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UNVEILING VIETNAMESE ENGLISH MAJORS' PERCEPTIONS OF AI CHATBOTS: A REFLECTIVE EXPLORATION THROUGH CONCEPTUAL METAPHORS AT TRA VINH UNIVERSITY, VIETNAM

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Abstract – *Conceptual metaphors are a fundamental aspect of human cognition that allows people to understand abstract ideas through more objective experiences. Recent studies show that metaphors are widely used in language and significantly influence human thought processes. However, how conceptual metaphors represent language learners' perspectives, has been required for more attention. Adapting the Conceptual Metaphor Theory proposed by Lakoff and Johnson, this study aims to analyse the conceptual metaphors employed by Vietnamese English majors to reflect their perceptions regarding the use of AI chatbots, especially ChatGPT, in language learning in general and English-speaking skill enhancement in particular. Data involves the collection of reflective statements from 32 participants, followed by frequent occurrences analysis to identify recurring conceptual metaphors and associated perceptions. The findings revealed that varied metaphors are illustrated, and that tool and learning companions appear to be the two most popular. Furthermore, the metaphors have been categorised into underlying sub-themes. While the majority of representations seem beneficial, concerns are also raised regarding creativity and critical thinking abilities may be replaced if students overuse ChatGPT. Based on the results, digital literacy development for both instructors and students, academic integrity accountability, and plagiarism's consequences are also discussed. This hopes to offer some insights for future research into various applications of ChatGPT for the analysis of specific language-learning settings.*

Keywords: ChatGPT, conceptual metaphor, English-speaking skill, language learning.

I. INTRODUCTION

AI technologies have been studied in educational settings for decades [1]. To date, AI is being integrated into certain mainstream educational institutions as a standalone curriculum and refined to enhance teaching performances [2]. The utilization of AI within educational settings is experiencing rapid and exponential growth, ranging from tutoring systems to assessment grading, chatbots like ChatGPT, and various other applications [3]. Additionally, its integration into language classrooms helps to tackle diverse educational challenges by providing timely writing feedback, delivering personalised instruction, and offering prompt additional support to students [4].

AI technologies boom is considered quicker than educational institutions can formulate clear norms and practices for teachers to handle specific AI-based applications, as evidenced by the recent introduction of ChatGPT (Generative Pre-Trained Transformer) [5]. Despite an increase of studies demonstrating the understanding of ChatGPT, both helpful and potentially risky. Ultimately most explorations of this new technology are likely to be both useful and potentially dangerous – in informing our understanding as we risk both underestimating and overestimating the constructive and destructive potential of this technology and the ethical dimensions of its use [5].

Since the emergence of ChatGPT, the exploration of metaphorical representations for Large

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Language Models (LLMs) has surged, with comparisons ranging from 'steam engines' to 'fire' and even to 'God' (Thompson, cited by Desai et al. [6]). This trend underscores the profound impact and diverse interpretations of LLM technology. Several recent works have explored how users conceptualise ChatGPT in daily life. One of the most salient metaphors mentioned is using ChatGPT as an explicit metaphor (an assistant) [7] or an implicit metaphor (magic) [6].

Several earlier studies have shown that students' beliefs about ChatGPT in language learning are both positive and negative, with many recognising its efficacy for vocabulary acquisition, translation, grammar checking, and paraphrasing [5–7]. It is believed that ChatGPT can enhance language learning by providing real-time communication, immediate feedback, and interactive activities, supporting teachers in facilitating language fluency and complexity [8]. However, students also emphasise the need for teacher instruction and physical classroom interaction despite the technology's potential benefits [9].

In academic discourse, metaphors serve as crucial tools for grasping the essence and utilization of ChatGPT, facilitating a deeper understanding of its role. Such metaphorical frameworks offer insight into the realistic applications of ChatGPT within academic settings. Therefore, it is necessary for a comprehensive exploration focusing on students' conceptual metaphors of ChatGPT within a language learning setting. This study delves into a range of metaphors expressed by EFL students and how these metaphors reflect their beliefs about using AI chatbots in general, aiming to aid students in understanding different aspects of technology. The research seeks to heighten awareness of using ChatGPT to improve the accessibility and clarity of the tool for students, potentially enhancing their engagement with AI chatbots in language learning and promoting critical digital literacy. The research question in this study is:

What conceptual metaphors do Vietnamese English majors use to reflect their perceptions about the usefulness and drawbacks of ChatGPT in language learning?

