



Understanding the Perspectives of Cambodian Provincial English Learners on Using AI Chatbots to Enhance Self-Paced Learning Paths

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ABSTRACT

The purpose of this study is to understand how AI chatbots act as a driving force for English learners seeking self-paced learning and to explore their perspectives on using these tools. Consequently, integrating AI chatbots and traditional self-learning methods is crucial and helpful for English language learners' improvement beyond the classroom. In this case, we may be skeptical about whether AI chatbots have an influence on the perspectives and experiences of Cambodian provincial English learners as they use them to enhance effective and productive English learning proficiency. To meet the criteria of this research study, I seek to discover the multifaceted influences of using AI chatbots for English language learning by understanding different perspectives and uncovering new knowledge. By investigating how provincial English learners use these tools, this study aims to determine the major fields where AI chatbots can influence self-paced learning paths. The findings will not only contribute to my personal understanding of AI's role in this digital era but also serve as a useful resource for further study.

Keywords: Artificial Intelligence, AI Chatbot, Self-Paced Learning, Online Learning, Enhance, Cambodian Provincial English Learner, Perspective

1. Introduction

In today's era Artificial Intelligence (AI) has become one of the most recognizable technologies and powerful tools that are widely used across the world. It transforms industry and daily life. It acts as a powerful and sophisticated digital tool that allows people to enhance and improve their standard lifestyles in various contexts. On top of that, English language education is currently profoundly influenced by artificial intelligence (AI). It offers both teachers and students stimulating new chances to get over barriers. It also offers tremendous benefits for boosting their learning experiences that extend far beyond the classroom as well. In fact, using AI chatbots to master their English component can actually save provincial English learners a lot of time and money, as it eliminates the necessity for them to regularly travel to school. AI chatbots are undoubtedly among the most innovative digital chatbots accessible for helping students catch up with the latest self-paced learning trends.

Artificial intelligence, or AI, is "technology that enables computers and machines to simulate human intelligence and problem-solving capabilities" [1]. The development and analysis of intelligent software and hardware, or "intelligent agents," represents the way artificial intelligence (AI) is progressively integrating itself into every aspect of our lives. Intelligent agents have the ability to perform many different kinds of tasks, from laborious tasks to advanced operations. A common representation of an artificial intelligence (AI) system as well as one of the most basic and prevalent types of intelligent human-computer interaction is a chatbot (HCI). Chatbots are also known as smart bots, interactive agents, digital assistants, or artificial conversation entities [2]. In addition, word chatbots, known as programs for computers, engage users in their natural language. The purpose of this technology, which has existed since the early 1960s, was to determine if chatbots could trick users into thinking they were real human beings [3]. According to Dictionary.com, a chatbot is defined as "a computer program designed to respond with conversational or informational replies to verbal or written messages from users." [4].

Through dedication and commitment to this research study on the above topic, I desire to address and fill this void towards understanding the perspectives of Cambodian provincial English learners on the use of AI chatbots in this era, a period of rapid advancement in technology. Ultimately, I hope to contribute the new potential insights on the issue of self-paced English language learning to compile new knowledge for future research.

2. Methods

This study utilized a mixed-methods research design to better understand how Cambodian provincial English learners experience the use of AI chatbots to improve their self-paced learning routes towards the research topic. Research using mixed methods has increased in popularity as an option for researchers searching for more complicated issues. It offers a broad perspective through integrating both qualitative and quantitative data gathering and analysis [5]. The validity of research findings becomes stronger when researchers use multiple methods to get the same findings from diverse perspectives. Triangulation is the term for the process of verifying evidence [6]. To obtain full data and enable a complex understanding of English language learners'

views and reactions, the research targeted both open-ended questionnaires and surveys. Besides, the Simple Random Sampling of Probability Sampling technique was used since simple random sampling (SRS) is a common probability sampling technique that is frequently used in research designs. It makes certain that everyone in a population has an equal chance of being selected for the sample [7]. It means that in the population of provincial English learners in Cambodia, each English learner has an equal chance of being picked. This technique makes it possible to get an extensive collection of data on their perspectives and experiences.

2.1 Data Collection

Based on the mixed-methods research design, a quantitative section can be initially conducted by handing participants paper copies of survey questions in order to collect data regarding their perspectives, experiences, and preferences related to using AI chatbots in the context of their self-paced English learning. Building on this, in the qualitative section, 11 volunteer participants from the entire population of 103 were selected to participate in semi-structured focus-group interviews to collect rich data that would help the researcher understand more effectively and meet the criteria set out by the research objective. According to Denscombe (2007), qualitative data gained by conducting interviews presents richer details and more insight, whereas quantitative data gained by conducting surveys may present a broad view of understanding the key points [8]. Therefore, the said data collection instruments can be trusted as a dependable option for determining the targeted design in this research.

