

ASIA ASSOCIATION OF  
COMPUTER-ASSISTED LANGUAGE LEARNING

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# Proceedings of the AsiaCALL International Conference

## Proceedings of the 20th AsiaCALL International Conference

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The 20th AsiaCALL International Conference at the University of Foreign Language Studies, The Da Nang University, Da Nang City, Vietnam from 25-26 November 2023. We received an impressive total of 182 submissions from 323 authors representing 17 diverse countries, such as USA, Philippines, China, Thailand, Germany, UK, Netherlands, South Korea, Iceland, Japan, Italy, Canada, Indonesia, Bangladesh, India, Malaysia, Vietnam. This global participation has enriched the conference's scope and promises an engaging and insightful event. In terms of full paper publications, many papers have been selected to be considered for publication in the Proceedings of Atlantis Press, part of Springer Nature, some papers were published in the AsiaCALL Online Journal (ISSN: 1936-9859), some papers were published in the Proceedings of the AsiaCALL International Conference (ISSN: 2833-6836, ISBN: 979-8-9870112-1-8).

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## Exploring the Role of ChatGPT in Developing Critical Digital Literacies in Language Learning: A Qualitative Study

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### ABSTRACT

**Keywords:** ChatGPT; Artificial Intelligence; Learner Autonomy; Online Language Learning; Critical Digital Literacies

This qualitative research study aims to investigate the role of ChatGPT in developing critical digital literacies in language learning. As artificial intelligence (AI) technology, including ChatGPT, has become increasingly prevalent in language education, it is crucial to explore how this technology can be utilized to promote critical digital literacies in language learning. Through a series of in-depth interviews with 8 language learners and 3 teachers, this study examines how ChatGPT can enhance language learners' critical thinking skills, digital literacy, and ability to navigate digital environments. The study also explores the challenges and opportunities of integrating ChatGPT into language learning pedagogy, as well as the ethical and social issues related to its use. This research aims to contribute to the advancement of knowledge and understanding of the role of AI in language learning and to promote the development of critical digital literacies among language learners.

### Introduction

Various industries, notably education, have experienced a revolutionary transformation due to the recent rapid advancements in artificial intelligence (AI) technology (Pokrivčáková, 2019). One particular field in which AI tools, like ChatGPT, have proven to be invaluable resources is language education in Vietnam. Created by OpenAI, ChatGPT is a conversational language model that employs deep learning techniques to generate responses similar to those of human beings and actively engage in conversation with users.

The potential benefits of incorporating AI technologies, such as ChatGPT, into language learning environments are immense when it comes to assisting learners in acquiring language skills and improving their communication abilities (Bin-Hady et al., 2023). However, in the unique context of Vietnam, there is a need to examine how this technology can specifically aid in the growth of crucial digital literacies among language learners. As Vietnam's digital



landscape continues to blossom, learners must possess the necessary skills and competencies to traverse and actively participate in the digital realm (Ho et al., 2020; Vall & Araya, 2023).

In Vietnam, a qualitative research study was conducted with the primary aim of exploring how ChatGPT contributes to the development of critical digital literacies in language learning. Critical digital literacies involve a variety of skills and abilities that are necessary for effectively and thoughtfully interacting with digital technologies. These include competencies in information literacy, media literacy, digital citizenship, and critical thinking.

By gathering insights from 8 language learners and 3 teachers, this research aims to explore the impact of ChatGPT on the cultivation of vital digital competences in Vietnamese language learning. Through analyzing the encounters of language learners and teachers who have engaged with ChatGPT, this investigation strives to unveil how this AI tool improves learners' cognitive abilities, understanding of media, and aptitude for maneuvering through online spaces.

Developing critical digital literacies in tertiary education in Vietnam is essential to grasp the significance of ChatGPT. Equipping Vietnamese students with the required skills and competencies to proactively navigate and critically engage in the digital landscape is crucial, as digital technologies continue to pervade everyday life.

Investigating how ChatGPT integrates into Vietnam's language learning pedagogy, the aim of this research is to advance our understanding of the role AI plays in language education. Valuable insights will be gained from the findings, shedding light on how ChatGPT can promote critical digital literacies among Vietnamese language learners. Ultimately, this will empower them to engage in the digital world actively and responsibly.

The development of effective and responsible educational practices that prepare students for the digital age is the main objective of this research study. It endeavors to provide information to educators, policymakers, and researchers in Vietnam about the integration of ChatGPT and other AI technologies in language learning pedagogy. This includes addressing the potential benefits, challenges, and ethical considerations associated with such integration.

## Literature review

In recent years, the use of ChatGPT - an AI technology - in language learning settings has become a hot topic. The incorporation of ChatGPT allows language learners to partake in dynamic and interactive conversations, mimicking real-life communication situations. Research has indicated that ChatGPT can boost learners' language fluency through tailor-made and situational language exercises. With immediate feedback and genuine conversations, learners can enhance their writing and speaking abilities (Aljanabi, 2023; Ho et al., 2020).

By allowing learners to practice language skills independently and at their own pace, ChatGPT encourages learner autonomy. The individualized support and guidance provided by the flexibility of ChatGPT promotes self-directed learning, as highlighted by Gilson et al. (2023). Learners have the opportunity to develop their language skills in a learner-centered and interactive manner through meaningful interactions with ChatGPT (Yang & Kyun, 2022).

Active, informed, and responsible digital citizens are crucial for learners in today's digital age.

They must possess critical digital literacies in order to effectively navigate and participate in the online world. These literacies involve the capability to analyze and critically evaluate digital information, comprehend the socio-cultural effects of digital technologies, and responsibly engage in online environments (Pangrazio & Selwyn, 2018).

Learners' ability to discern and evaluate digital content for credibility, reliability, and bias is fostered through the integration of critical digital literacies into education. By critically analyzing and interpreting information through engaging in discussions about digital media, learners develop the necessary skills to promote digital media literacy (Mihailidis & Cohen, 2013; Sriwisathiyakun & Dhamanitayakul, 2022; Van et al., 2021). Empowering learners with critical digital literacies enable them to navigate complex digital environments, engage in ethical and responsible digital practices, and make informed decisions (Pangrazio & Selwyn, 2018).

