliant or lazier.

Last but not least, in contradiction to the finding from the study [6] which revealed the importance of AI platforms in promoting interactions, the result from this research showed no strong opinion of learners about the ability of improving learners' interaction. In stead, most surveyed students chose neutral option when they were asked if they had opportunities to interact with other people from their learning community (M=3.32, SD=0.89).

Table 1. *Benefits and challenges of using AI tools in English self-learning*

Items	Mean	Std. Deviation	N
AI helps me set clear learning goals for English.	3.44	0.84	196
AI helps me track and monitor my progress in English skills.	3.46	0.87	196
AI provides helpful feedback to improve my English.	3.93	0.79	196
AI motivates me to practice English regularly.	3.22	0.87	196
AI allows me to learn English at my own pace.	3.71	0.85	196
AI helps me to improve my English skills.	3.87	0.72	196
AI saves me a lot of time and money in learning English.	3.87	0.82	196
AI provides me opportunities to interact with other people from my learning community.	3.32	0.89	196
I find AI tools easy to use for learning English.	3.98	0.76	196
I find it interesting to learn English with AI	3.69	0.79	196
I feel more confident when learning English by myself through AI tools.	3.73	0.82	196
The suggestions or corrections provided by AI tools are sometimes inaccurate or irrelevant.	3.78	0.82	196
I become less independent when learning through AI.	3.07	0.86	196
I can easily be distracted by other interesting things instead of learning.	3.36	0.93	196

3.2.2. Teachers' perceptions of using AI in English self-learning

Through the in-depth interviews, three teachers have provided their insights towards the use of AI-driven tools in students English self-learning.

3.2.2.1. Benefits

AI is effective in facilitating personalized learning experience

In my opinion, AI greatly benefits students' self-study by personalizing the learning process. It offers tailored exercises, suggestions, and feedback based on individual levels and needs. With tools for speaking, grammar, and study material recommendations, students can learn anytime, anywhere. For instance, some of my students use apps like Elsa Speak to improve their pronunciation. The app identifies specific errors and provides instant, detailed feedback, allowing students to progress quickly-often within just a few weeks. (Teacher 1)

These observations echo prior studies on AI's adaptability to diverse learning styles [1] – [3]. Additionally, the time-saving and skill-enhancing benefits are consistent with recent findings [6], [7].

AI provides great learning resources for students and maintains students' motivation in learning

I believe that using AI in self-study provides students with a wide range of flexible learning resources. It can simulate real-life communication and give instant feedback on vocabulary, grammar, and sentence structure, helping learners identify and fix their mistakes independently. Moreover, AI helps maintain motivation-tools like English chatbots support daily conversation practice, making learning more interactive and enjoyable. (Teacher 2&3)

These benefits are consistent with Owan et al. [5] and Salih et al. [4], who highlighted the role of AI in delivering high-quality, personalized materials that keep learners motivated.

3.2.2.2. Challenges and solutions

AI can lead to dependence and laziness

In my opinion, one major challenge is that students can become overly dependent on AI. If they rely only on the tool to correct mistakes without thinking for themselves, over time it will weaken their analytical and independent learning abilities (Teacher 1).

Teacher 1 expressed concern about students becoming too reliant on AI, which can hinder critical thinking and independent learning. Bui and Nguyen [10] similarly warned about reduced learner initiative. To address this, Teacher 1 suggested encouraging students to solve problems independently before consulting AI, ask reflective questions, and set challenging goals. Promoting project-based learning and limiting AI use can also build autonomy. By implementing these methods, learners will become more proactive and reduce their dependence on AI.

AI may provide unreliable information

Moreover, AI can still make errors, especially in complex contexts, and if students don't know how to verify the information, they may unknowingly learn incorrectly (Teacher 1).

This viewpoint is consistent with the claims made by the authors of [10] and [11] regarding the unreliability of AI tools in self-learning. In order to deal with this issue, Teacher 1 proposed that AI tools should be used alongside traditional resources like books, videos, or language partners. This highlights the idea that, while AI is valuable, learners recognize that it cannot entirely replace the diverse input and interaction needed, especially when it comes to developing communicative competence and cultural understanding.

Learners can be distracted when learning with AI

From my experience, the challenge also lies in maintaining learning motivation. AI allows students to study anytime, but that also means they can easily get distracted - switching from studying to gaming or browsing social media. Self-study with AI requires a high degree of self-discipline, which many students still lack (Teacher 3).

The idea above aligns with Pérez-Juárez et al. [12], who state that learners can be distracted by non-academic activities when using AI tools on digital devices. To overcome this, the teacher suggested students set clear goals, reward themselves for progress, and build self-discipline to stay focused in digital environments.

4. Conclusion

The integration of Artificial Intelligence into self-directed learning at the tertiary level marks an important development in language education. This study highlights AI's role in enhancing students' autonomy, motivation, and engagement in English self-learning. The widespread use of AI tools among PTIT students shows its growing accessibility and influence in supporting independent learning beyond traditional classrooms. AI tools like chatbots, language apps, and grammar checkers offer personalized content, instant feedback, and flexible study options. These features help learners manage their own progress more effectively, improve time efficiency, and build confidence, which are the key elements of successful self-directed learning. However, challenges remain. Teachers raised concerns about students' overreliance on AI potentially weakening critical thinking, while students themselves expressed a more neutral view, suggesting either limited awareness or balanced use. This difference in perception highlights the need for further research combining self-reports with observational data. Besides, this research only focuses on small sample, which is suitable for a case study. Though it meets the needs for the development of English learning for a specific group of students, the sample is not large enough for generalization. Therefore, more research is needed for conclusion on the application of using AI in English self-learning.

Lời cảm ơn

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