II. LITERATURE REVIEW

A. ChatGPT and its metaphors

ChatGPT, a freely available chatbot, is accessible on the internet to all users and operates using artificial intelligence [8]. ChatGPT, a model by OpenAI, was initially intended for language generation tasks like machine translation. It's crafted to produce human-like text responding to specific requests or dialogues, fostering natural, open-ended conversations. Additionally, ChatGPT can generate various forms of content beyond text, including code, stories, and poems [1]. In contrast to earlier AI language models, ChatGPT is a generative AI that can produce original ideas and material by improving its learning from user feedback and expressing it in real-time dialogues. ChatGPT's ability to maintain a conversational style with a consistent personality throughout discussions is a significant feature. This characteristic fosters more authentic and realistic conversations [9].

According to Qadir [10], conceptual metaphors help people understand one thing by comparing it to another. Conceptual metaphors are fundamental to how humans think, allowing people to understand abstract ideas through concrete experiences or using experiences that people all understand, makes communication more effective. The Conceptual Metaphor Theory (CMT) is a widely accepted way of studying how language and thought are connected. It is used in various fields like literature, grammar, different kinds of discussions, and teaching second languages [11]. The CMT was first developed by Lakoff et al. in the 1980s (cited by Qadir [10]). Lakoff et al. suggested that metaphors in language are not only just fancy ways of speaking but also show how our minds work.

B. ChatGPT applications in education and the language learning process

Benefits

Integrating AI, particularly OpenAI's ChatGPT application, into educational settings has become a prominent focus in the discourse surrounding modern pedagogy [12]. Despite the recent introduction of GPT-4, scholarly interest in AI-supported chatbots has surged, particularly regarding their potential to augment student engagement and learning outcomes within university contexts [13]. Many studies have explored the efficacy of chatbots in various educational environments, shedding light on their capacity to enhance student interaction, enrich learning experiences, and potentially foster motivation and achievement levels across disciplines, reducing foreign language learning anxiety and supporting students with low communication willingness [14–16].

In the realm of higher education, ChatGPT has highlighted its utility as a platform for delivering personalized learning resources and information tailored to individual student needs, thereby facilitating adaptive learning experiences [17]. Zawacki-Richterat et al. [18] explored the potential benefits of ChatGPT in teaching and learning, including personalized learning, interactive teaching methods, and formative assessment supported by continuous feedback. Moreover, Willems [19] proposed a method for generating assessment questions using a fine-tuned GPT-3 model based on text-based learning materials in a data science course. They evaluated the usefulness of these questions in achieving learning outcomes, reporting favourable ratings from human experts. Moreover, ChatGPT has garnered attention for its potential to enhance critical thinking and problem-solving skills, as noted by Bhat et al. [20].

Potential risks

Despite the growing body of literature on the use of AI, particularly the GPT-4 model, in education, there remains a notable gap in research addressing the perspectives of scholars and students regarding the rapid adoption of ChatGPT. This gap triggers the importance of ongoing discussions surrounding the ethical and pedagogical implications of AI integration in higher education. Noticeably, discussions surrounding ChatGPT's implications in academia have highlighted concerns regarding academic integrity, alongside recognition of its potential to transform learning methodologies. Risks and broader ethical and pedagogical implications of employing ChatGPT within universities are raised, as issues such as misinformation generation, biases in data training, and privacy concerns associated with ChatGPT [20–22]. Similarly, Willems [19] advocated for leadership to ensure the ethical use of ChatGPT in education, focusing on character development, assessment practices, and learning with artificial intelligence. Meanwhile, Crawford [23] questioned the readiness of artificial intelligence to attain a university degree and Malinka et al. [24] critically assessed ChatGPT's potential impact on traditional assessment methods in higher education. Sharing a similar view, Rudolph et al. [25] expressed concerns about ChatGPT's implications for academia, highlighting potential disruptions to education and emphasizing the evolving nature of its academic writing capabilities, prompting educators to reconsider teaching approaches and assessment strategies to address the challenges posed by AI. It is observed that Chinese essays translated from English by ChatGPT exhibited structural deficiencies and grammatical errors, which suggest that while ChatGPT performs well with high-resource European languages like English and French, it struggles significantly with low-resource languages such as Chinese [24].