Incorporating AI technologies such as ChatGPT into language education presents distinctive chances for language learners (Pang, 2022). AI tools have the potential to offer customized and adaptable language learning experiences that cater to the specific needs of individual learners (Grassini, 2023; Kasneci et al., 2023; Kung et al., 2023). With the ability to process natural language, AI technologies can comprehend the language output of learners and deliver focused feedback. This individualized approach assists learners in their journey of acquiring a language, nurturing personalized and successful language learning experiences (Hwang et al., 2023).

Promoting social interaction and language development, AI technologies offer opportunities for collaborative learning by simulating authentic conversations. ChatGPT facilitates language practice in real-life situations, enabling learners to engage in peer-to-peer interactions and practice language skills within various contexts and domains (Adamopoulou & Moussiades, 2020; Ahmadi, 2018; Akçayır & Akçayır, 2017; Albirini, 2006; Pokrivčáková, 2019).

Maintaining ethical practices in AI-driven language education is crucial. Privacy concerns arise when learners interact with AI tools that collect and analyze personal data, highlighting the need to safeguard learners' privacy and ensure data protection. The integration of AI technologies in education raises ethical and social considerations that must be carefully addressed (Abdulquadri et al., 2021; Ahmadi, 2018; Hinze et al., 2022; Huertas-Abril et al., 2023; Ray, 2023; Sagin Simsek, 2008).

Moreover, in order to ensure fairness and transparency, it is crucial that AI technologies are developed and implemented in a way that addresses and assesses any potential biases within the system. AI algorithms that exhibit bias have the potential to perpetuate societal inequalities and marginalize certain groups of learners. Therefore, it is necessary to regularly train AI models on diverse and representative datasets in order to mitigate these biases and promote equality (Abdulquadri et al., 2021; Arnau-González et al., 2023; Bommarito et al., 2023; Dwivedi et al., 2023).

Promoting ethical AI practices and fostering learners' critical understanding of AI is imperative. Educators should engage learners in discussions about the limitations and potential biases of AI and how to responsibly use AI tools (Chaudhry et al., 2022). By empowering learners to make informed decisions about AI technology, we can develop critical digital literacies.

Language learning potential is highlighted by the literature on ChatGPT, especially in the development of language proficiency and encouragement of learner autonomy. The digital age makes the integration of critical digital literacies in education increasingly important, a role that ChatGPT fulfills by allowing learners to critically analyze and evaluate digital content (Martínez, 2019). Moreover, AI technologies, like ChatGPT, in language education offer personalized and adaptive learning experiences, simulate authentic language interactions, and promote collaborative learning (Abdelghani et al., 2022).

Social and ethical concerns should not be disregarded when considering the use of AI technologies in education. It is crucial to address algorithmic biases, data protection, and privacy concerns to ensure a fair and responsible implementation of AI. Educators have a role in fostering critical discussions and facilitating learners' understanding of the limitations, ethical implications, and biases of AI. This will empower learners to make informed choices when using AI tools (Alshater, 2023; Banihashem et al., 2023; Chen et al., 2023; Cotton et al., 2023; Dwivedi et al., 2023).

Further exploration is required to fully understand the potential benefits of ChatGPT and AI in language education. Specifically, investigating how ChatGPT contributes to the development of critical digital literacies among language learners is essential. By understanding how ChatGPT improves learners' critical thinking skills, media literacy, and proficiency in navigating digital environments, effective pedagogical practices can be developed to prepare learners for the digital world (Kasneci et al., 2023; Pang, 2022; Sallam, 2023; Susnjak, 2022; Trang, 2021; Young, 2003; Zhai, 2022).

The development of ethical and effective educational practices in the digital age is crucial to responsibly utilize AI technologies. Thus, integrating ChatGPT into language education shows potential in enhancing language learning outcomes and fostering critical digital literacies. However, it is imperative to address ethical and social concerns associated with the use of AI technologies in education. Additional research is required to comprehensively comprehend the influence of ChatGPT on critical digital literacies and inform the development of ethical educational practices in the digital era (Alshater, 2023; Belk, 2021; Bommarito et al., 2023; Chen et al., 2023; Cooper, 2023).

## **Methodology**

This study utilized a qualitative approach involving semi-structured interviews with 8 language learners and 3 language teachers. Participants were selected through purposive sampling based on the criteria of having prior experience using ChatGPT for language learning purposes. This sampling strategy enabled gathering insights from information-rich cases.

The researcher recruited participants by contacting language learning communities, forums, and schools to identify language learners and teachers who met the criteria. The sample size of 11 participants was deemed sufficient to reach data saturation and enable in-depth analysis.

60-minute online semi-structured interviews were conducted via video conferencing software. The interview protocol consisted of open-ended questions that invited participants to describe their experiences and perspectives related to the use of ChatGPT for language learning. Follow

up probes were used to elicit more details when needed.

The interviews were recorded and transcribed. Transcripts were analyzed using thematic analysis which involved an iterative process of open coding, developing categories, identifying overarching themes, reviewing themes, and defining themes. NVivo software facilitated the coding and analysis process.

Several procedures were implemented to increase the trustworthiness of the qualitative findings. These included members checking of transcripts, peer debriefing, maintaining an audit trail, and providing thick descriptions of the context, participants, and procedures. The study strictly adhered to ethical guidelines involving informed consent, voluntary participation, confidentiality, and avoiding harm.

## Results

This section offers comprehensive insights into the findings of the qualitative study, addressing each research objective while organizing the data collected from the questionnaire and interviews into tables. The subsections below present a detailed analysis of the participant's responses and experiences.

### *Enhancement of Critical Thinking Skills through ChatGPT*

#### **Frequency of ChatGPT Usage**

The participants' responses regarding their frequency of ChatGPT usage for language learning are summarized in Table 1.