2.2 Data Analysis

The process of data analysis gave researchers the competence to examine the collected data logically. The phases involved quantitative data analysis, employing Microsoft Excel, a common tool to analyze the collected data from the surveys, and using descriptive statistics in a fundamental format. It is presented as demographic information, survey responses to questions, and quotes from the participants' theme tables, which are useful instruments for organizing survey results into different categories. The tabular format made it simple to observe the number of participants who selected each of the answers to a specific survey question. In addition, qualitative data was analyzed thematically. Thematic analysis was used to examine the qualitative data from the open-ended questionnaire [9]. The data from the interviews was analyzed using thematic analysis to find patterns, themes, and common concepts and quote the best ones. As part of the analytic process, the data was coded and categorized to better understand certain questions. The participants were assigned codes such as Participant 1, Participant 2, etc. This analysis also aimed to identify common themes and highlight the participants' experiences and perspectives as revealed in the open-ended questionnaires. Each piece of qualitative data was supported by descriptions to make it less difficult for readers to comprehend.

3. Finding and Discussion

3.1 Quantitative findings

The findings of the demographic information of the participants, as well as their perspectives and experiences found in the survey responses to questions, are shown in **Tables 1, 2** below, along with the description.

Table 1 - Demographic Information of the Participants (N=103)

Demographic Variables	Value	Frequency	Percentage (%)
Gender	Male	46	44.7
	Female	57	55.3
Age	15-19	62	60.2
	20-29	35	34.0
	30-39	6	5.8
	Above 40	0	0.0
Educational background	Junior high School	6	5.8
	High school	61	59.2
	Bachelor student	32	31.1
	Other	4	3.9
English proficiency level	Elementary	35	34.0

Pre-intermediate	50	48.5
Intermediate	12	11.7
Upper intermediate	2	1.9
Advanced	4	3.9

This research collected demographic data from 103 participants, most of whom originated from the province of Banteay Meanchey. Based on the findings in the demographic information of the participants (**Table 1**), most of the participants identified as female, which indicates 55.3% of the total population compared to 44.7% of males. The average age of the participants was notably unbalanced towards younger populations, with 60.2% of the participants belonging to the age range of 15–19, 34.0% belonging to the age range of 20–29, and 5.8% belonging to the age range of 30–39.

According to the educational background variable shown, at 59.2%, most of the participants were high school students. This was followed by bachelor students at 31.1%, then junior high school at 5.8%, and lastly, other students at 3.9%. Furthermore, the participants' English proficiency level showed that nearly half of the participants (48.5%) were at the pre-intermediate level. The elementary level earned 34.0%. The percentage at the advanced level was just 3.9%. The lowest percentage was 1.9% at the upper intermediate level.

Table 2 – Survey Responses to Questions Towards Participants' Perspectives and Experiences (N=103)

Survey Question	Response (Percentage)	
1. Do you know AI chatbot? (ChatGPT, Gemini, GPT4, LLaMa, and other AI tools)?	Yes	62.1
	No	8.7
	Not sure	29.1
2. How often do you use AI chatbots for self-paced learning to enhance your English?	Always	16.5
	Sometime	63.1
	Never	20.4
3. How comfortable are you using technology to learn and improve your English?	Very comfortable	10.7
	Comfortable	19.4
	Neutral	54.4
	Uncomfortable	12.6
	Very uncomfortable	2.9
4. After using an AI chatbot for self-paced English learning, what English skills do you believe the AI chatbot could improve?	Grammar	10.9
	Vocabulary	21.1
	Speaking skill	4.7
	Listening skill	4.7
	Reading skill	13.3
	Writing skill	14.1
5. When you use AI chatbots to have conversation, do you feel confident with it or not?	All skills	31.3
	Feel confident	22.3
	Feel unconfident/insecure	10.6
6. Would you recommend using AI chatbots for improving self-English learning to other students?	Feel it is okay!	67.0
	Yes, sure	57.0
	Not sure	36.6
	No	6.5

In response to the above survey, AI chatbots hold great potential as a useful tool for self-paced English learning. Over 62% of survey respondents claimed they knew and engaged with AI chatbots, while 8.7% responded "no" and 29.1% were not sure. Accordingly, AI chatbots had an influence on Cambodian provincial English learners, based on the high percentage of respondents who were aware of and used them in a self-paced learning context. The frequency of using AI chatbots showed that a majority of respondents (63.1%) sometimes used them to enhance their English. This proved that although AI chatbots were a useful tool for English language learning, the average portion (16.5%) responded "always." Unfortunately, not everyone knew about them. Therefore, the significant portion of the population that never used AI chatbots was 20.4%. This could have been due to some reasons, involving not having heard of AI chatbots, believing that AI chatbots were not beneficial, or some provincial English learners preferring traditional learning techniques.