C. Existing metaphors for ChatGPT

It is crucial to note that metaphor analysis can be complex and nuanced depending on various usage scenarios. Regarding different subjects, the use of multiple metaphors can assist in fostering discussion and in offering a more comprehensive understanding of this novel technology and its usage implications (Spiro et al., cited by Anderson [7]).

Certain researchers have delved into how metaphors influence public perceptions within the discussion surrounding AI broadly and ChatGPT specifically. ChatGPT, described by Erik Brynjolfsson as a 'writing calculator' is believed to streamline tasks and boost creativity [26]. Despite differing opinions, ChatGPT is universally and commonly framed as a tool [5]. However, it is argued that ChatGPT might hinder students' learning experiences but is a valuable tool for enhancing thinking skills (Warner, cited in [5]). Additionally, Aldrick [27] explores human-like metaphors in their evaluation of ChatGPT, describing it as a 'friend, philosopher, and guide' alongside the contrasting notion of it being 'your worst enemy'. Moreover, opinions vary regarding the role of ChatGPT as a collaborator. Stokel-Walker highlights that some recent peer-reviewed articles have listed ChatGPT as a co-author [28, 29].

Anderson [7] carried out a month-long autoethnography to explore how people use ChatGPT by looking at different metaphors. The authors conceptualise ChatGPT as three things, including an unreliable narrator, court jester, and sounding board. Desai et al. [6] point out that using fun metaphors instead of complicated ones is likely to make ChatGPT easier to understand for people who are non-experts or policymakers. Furthermore, Desai et al. [6] detail ChatGPT's self-perception through metaphorical descriptions. ChatGPT presents itself as flexible and friendly, comparing itself to good things like a Swiss army knife, a big library, and a space observatory [8]. However, when prompted, ChatGPT reluctantly offers some critical metaphors for the impacts of AI, including likening it to a double-edged sword and a Pandora's Box [8], which reflect on the potential risks and societal reflections associated with AI technology.

From the above analysis, it can be seen that the current state of research on the integration of AI, particularly ChatGPT, into educational settings has highlighted its potential to enhance learning experiences, student engagement, and personalized education. Studies have demonstrated that ChatGPT can support language learning, improve critical thinking, and provide adaptive learning resources tailored to individual student needs. However, the exploration of metaphors used to describe ChatGPT's role in education, particularly from the perspective of language learners, remains under-researched.

Despite the achievements in demonstrating the benefits of AI in education, several limitations exist. There is a notable lack of research addressing the ethical and pedagogical implications of widespread AI adoption, including issues related to academic integrity, and misinformation [30, 31]. Moreover, while existing studies highlight the positive impacts of ChatGPT on learning, they often overlook the potential drawbacks, such as the risk of diminishing students' creativity and critical thinking skills due to over-reliance on AI tools.

While there is substantial evidence of the effectiveness of AI in improving educational outcomes, the nuanced understanding of how students perceive and metaphorically conceptualize AI tools like ChatGPT is still developing. This gap underscores the need for a deeper investigation into the metaphors employed by Vietnamese EFL students, as these metaphors can significantly influence how they interact with and benefit from AI technologies. The integration of AI, particularly ChatGPT, into educational environments addresses a notable research gap by introducing an adaptive learning tool that significantly enhances student engagement and learning outcomes. This study contributes to the research gap by providing a nuanced understanding of how conceptual metaphors reflect Vietnamese English majors' perceptions of AI chatbots in language learning. The findings emphasise the need for digital literacy development and academic integrity, informing future research on AI applications in language learning settings and offering practical insights for educators. Additionally, this research not only deepens our understanding of AI's role in education but also guides the ethical and effective integration of AI in academic settings.

III. METHODOLOGY

A. Participants and research instrument

Participants in this study consisted of 32 English major students at Tra Vinh University. Participants were surveyed online through an invitation sent out on class group chat and social media platforms at the end of term two, the academic year 2023–2024. It is informed that participation in the study is voluntary and most importantly, participants must have prior experience using ChatGPT, either for language learning purposes or in other contexts. This criterion ensures that participants are familiar with the use of ChatGPT and can provide informed perspectives on its usefulness and limitations.

The online questionnaire consists of two parts, including general information and an open-ended question. In the first part, participants are asked whether they have used ChatGPT before. This question ensures that participants have fully experienced using ChatGPT, making their responses more valid. The second part contains an open-ended question where participants are asked to generate one metaphor for ChatGPT and explain the reasons behind their choice. This allows participants to creatively express their perception of ChatGPT, providing deeper insight into their understanding and experience with this AI chatbot. Throughout the questionnaire, participants are assured of their anonymity and confidentiality, and their right to withdraw from the study at any time without consequence is emphasized. Any identifying information collected during the study is kept confidential and used solely for research analysis.