Table 1. Frequency of ChatGPT Usage

<b>Participant</b>	<b>Frequency of Usage</b>
Participant #1, 4, and 6	Daily
Participant #2, 5, and 8	Weekly
Participant #3, and 7	Monthly

As Table 1 illustrates, the frequency of ChatGPT usage among participants varies, with some using it daily, while others employ it on a weekly or monthly basis. This diversity in usage patterns offers valuable insights into the role of ChatGPT in enhancing critical thinking skills across different levels of engagement.

#### **Usage Patterns and Critical Thinking Skills**

Table 2 summarizes participants' responses concerning how they utilize ChatGPT for language learning and its impact on their critical thinking skills.

Table 2. Usage Patterns and Impact on Critical Thinking Skills

<b>Participant</b>	<b>Usage Patterns</b>	<b>Impact on Critical Thinking Skills</b>
Participant # 1	Conversational practice, grammar checking	Improved problem-solving abilities
Participant # 2	Writing assistance, vocabulary expansion	Enhanced analytical thinking
Participant # 3	Reading assistance, language translation	Increased creativity in learning
Participant # 4	Conversational practice, language translation	Greater ability to make connections
Participant # 5	Writing assistance, grammar checking	Enhanced cognitive flexibility
Participant # 6	Conversational practice, vocabulary expansion	Improved decision-making skills
Participant # 7	Reading assistance, language translation	Enhanced analytical thinking
Participant # 8	Writing assistance, grammar checking	Increased proficiency in reasoning

The responses in Table 2 demonstrate that ChatGPT serves various language learning purposes, from conversational practice to grammar checking. Interestingly, participants reported enhancements in their critical thinking skills, including improved problem-solving abilities, enhanced analytical thinking, increased creativity, and greater cognitive flexibility.

### *Improvement of Media Literacy in Language Learning*

#### **Media Integration in Language Learning**

Participants' utilization of ChatGPT for media integration in language learning is summarized in Table 3.

Table 3. Media Integration in Language Learning

<b>Participant</b>	<b>Utilization of Media in Language Learning</b>
Participant # 1	Incorporates videos, podcasts, and news articles
Participant # 2	Engages with multimedia content in target language
Participant # 3	Utilizes ChatGPT to access foreign films and TV shows
Participant # 4	Explores culturally relevant content online
Participant # 5	Incorporates music and videos in language practice
Participant # 6	Integrates news websites for language learning
Participant # 7	Uses online radio and podcasts for language exposure
Participant # 8	Accesses documentaries and interviews in target language

Table 3 reveals a diverse range of media integration practices in language learning, indicating a rich variety of digital resources employed by participants. These media sources include videos, podcasts, news articles, foreign films, music, and more.

### Impact on Media Literacy

Table 4 encapsulates participants' perspectives on how the integration of ChatGPT with media content influences their media literacy.

Table 4. Impact on Media Literacy

Participant	Impact on Media Literacy
Participant # 1	Improved ability to critically analyze news sources
Participant # 2	Enhanced skills in discerning biases in media content
Participant # 3	Developed cross-cultural understanding through foreign media
Participant # 4	Increased ability to evaluate credibility of online sources
Participant # 5	Improved comprehension of cultural nuances in media content
Participant # 6	Enhanced skills in recognizing persuasive techniques in media
Participant # 7	Greater proficiency in identifying reliable sources online
Participant # 8	Improved ability to distinguish between factual and opinion-based content

As shown in Table 4, participants' engagement with media content via ChatGPT has positively impacted their media literacy. They reported improved abilities in critically analyzing news sources, discerning biases, evaluating credibility, understanding cross-cultural nuances, and distinguishing between factual and opinion-based content.

### *Enhanced Ability to Navigate Digital Environments*

#### **Navigational Practices**

Table 5 outlines the participants' practices in navigating digital environments facilitated by ChatGPT.

Table 5 showcases diverse navigational practices in digital environments, including participation in online forums, language-related social media groups, collaborative projects, academic research, virtual exchanges, and mobile applications.

Table 5. Navigational Practices

<b>Participant</b>	<b>Practices in Navigating Digital Environments</b>
Participant # 1	Actively participates in online language forums and communities
Participant # 2	Explores language-related social media groups and platforms
Participant # 3	Engages in collaborative online language projects
Participant # 4	Utilizes ChatGPT for accessing academic and research resources
Participant # 5	Participates in virtual language exchanges and conversations
Participant # 6	Explores language-related mobile applications and websites
Participant # 7	Actively participates in online language forums and communities
Participant # 8	Engages in virtual language immersion experiences

### *Impact on Navigational Abilities*

Participants' perceptions of how ChatGPT enhances their navigational abilities are summarized in Table 6.

Table 6. Impact on Navigational Abilities

<b>Participant</b>	<b>Impact on Navigational Abilities</b>
Participant # 1	Improved online search and research skills
Participant # 2	Enhanced proficiency in navigating language communities
Participant # 3	Increased ability to explore online language resources
Participant # 4	Greater proficiency in accessing academic content
Participant # 5	Improved competence in virtual language exchanges
Participant # 6	Enhanced skills in utilizing language-related apps
Participant # 7	Improved online research and information retrieval
Participant # 8	Greater ease in engaging in virtual language immersion

Table 6 reveals that ChatGPT's integration into digital environments has contributed to participants' improved online search and research skills, enhanced proficiency in navigating language communities, increased ability to explore online language resources, greater competence in accessing academic content, improved skills in virtual language exchanges, and enhanced utilization of language-related apps.

## *Challenges and Opportunities of Integrating ChatGPT into Language Learning Pedagogy*

### **Challenges**

Table 7 summarizes the challenges participants encountered while integrating ChatGPT into language learning pedagogy.

Table 7. Challenges of Integrating ChatGPT

<b>Participant</b>	<b>Challenges</b>
Participant # 1	Technical issues during ChatGPT interactions
Participant # 2	Overreliance on ChatGPT for language practice
Participant # 3	Difficulty in ensuring the accuracy of responses
Participant # 4	Limited availability of ChatGPT for some languages
Participant # 5	Challenges in adapting ChatGPT for classroom use
Participant # 6	Concerns about potential loss of human interaction
Participant # 7	Balancing ChatGPT with traditional teaching methods
Participant # 8	Challenges in monitoring and assessing ChatGPT use

Table 7 highlights a range of challenges participants faced when integrating ChatGPT into their language learning pedagogy. These challenges encompassed technical issues, overreliance concerns, accuracy, availability, adaptation, human interaction, balancing with traditional methods, and monitoring and assessment.