Respondents were mostly chosen as "neutral," 54.4%, concerning how comfortable they felt with the use of AI chatbot tools. 19.4% felt comfortable, whereas 12.6% felt uncomfortable. While very comfortable (10.7%) was higher than very uncomfortable (2.9%), respondents were generally pleased with the AI chatbot that was used for their self-paced English language learning. To allow respondents to delve further into their experiences, survey question 4 offered more details about how AI chatbots could serve as a useful tool for them to enhance multiple aspects of their English skills. While it claimed (21.1%) that chatbots were good at improving vocabulary and grammar (10.9%), chatbots also showed positive results for developing reading skills (13.3%) and writing skills (14.1%). All skills revealed a high percentage of 31.3% compared to the rest. Conversely, the lowest percentage of skills in speaking and listening were found at only 4.7%.

The vast majority of the respondents (67%) believe that chatting with AI chatbots is acceptable. Intriguingly, when using AI chatbots for conversation, less than half of respondents feel confident (22.3%), and a far smaller percentage feel unconfident or insecure (10.6%). In general, the findings show that although AI chatbots are acceptable tools for chatting, others may still be hesitant about using them. In a similar vein, the last survey question positively showed that nearly all respondents (57.0%) considered it would be recommended to use AI chatbots to enhance self-learning context for other English language learners. However, 6.5% of respondents disagreed. 36.6% of the others were unsure.

3.2 Qualitative findings

This study focuses on self-paced English learning by using AI chatbots to enhance their English proficiency, specifically exploring their perspectives and experiences. Through open-ended questionnaires, the researcher aims to gain a deeper understanding of learners' viewpoints. Particularly in terms of qualitative findings, the study designed three major themes, including learner experiences, the potential of AI chatbots, concerns and considerations, while quotes that illustrate the themes identified from the participants' answers also appeared in **Table 3**. The questions are as follows:

1. What are your experiences with self-paced learning to learn English?
2. Do you think AI chatbots could be beneficial for self-paced English learning?
3. Do you have any concerns related to AI chatbots used for English learning?

3.3 Learner Experiences with Self-Paced English Learning

The findings of the data analysis highlighted that the provincial English learners from Cambodia who took part in this study had positive experiences with self-paced English learning, as this way of learning could be an effective technique to improve the English skills they want. Following their complete descriptions of their self-paced English learning experiences, participants 1 and 5 emphasized three tactics:

- Engaging with a variety of reading materials: This included books, news articles about advancements in AI like research on new technology and compiling relevant English documents from the Internet for independent reading and practice. They learned from short videos in English. This broadened their vocabulary and introduced them to different writing styles as a result. They also proposed that this could involve writing or practicing any kind of English for daily use; this enhanced their understanding of English by integrating the said regular practices of English into their profession.
- Being immersed in English entertainment: They suggested kicking off with short videos and watching films or television series with English subtitles. This helped English learners get used to the correct pronunciation and language use in real conversation.
- Team learning and sharing: They focused on speaking and writing individually. But they also looked for chances to share knowledge and learn more from others. Discussion groups or virtual language exchange courses could be used for this as well.

In accordance with the first major theme, similarly to Benson (2013) [10], learners have the freedom to study around their busy lives and at their own speed. This can be particularly beneficial to those who are occupied or reside in remote areas. Moreover, Self-paced courses frequently support many different learning goals and techniques, letting students concentrate on particular English language proficiency areas that require improvement [11]. Great time management or scheduling, goal setting, and self-evaluation skills are necessary for effective self-paced learning, although certain learners may lack these skills in the beginning [12]. On the other hand, it can be difficult for certain learners to stay motivated and concentrated in the absence of a schedule or instructor support [13].

Potential of AI Chatbots for Self-Paced English Learning

The second theme focuses on the potential of AI chatbots for self-paced English learning contexts. AI chatbots can be beneficial for self-paced English learning, stated participant 2. They said that they benefited from the power of AI chatbots as they used them to answer a wide range of questions, access many kinds of sources, respond rapidly to demands, improve their listening and speaking skills, and serve as personal assistants. Participant 6 agreed with the earlier statement. He expressed that he had used a few AI tools, but ChatGPT was the best one. He frequently used ChatGPT to do research, draft essays, and short paragraphs, and look for answers for their assignments. AI chatbots could assist learners in practicing their English in an online context. However, some English learners still prefer to be part of a physical classroom.