B. Data collection and analysis

Participants were asked to demonstrate their responses in Vietnamese. To analyze the data, the responses from the online survey were first translated into English to ensure comprehension and facilitate analysis. In this current paper, the results provided were analyzed using Lakoff et al.'s framework [32], which centres on the frequent occurrences of each metaphor. Lakoff et al.'s framework indicates that metaphors are pervasive in everyday language and thought, arguing that metaphors shape how people perceive, think, and act, influencing our understanding of abstract concepts by mapping them onto more familiar experiences [32]. This frequent use of metaphors highlights their fundamental role in human cognition and communication. This approach would offer the significance of reported metaphors based on their frequency.

IV. FINDINGS AND DISCUSSION

Table 1 below presents an analysis of the conceptual metaphors expressed by Vietnamese English majors towards ChatGPT.

Based on the research data, the conceptual metaphors utilised by Vietnamese English majors to express their beliefs about the utility of ChatGPT in language learning can be summarised as follows, ranked by their frequency of appearance from the highest to the lowest:

- Learning companion/partner (eight occurrences): Reflects the perception of ChatGPT as an effective assistant supporting learning and research endeavours, offering personalised assistance and guidance.

- Supportive tool (seven occurrences): Highlights ChatGPT's role as a practical aid for enhancing vocabulary and professional skills, emphasizing its utility in various educational and professional contexts.

- Boundless library (five occurrences): Describes ChatGPT as an extensive knowledge repository, providing access to diverse resources across different subjects and disciplines.

- Double-edged sword (three occurrences): Portrays ChatGPT as a versatile and multifunctional tool capable of addressing various learning needs and challenges.

- A mentor (two occurrences): This metaphor suggests that ChatGPT functions similarly to a supportive advisor. ChatGPT is helpful, offering advice on personal problems and academic challenges. Its conversational style provides a sense of understanding and empathy, making it a reliable source of support.

- A virtual friend, a scholar, an English tutor at home, an online teacher, a feedback giver, an

Table 1: Metaphorical representations for ChatGPT provided by the participants

Metaphor	Total Occurrences	Examples
A learning companion/ partner	8	'In my opinion, AI applications like ChatGPT is a good partner in learning. I especially like ChatGPT because it can fulfil my specific requests, such as correcting grammar in writing or providing some vocabulary to serve the speech.' [33]
A supportive tool	7	'More like a support tool; Because using such software will partly improve vocabulary as well as in professional fields.' [34]
Boundless library	5	'In my opinion, AI Chatbox applications like ChatGPT are like a boundless library. I consider ChatGPT as a library because I can find all the resources I need, from science to history or even life situations.' [35]
Double-edged sword	3	'In my opinion, AI Chatbox applications like ChatGPT are like a 'double-edged sword' because AI applications like ChatGPT still have grammatical mistakes and spelling errors.' [36]
A mentor	2	'Chatgpt is like a person who gives me advice even about my personal problems and difficulties I encounter during my studies or in life.' [37]
Virtual friend	1	'In my opinion, AI chatbot applications like ChatGPT are like a virtual friend.' [38]
A scholar	1	'In my opinion, AI Chatboxes like ChatGPT are like being a scientist because ChatGPT's answers can help you save time when searching for basic information in the process of learning English.' [39]
An English tutor at home	1	'In my opinion, AI Chatbox applications like ChatGPT are like an English tutor at home. ChatGPT helps me a lot in finding ideas on a given topic, expanding and improving my vocabulary, and pointing out errors in my work as well as suggesting solutions. Thanks to the support of this tool, I find learning and applying English much easier and more effective than before.' [40]
An online teacher	1	'In my opinion, GPT chat is like an online teacher. It provides me with a lot of information in many subjects and helps me study and review right away.'[41]
A feedback giver	1	'I often use it to paraphrase paragraphs and from there I will get new synonym phrases. I find this application quite suitable for those who want to improve their structure when writing articles.' [42]
An English learning assistant	1	'AIs like ChatGPT can also create a specific English learning schedule for the user.' [43]
A delicious cake	1	'To me, AI Chat box applications like Chat GPT are like delicious cakes.' [44]

English learning assistant, and a delicious cake (one occurrence each): These metaphors offer diverse perspectives, ranging from acknowledging the potential drawbacks of AI technology to likening ChatGPT to familiar entities such as a friend, a tutor, or even a delightful indulgence like cakes.