### **Opportunities**

Table 8 presents the opportunities participants identified in the integration of ChatGPT into language learning pedagogy.

Table 8. Opportunities of Integrating ChatGPT

<b>Participant</b>	<b>Opportunities</b>
Participant # 1	Enhanced individualized language practice
Participant # 2	Increased accessibility to language resources
Participant # 3	Supplementing classroom learning
Participant # 4	Expanding language offerings
Participant # 5	Enabling asynchronous language practice
Participant # 6	Providing instant language assistance
Participant # 7	Promoting learner autonomy
Participant # 8	Diversifying teaching and learning strategies

Table 8 underscores the various opportunities participants recognized when integrating ChatGPT into language learning pedagogy, including individualized practice, increased accessibility, supplementation of classroom learning, expansion of language offerings, asynchronous practice, instant assistance, learner autonomy, and diversification of teaching and learning strategies.



*Ethical and Social Issues Related to the Use of ChatGPT in Language Learning***Ethical Concerns**

Table 9 outlines the ethical concerns raised by participants regarding the use of ChatGPT in language learning.

Table 9. Ethical Concerns

<b>Participant</b>	<b>Ethical Concerns</b>
Participant # 1	Potential misuse of ChatGPT for unethical purposes
Participant # 2	Uncertainty about the source of ChatGPT responses
Participant # 3	Privacy concerns related to ChatGPT interactions
Participant # 4	Ethical issues surrounding AI-generated content
Participant # 5	Concerns about ChatGPT replacing human teachers
Participant # 6	Issues related to responsible AI use in education
Participant # 7	Cultural sensitivity and bias in ChatGPT responses
Participant # 8	Plagiarism concerns with AI-generated language content

Table 9 highlights the ethical concerns participants expressed regarding ChatGPT use in language learning, encompassing potential misuse, source uncertainty, privacy, AI-generated content, teacher replacement, responsible AI use, cultural sensitivity, and plagiarism.

**Social Implications**

Table 10 encapsulates the social implications perceived by participants related to ChatGPT in language learning.

Table 10. Social Implications

<b>Participant</b>	<b>Social Implications</b>
Participant # 1	Impact on the role of language educators
Participant # 2	Influence on peer collaboration in language learning
Participant # 3	Potential for bridging language and cultural gaps
Participant # 4	Changing dynamics in language exchange communities
Participant # 5	Shaping global perspectives and interconnectedness
Participant # 6	Reinforcing the importance of digital literacy
Participant # 7	Impact on the availability of language resources
Participant # 8	Promoting a more inclusive language learning landscape

Table 10 underscores the social implications of ChatGPT use in language learning, including effects on language educators, peer collaboration, language and cultural bridges, language exchange communities, global perspectives, digital literacy, resource availability, and inclusivity.

## Discussion

The current findings provide insights into the role of ChatGPT in cultivating critical digital literacies among language learners. Critical digital literacies encompass skills needed to participate in digital environments effectively and responsibly (Pangrazio & Selwyn, 2018). This investigation focused specifically on how ChatGPT enhanced critical thinking capacities, analysis and evaluation abilities, and digital navigation proficiencies.

### *Critical Thinking Skills*

Participants reported improvements in analytical skills, problem-solving, creativity, and cognitive flexibility through engaging with ChatGPT. As AI conversational agents, systems like ChatGPT can tailor interactions to improve cognitive abilities (Albirini, 2006). The instant, adaptive responses and explanations from ChatGPT appeared to strengthen capacities like drawing connections and decision-making. These results align with Banihashem et al. (2023), who found AI educational systems enhanced analytical thinking. Developing critical thinking is vital for critical digital literacies (Kasneci et al., 2023).

### *Analysis and Evaluation Skills*

Integrating ChatGPT with diverse digital materials sharpened learners' analysis and evaluation of online content. This manifested in improved identification of credible sources, recognizing biases, and distinguishing opinions from facts. Media literacy is a key component of critical digital literacies, equipping learners to be informed digital citizens (Chen et al., 2023). ChatGPT conversations about online content seemingly fostered analytical and evaluative skills.

### *Digital Navigation*

Using ChatGPT to find and engage with digital resources appeared to enhance learners' digital navigation proficiencies. Participants described how ChatGPT enabled them to access online communities, materials, and immersive experiences. As AI systems, ChatGPT can facilitate personalized selection of digital language resources to match learners' needs (Grassini, 2023). These digital navigation improvements are essential for effectively participating in digital environments.

### *Opportunities and Challenges*

Despite the benefits found, participants noted challenges must be addressed when integrating conversational AI like ChatGPT into education. In line with Dwivedi et al. (2023), overreliance on ChatGPT was a concern requiring balanced integration. However, opportunities identified included individualizing learning and supplementing classrooms, consistent with Yang and Kyun (2022). Intentional design is needed to maximize the advantages while overcoming limitations.

### *Ethical Considerations*

Privacy risks and algorithmic biases were ethical issues raised, echoing cautions by other researchers (Abdulquadri et al., 2021; Chen et al., 2023). As AI systems collect learner data and absorb human-created content, concerns exist surrounding data privacy and potential biases.

Responsible development and implementation of AI technology is crucial for an ethical approach (Alshater, 2023). Fostering learners' awareness of AI limitations promotes critical digital literacies.