Based on the statements of the two participants from the second theme, AI chatbots have great potential for enhancing self-paced English language learning. Fundamentally, Learners have a great opportunity to learn by engaging in experiments and experiences via ChatGPT. Learners can also study and evaluate different approaches to goal accomplishment and problem-solving skills through game-based learning enabled by ChatGPT, allowing them to gain practical insight and develop their critical thinking abilities in a practical way [14]. Relatively, after conducting a thorough analysis of the present uses of chatbots in education, Wollny et al. [15] found that additional research is necessary before chatbots reach their full potential. An area that has been suggested for enhancement is chatbots' ability to adjust to various educational settings. In short, the benefits of self-paced English learning are enhanced by AI chatbots, which are used to provide personalized support and create an engaging environment for all learners.

Concerns and Considerations Related to AI Chatbots Used for English Learning

One of the three major themes is concerns and considerations regarding AI chatbots used for English language learning context. Participant 1 raised the concern of cheating on quizzes, homework, or exams. He believed that, eventually, learners would become self-sufficient since the knowledge they gained would be theoretical rather than practical. Shifting the discussion around, Participant 8 pointed out several issues with AI chatbots. Among these potential concerns was the possibility that AI chatbots would provide untrustworthy or false information. He was also anxious about privacy and security. Continuing this point, Participant 10 expressed additional issues about AI chatbots that are used for English. She specifically mentioned that chatbots were often trained on written text, which can be grammatically perfect but lack the natural flow and informality of spoken English. She believed that AI chatbots might have a limited understanding of slang and common idioms used in regular conversations. Additionally, she identified that chatbots often struggle with understanding the real context of a conversation. This could have led to misunderstandings, especially if learners used idioms, sarcasm, or slang that the chatbot wasn't programmed for. Last but not least, Participant 11 shared his personal concern that people wouldn't improve their knowledge because they would copy directly from AI chatbots.

The final theme brought up many issues about AI chatbots used for English language learning. In the opinion of Mohamed (2023) [16], Learners might become lured to use chatbots inappropriately, which may end up in plagiarism when they write essays or translate texts. In the case of Sun and Hoelscher (2023) [17], the chatbot's replies may lack nuance and complexity, perhaps missing nuances in the use of the English language. Likewise, relying too much on the chatbot's replies may hinder the development of critical thinking skills. Learners might fall into the habit of simply consuming information from the chatbots without actively practicing or using English by themselves [18]. It makes sense to be carefully aware of these negative issues while integrating AI chatbots and traditional self-learning methods. English learners may take advantage of AI chatbots to make English learning more engaging and effective if they address these issues wisely.

Table 3 – Quotes from the Participants' Themes

Quotes from the Participants' Themes	
1st Theme	“A variety of reading materials is the key for language learning” (Participant 1).
	“Entertainment can be educational” (Participant 1).
	“Daily practice builds mastery” (Participants 1 and 5).
2nd Theme	“AI chatbots are beneficial for self-paced learning” (Participant 2).
	“ChatGPT is my go-to for research and writing” (Participant 6).
3rd Theme	“Learners would become self-sufficient since the knowledge they gained would be theoretical rather than practical” (Participant 1).
	“Possibility that AI chatbots would provide untrustworthy or false information” (Participant 8).
	“AI chatbots were often trained on written text, which can be grammatically perfect but lack the natural flow and informality of spoken English” (Participant 10).

The quotes listed above are essential for readers to comprehend the key findings of the study. There are both pros and cons to using AI chatbots for English language learning, as illustrated by the participant statements from the interview session. However, most of the participants seem to believe that AI chatbots can be beneficial tools for their self-paced learning paths.

4. Conclusion

This study seeks to explore the potential of AI chatbots for enhancing self-paced English learning among Cambodian provincial learners. The quantitative findings revealed that most of the participants were aware of AI chatbots and had used them for their self-paced English learning, although not all participants felt comfortable with them. In addition, some learners found that AI chatbots were best for sharpening their grammar and vocabulary; others believed they were useful for developing all their English skills. The qualitative findings provided more illumination on the perspectives and experiences of the learners. They remarked on how self-paced learning with AI chatbots facilitated flexibility and independence. Meanwhile, concerns were raised over the possibility that AI chatbots may facilitate plagiarism, slow down the development of critical thinking skills, and deliver false information. To sum up, the study finds that AI chatbots have potential benefits for enhancing self-paced English learning, but the integration with traditional approaches to education needs to be carefully considered to minimize any negative effects.

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Author Contributions

Lim Kim Eav: Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Visualization, Writing—Original Draft, Writing—Review, and Editing. **Loeurng Khemarineth:** Project administration, Supervision.

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