From the presented findings above, it can be seen that the conceptual metaphors depicted by Vietnamese English majors express their varied perspectives regarding the utility of ChatGPT in language learning. Analysis revealed several recurring metaphors, each reflecting distinct perceptions towards ChatGPT.

Many participants liken AI chatbots to companions or study partners. This metaphor empha-

sizes the collaborative and supportive role that AI chatbots play in the language learning process. Participants view ChatGPT as an interactive ally, capable of providing guidance, feedback, and assistance in various language-related tasks. Participants perceive AI chatbots like ChatGPT as supportive allies, capable of providing guidance, feedback, and assistance throughout the language learning journey. This metaphor is similar to Atlas's study [5], stating that metaphor suggests a sense of partnership between the learner and ChatGPT, highlighting the perceived value of AI chatbots as companions in the journey of language acquisition and therefore, reflecting the notion of collaboration and partnership between learners and technology.

Participants also view ChatGPT as a supportive tool or learning aid. This is common with the studies of Atlas [5] and Ajlouni et al. [31]. This conceptualization highlights the perceived role of these tools as comprehensive sources of information. This metaphor emphasizes the role of ChatGPT in facilitating language learning by assisting with vocabulary acquisition, grammar correction, and generating ideas for written assignments. While participants acknowledge the benefits of AI chatbots in enhancing learning outcomes, they also recognize the importance of not over-relying on these tools to maintain critical thinking skills. This portrayal suggests a pragmatic approach to AI integration, where ChatGPT is perceived as a practical resource for linguistic enhancement and skill refinement.

A significant metaphor identified was that of ChatGPT being likened to a 'boundless library'. This metaphor suggests that participants view ChatGPT as an extensive and comprehensive resource, capable of providing a wide array of information and assistance across various subjects and topics. It implies that ChatGPT serves as an accessible repository of knowledge, facilitating learning and exploration for English majors.

Some participants conceptualize AI chatbots as virtual assistants, online teachers or scientists. The viewpoint resonates with ideas presented by Desai et al. [6] and Du Boulay [2]. This metaphor highlights the perceived expertise of ChatGPT in providing guidance and instruction to users seeking to improve their language skills. This metaphor emphasizes the perceived role of AI chatbots in enhancing the language learning experience and supporting skill development.

The discussion of conceptual metaphors also prompts considerations regarding the integration of ChatGPT in other settings. The metaphors of 'double-edged sword' and 'a delicious cake' acknowledge the nuanced nature of AI technology, highlighting both its advantages and potential pitfalls. This perspective aligns with broader discussions in the field [7, 32], where scholars and practitioners cope with the complexities of integrating AI tools like ChatGPT into different contexts while being mindful of ethical, social, and practical implications.

V. CONCLUSION AND RECOMMENDATIONS

This study provides the perceptions of Vietnamese English majors at Tra Vinh University regarding the role of ChatGPT in language-related tasks. Through various conceptual metaphors, students demonstrate both the positive aspects and potential drawbacks of using AI technology in their learning process. While students appreciate the support, assistance, and convenience offered by ChatGPT, they also express concerns about overdependence, the potential loss of critical thinking skills, and the need to maintain a balanced approach to its usage. These findings give the complex nature of integrating AI chatbots into language learning and highlight the importance of mindful usage and consideration of their limitations.

It is recommended that lecturers and learners approach the integration of AI chatbots in language learning with awareness and thoughtful consideration. While AI technology such as ChatGPT can undoubtedly offer valuable support and assistance, it is essential to maintain a balance between utilizing AI tools and fostering critical thinking skills, creativity, and human interaction. Lecturers should incorporate training and guidance on the responsible use of AI chatbots in

course syllabi, and emphasize their role as supplementary tools. By adopting a balanced and informed approach to the integration of AI chatbots in language learning, lecturers and learners can take advantage of the benefits of AI technology while restraining its potential drawbacks, ultimately facilitating more effective and enriching language learning experiences.

Continued research and development efforts should focus on enhancing AI chatbots' capabilities to promote more interactive and personalized learning experiences while addressing concerns about over-dependence and potential negative impacts on learners' cognitive abilities.

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