## **Conclusion**

In conclusion, this qualitative study explores the role of ChatGPT in developing critical digital literacies in language learning. The findings demonstrate that ChatGPT significantly contributes to the enhancement of critical thinking skills, media literacy, and the ability to navigate digital environments. Despite the challenges identified, numerous opportunities exist for integrating ChatGPT into language learning pedagogy. Additionally, ethical and social considerations underscore the need for responsible AI integration in language education. This research contributes to the advancement of knowledge regarding the role of AI in language learning and promotes the development of critical digital literacies among language learners. The limitations of this study include its qualitative nature, the relatively small sample size, and the potential for participant bias. Future research should consider quantitative studies with larger and more diverse samples to further explore the impact of ChatGPT on language learning and critical digital literacies. This study encourages educators, policymakers, and researchers to engage in a dialogue about the responsible use of AI, such as ChatGPT, in language education, while fostering critical digital literacies essential for thriving in the digital era.

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## References

- Abdelghani, R., Wang, Y.-H., Yuan, X., Wang, T., Sauzéon, H., & Oudeyer, P.-Y. (2022). GPT-3-driven pedagogical agents for training children's curious question-asking skills. <http://arxiv.org/abs/2211.14228>
- Abdulquadri, A., Mogaji, E., Kieu, T. A., & Nguyen, N. P. (2021). Digital transformation in financial services provision: a Nigerian perspective to the adoption of chatbot. *Journal of Enterprising Communities*, 15(2), 258-281. <https://doi.org/10.1108/JEC-06-2020-0126>
- Adamopoulou, E., & Moussiades, L. (2020). Chatbots: History, technology, and applications. *Machine Learning with Applications*, 2, 100006-100006. <https://doi.org/10.1016/j.mlwa.2020.100006>
- Ahmadi, D. M. R. (2018). The Use of Technology in English Language Learning: A Literature Review. *International Journal of Research in English Education*, 3(2), 115-125. <https://doi.org/10.29252/IJREE.3.2.115>
- Akçayır, M., & Akçayır, G. (2017). Advantages and challenges associated with augmented reality for education: A systematic review of the literature. *Educational Research Review*, 20, 1-11. <https://doi.org/10.1016/J.EDUREV.2016.11.002>
- Albirini, A. (2006). Teachers' attitudes toward information and communication technologies: the case of Syrian EFL teachers. *Computers and Education*, 47(4), 373-398. <https://doi.org/10.1016/J.COMPEDU.2004.10.013>
- Aljanabi, M. (2023). ChatGPT: Future Directions and Open possibilities. *Mesopotamian Journal of Cyber Security*, 16-17. <https://doi.org/10.58496/MJCS/2023/003>
- Alshater, M. (2023). Exploring the Role of Artificial Intelligence in Enhancing Academic Performance: A Case Study of ChatGPT. *SSRN Electronic Journal*. <https://doi.org/10.2139/SSRN.4312358>
- Arnau-González, P., Arevalillo-Herráez, M., Luise, R. A. D., & Arnau, D. (2023). A methodological approach to enable natural language interaction in an Intelligent Tutoring System. *Computer Speech and Language*, 81. <https://doi.org/10.1016/j.csl.2023.101516>
- Banihashem, S. K., Noroozi, O., den Brok, P., Biemans, H. J. A., & Kerman, N. T. (2023). Modeling teachers' and students' attitudes, emotions, and perceptions in blended education: Towards post-pandemic education. *The International Journal of Management Education*, 21(2), 100803-100803. <https://doi.org/10.1016/j.ijme.2023.100803>
- Belk, R. (2021). Ethical issues in service robotics and artificial intelligence. *Service Industries Journal*, 41(13-14), 860-876. <https://doi.org/10.1080/02642069.2020.1727892>
- Bin-Hady, W., Al-Kadi, A., Hazaea, A. N., & Ali, J. K. M. (2023). Exploring the Dimensions Of ChatGPT in English Language Learning: A Global Perspective. *Library Hi Tech*. <https://doi.org/10.1108/lht-05-2023-0200>
- Bommarito, J., Bommarito, M. J., Katz, J., & Katz, D. M. (2023). Gpt as Knowledge Worker: A Zero-Shot Evaluation of (AI)CPA Capabilities. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4322372>
- Chaudhry, M. N., Cukurova, M., & Luckin, R. (2022). A Transparency Index Framework for

- AI in Education. <https://doi.org/10.35542/osf.io/bstcf>
- Chen, Y., Jensen, S., Albert, L. J., Gupta, S., & Lee, T. (2023). Artificial Intelligence (AI) Student Assistants in the Classroom: Designing Chatbots to Support Student Success. *Information Systems Frontiers*, 25(1), 161-182. <https://doi.org/10.1007/S10796-022-10291-4>
- Cooper, G. (2023). Examining Science Education in ChatGPT: An Exploratory Study of Generative Artificial Intelligence. *Journal of Science Education and Technology*. <https://doi.org/10.1007/S10956-023-10039-Y>
- Cotton, D. R. E., Cotton, P. A., & Shipway, J. R. (2023). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International*, 1-12. <https://doi.org/10.1080/14703297.2023.2190148>
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., . . . Wright, R. (2023). “So what if ChatGPT wrote it?” Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642-102642. <https://doi.org/10.1016/J.IJINFOMGT.2023.102642>
- Gilson, A., Safranek, C. W., Huang, T., Socrates, V., Chi, L., Taylor, R. A., & Chartash, D. (2023). How Does ChatGPT Perform on the United States Medical Licensing Examination? The Implications of Large Language Models for Medical Education and Knowledge Assessment. *JMIR Medical Education*. <https://doi.org/10.2196/45312>
- Grassini, S. (2023). Shaping the Future of Education: Exploring the Potential and Consequences of AI and ChatGPT in Educational Settings. *Education Sciences*. <https://doi.org/10.3390/educsci13070692>
- Hinze, A., Vanderschantz, N., Timpany, C., Cunningham, S. J., Saravani, S. J., & Wilkinson, C. (2022). A Study of Mobile App Use for Teaching and Research in Higher Education. *Technology, Knowledge and Learning*, 1-29. <https://doi.org/10.1007/S10758-022-09599-6/FIGURES/20>
- Ho, P. V. P., Thien, N. M., An, N. T. M., & Vy, N. N. H. (2020). The effects of using games on EFL students’ speaking performances. *International Journal of English Linguistics*, 10(1), 183-193.
- Huertas-Abril, A., Palacios-Hidalgo, F. J., Chung, S.-J., & Choi, L. J. (2023). The Use of Mobile Instant Messaging in English Language Teaching: The Case of South Korea. *Education Sciences* 2023, Vol. 13, Page 110, 13(2), 110-110. <https://doi.org/10.3390/EDUCSCI13020110>
- Hwang, W. Y., Nurtantyana, R., Purba, S. W. D., Hariyanti, U., Indrihapsari, Y., & Surjono, H. D. (2023). AI and Recognition Technologies to Facilitate English as Foreign Language Writing for Supporting Personalization and Contextualization in Authentic Contexts. *Journal of Educational Computing Research*. <https://doi.org/10.1177/07356331221137253>
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T.,

- Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., . . . Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274-102274. <https://doi.org/10.1016/J.LINDIF.2023.102274>
- Kung, T. H., Cheatham, M., Medenilla, A., Sillos, C., De Leon, L., Elepaño, C., Madriaga, M., Aggabao, R., Diaz-Candido, G., Maningo, J., & Tseng, V. (2023). Performance of ChatGPT on USMLE: Potential for AI-assisted medical education using large language models. *PLOS Digital Health*, 2(2), e0000198-e0000198. <https://doi.org/10.1371/JOURNAL.PDIG.0000198>
- Martínez, C. (2019). Promoting Critical Digital Literacy in the Leisure-Time Center: Views and Practices Among Swedish Leisure-Time Teachers. *Nordic Journal of Digital Literacy*. <https://doi.org/10.18261/issn.1891-943x-2019-03-04-04>
- Mihailidis, P., & Cohen, J. S. (2013). Exploring Curation as a Core Competency in Digital and Media Literacy Education. *Journal of Interactive Media in Education*. <https://doi.org/10.5334/2013-02>
- Pang, Y. (2022). The Role of Web-Based Flipped Learning in EFL Learners' Critical Thinking and Learner Engagement. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2022.1008257>
- Pangrazio, L., & Selwyn, N. (2018). 'Personal Data Literacies': A Critical Literacies Approach to Enhancing Understandings of Personal Digital Data. *New Media & Society*. <https://doi.org/10.1177/1461444818799523>
- Pokrivčáková, S. (2019). Preparing Teachers for the Application of AI-powered Technologies in Foreign Language Education. *Journal of Language and Cultural Education*. <https://doi.org/10.2478/jolace-2019-0025>
- Ray, P. P. (2023). ChatGPT: A comprehensive review on background, applications, key challenges, bias, ethics, limitations and future scope. *Internet of Things and Cyber-Physical Systems*, 3, 121-154. <https://doi.org/10.1016/j.iotcps.2023.04.003>
- Sagin Simsek, C. S. (2008). Students' attitudes towards integration of ICTs in a reading course: A case in Turkey. In *Computers and Education* (Vol. 51, pp. 200-211).
- Sallam, M. (2023). ChatGPT Utility in Healthcare Education, Research, and Practice: Systematic Review on the Promising Perspectives and Valid Concerns. *Healthcare (Basel, Switzerland)*, 11(6). <https://doi.org/10.3390/HEALTHCARE11060887>
- Sriwisathiyakun, K., & Dhamanitayakul, C. (2022). Enhancing digital literacy with an intelligent conversational agent for senior citizens in Thailand. *Education and Information Technologies*, 27(5), 6251-6271. <https://doi.org/10.1007/S10639-021-10862-Z>
- Susnjak, T. (2022). ChatGPT: The End of Online Exam Integrity? <http://arxiv.org/abs/2212.09292>
- Trang, N. T. T. (2021). Students' Evaluation of the Outcomes Achieved from Their Learning Experience at Industrial University of Ho Chi Minh City. *Journal of Science and Technology - IUH*, 53(05), 2021-2021. <https://doi.org/10.46242/JSTIUH.V53I05.4146>
- Vall, R. R. F. d. l., & Araya, F. G. (2023). Exploring the Benefits and Challenges of AI-Language Learning Tools. *The International Journal of Social Sciences and Humanities Invention*.

- <https://doi.org/10.18535/ijsshi/v10i01.02>
- Van, L. K., Dang, T. A., Pham, D. B. T., Vo, T. T. N., & Pham, V. P. H. (2021). The Effectiveness of Using Technology in Learning English. *AsiaCALL Online Journal*, 12(2), 24-40. <https://asiacall.info/acoj/index.php/journal/article/view/26>
- Yang, H., & Kyun, S. (2022). The Current Research Trend of Artificial Intelligence in Language Learning: A Systematic Empirical Literature Review From an Activity Theory Perspective. *Australasian Journal of Educational Technology*. <https://doi.org/10.14742/ajet.7492>
- Young, S. S. C. (2003). Integrating ICT into second language education in a vocational high school. *Journal of Computer Assisted Learning*, 19(4), 447-461. <https://doi.org/10.1046/J.0266-4909.2003.00049.X>
- Zhai, X. (2022). ChatGPT user experience: Implications for education. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4312418>

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## Appendix 1

### Survey Questionnaire

Thank you for participating in this questionnaire. The purpose of this questionnaire is to collect data for a research paper on the topic of exploring the role of ChatGPT in developing critical digital literacies in language learning: a qualitative study. Your responses will be anonymous and confidential.

Please answer the questions based on your experience of using ChatGPT as a language learning tool. The questionnaire should take about 15 minutes to complete. If you have any questions or concerns, please contact the researcher at [nghatt@hufi.edu.vn](mailto:nghatt@hufi.edu.vn).

Thank you for your interest and contribution.

1. *How often do you use ChatGPT for language learning?*
2. *In what ways do you use ChatGPT for language learning (e.g., practicing speaking, writing, reading, etc.)?*
3. *How has ChatGPT helped you improve your critical thinking skills in language learning?*
4. *How has ChatGPT helped you improve your media literacy in language learning?*
5. *How has ChatGPT helped you navigate digital environments in language learning?*
6. *What challenges have you encountered when using ChatGPT for language learning?*
7. *What opportunities do you see for integrating ChatGPT into language learning pedagogy?*
8. *What ethical and social issues do you think are related to the use of ChatGPT in language learning?*

### Interview Questions

1. *Can you tell me about your experience using ChatGPT for language learning?*
2. *How do you think ChatGPT can enhance critical thinking skills in language learning?*
3. *How do you think ChatGPT can enhance media literacy in language learning?*
4. *How do you think ChatGPT can help language learners navigate digital environments?*
5. *What challenges have you encountered when using ChatGPT for language learning? How have you addressed these challenges?*
6. *What opportunities do you see for integrating ChatGPT into language learning pedagogy? Can you provide some examples?*
7. *What ethical and social issues do you think are related to the use of ChatGPT in language learning? Can you provide some examples?*



## The Intercultural Communication Analysis of Conversations in the Project ‘My Hanoi’ by Faculty of Tourism, Hanoi Open University

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### ABSTRACT

#### Keywords:

intercultural communication, tourism, conversations, strengths and weaknesses, strategies

Culture is significant in the process of creating communication, and language is the key element of communication. More than ever, English and tourism have created opportunities for people from different cultures to exchange and share their cultural values directly. Therefore, intercultural communication skill is highlighted in the context of the thriving global tourism industry. When a group of 20 junior students from the Faculty of Tourism, Hanoi Open University, took two foreign guests on food tours funded by the project ‘My Hanoi’ to improve their communicative competence in English, the researchers had a great chance to observe such interesting phenomena of intercultural communication in their conversations. Those phenomena were then analyzed from the intercultural communication perspective to indicate the strengths and weaknesses of our students in communicating with people from other cultures.

### Introduction

Today, tourism has brought the whole world closer, and in the global village where we all live, individuals, regardless of whether we are tourists or tourism staff, communicate in a multicultural environment. It has been and is becoming a more culturally diverse industry (Beydilli & Kurt, 2020). The present context brings about both distinctive linguistic and cultural challenges and precious learning opportunities for tourism staff (Nguyen, 2023). Tourism employees must consider cultural differences and enhance intercultural communication to better adapt to the international working environment (Liu, Liu & King, 2022). Many hospitality and tourism management graduates will be required to deal with customers from different cultural backgrounds. Therefore, intercultural communication skills are essential not only for staff involved in the increasingly internationalized tourism industry but also for university students who will start their careers in the future (Milhauser & Rahschulte, 2010). Students' intercultural communication competence (ICC) or their ability to comprehend and adjust to different cultural situations and perspectives should help greatly determine tourist

satisfaction or the success of the tourism industry in general and their career fulfillment in particular. Vietnamese tourism and tourism training schools in Vietnam are also operated in this general context, so English teaching in Vietnam, especially at tourism training schools, needs to take ICC as one of the goals for learners (Nguyen, 2020). During the period of openness and integration, the involvement of foreign factors has led to dramatic changes in many aspects, from economy to language, culture or society (Tran, 2021). Students should be encouraged to engage in authentic intercultural communication to learn about the target language and culture. Schools need to create opportunities for their students to meet and talk with foreigners so that learners can not only improve their ability to use English but also increase their understanding of cultural differences to develop cultural communication skills (Peterson & Coltrane, 2003). Accordingly, the 'My Hanoi' project model sponsored by Hanoi Open University to help the students from the Faculty of Tourism accompany foreign volunteers to explore Hanoi is considered a great opportunity to improve their ICC. The intercultural communication analysis of conversations should provide insight into obvious issues in ICC of those students.

### **Literature review**

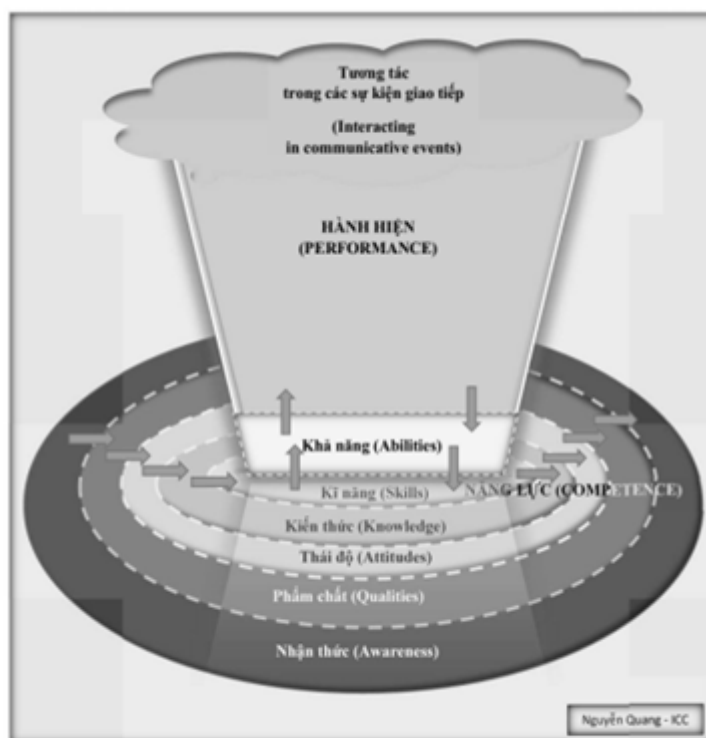
The intercultural communication analysis (ICA) is conducted based on the perspective of intercultural communication itself. The American anthropologist Edward T. Hall (1959) is considered the author who first introduced the concept of "intercultural communication" in the book "The silent language". Intercultural communication was indirectly defined as the interaction among people of different cultures. Although he mainly discussed non-verbal communication, his viewpoint about culture as a communication process helped open up further research directions on intercultural communication.

About the interrelationship between language and culture, in 1994, when the Australian linguist Michael Clyne examined the impact of cultural values on discourse, he claimed that language is the deepest expression of a culture and culture has a huge role in influencing the way not only the mother language but also foreign languages are used. Ting-Toomey (1999) emphasized that inappropriate encounters between people from different cultural backgrounds may lead to frustration and confusion. He reinforced that students have to learn to move effectively and appropriately through a wide range of transcultural situations by combining culture-specific knowledge with mindful listening and communication skills when building ICC. This could explain why there is one section about sociolinguistic competence in the Common European Framework of Reference for Languages (2001) with descriptions of cultural awareness. This competence is concerned with the knowledge and skills required to deal with the social dimension of language use, and language is considered a sociocultural phenomenon. According to Ishii (2006), intercultural communication is the culturally interrelated cognitive, affective, and behavioral activity process of interactively sending and receiving verbal and nonverbal messages between or among people from mutually different cultural backgrounds in specific contexts.

Most noticeably, in 2010, Judith Martin from Arizona State University and Thomas K. Nakayama from Northeastern University, America, fostered an in-depth understanding of intercultural communication and ICA with six dialectics of intercultural communication,

including cultural – individual, personal – contextual, differences – similarities, static – dynamic, history/past – present/future, and privilege – disadvantages. This theory has made the analysis of intercultural communication more accessible and effective. Furthermore, in 2013, Bennett from the Intercultural Development Research Institute, Boston, America, proposed an approach to relations among members of different cultural groups that focuses on the recognition and respect of cultural differences and supports the development of intercultural sensitivity on the part of individuals to enable empathic understanding and competent coordination of action across cultural differences. Initially, those relations should be set up with one or two target cultures to avoid any stress or confusion among inexperienced English learners. English learners' target cultures tend to be the United Kingdom and the United States (Coperías, 2007; Baker, 2012; Li, 2016). Pennycook (2016) suggested the focus on these two countries in the integration with the awareness of the learners' own culture. Baker (2020) stated that ICA should incorporate the wider range of attitudes, skills, and knowledge needed for intercultural communication and could be conducted when learners are exposed to the complexity and flexibility of connections between language and culture in their natural environments outside the classroom. Lately, Jandt (2021) highlighted various aspects involved in ICA, including the awareness of intercultural competence, cultural identity, and conflict resolution. Ting-Toomey and Chung (2022) shared a similar view when they acknowledged the role of cultural identities, face-saving, and conflict resolution in intercultural interactions in the attempt of ICA.

In Vietnam, recently, Professors Nguyen Hoa and Nguyen Quang from the University of Languages and International Studies, Vietnam National University, Hanoi, have contributed two most comprehensive studies. Nguyen Hoa (2019) systematized the concepts of intercultural communication and affirmed that ICA has become an important research object of great interest. The intercultural aspect of communication is mainly revealed through interpersonal relations between individuals. Interpersonal relationships impact the form of discourse used to express culture and cultural values such as harmony, character, and politeness. Therefore, ICA is essentially a performative discourse analysis from an intercultural perspective, verbally and nonverbally. Nguyen Quang (2017) proposed the Intercultural Competence Model, including awareness, qualities, attitudes, knowledge, skills, and abilities.



*Intercultural Competence Model by Nguyen Quang (2017)*

The author emphasized the significance of developing ICC in English teaching and learning and analyzing this competence in an attempt to modify training courses effectively. He also suggested that individuals from different cultures must create an adaptive culture to communicate successfully. Similarly, Nguyen Thi Thuy Lan (2020) phased the process of improving ICC, including awareness raising, skills development, production, and feedback. She also proposed some strategies for improving ICC, like using authentic materials, role-plays, interviews, or course-based activities. In 2023, the authors Tran Thi Thu Trang and Vo Tu Phuong, when analyzing the need for enhancing ICC among 628 tourism students, recognized their positive attitudes in intercultural communication and higher needs of tasks for improving discourse and behavioral competencies.

The studies by international and Vietnamese authors in both the world and Vietnamese context related to learning both general English and English for tourism have helped generalize the overall picture of intercultural communication and ICC as well as provide suggestions on directions for ICA.

### *Research gap and research questions*

After reviewing various related studies on intercultural communication, ICC, and ICA, the researchers found that those studies mainly approached the topic from a theoretical perspective or ICA was often conducted in a broad context with little reference to changes in student's ICC over a period of time. Moreover, some directly approached tourism students, but mass research decreased the in-depth insight and detailed analysis of outstanding phenomena. Accordingly, we decided to analyze intercultural communication in conversations on the small scale of My Hanoi project at the Faculty of Tourism, Hanoi Open University (FOT-HOU).

Accompanying our students on their food tours with foreign guests in the My Hanoi project, the researchers have obtained a lot of interesting data. We have applied the theory of intercultural communication analysis (ICA) in a great attempt to find out outstanding intercultural communication phenomena among the participants' conversations and conclude their strengths and weaknesses. To fulfill the purpose of the study, the authors aimed to answer the following research questions:

- 1. What are the outstanding intercultural communication phenomena among the participants' conversations?*
- 2. What are their strengths and weaknesses in intercultural communication?*

## **Methods**

### *Setting and Participants*

This research was carried out in parallel with the implementation of the My Hanoi project under the authors' scientific research funded by Hanoi Open University since June 2023. The project involved twenty students, two foreigners, and five English lecturers.

Twenty voluntary students who have finished their first academic school year at FOT-HOU were selected to participate in the project. They major in both tourism service and hospitality management and have completed two courses in English for tourism. Their English level is

more or less A2 according to the European competence framework and evaluated by the speaking pre-test designed for the project. Before the project, those students' real-life communication experience with foreigners was very limited. However, they have learned about different cultures in two courses of English for tourism and other English courses at their previous schools.

One American YouTuber and one British freelance registered for the project when its poster was shared on some social networks. They are various in educational background, occupation, their living time in Vietnam, or their level of exposure to Vietnamese culture. However, interestingly, all of them have backgrounds in tourism and hospitality as well as experience in contact with many different cultures around the world.

Five English lecturers at FOT-HOU majoring in English Teaching Methodology and English Linguistics have experience teaching English for tourism ranging from three years to twenty-nine years. We also participated in a number of training programs by the European Committee, the World University Service of Canada, and other organizations, which helped us become quite competent in intercultural communication.

The participants were scheduled for a general meeting to help them get to know each other. As a result, such a friendly environment was recorded during the tours, which helped promote natural communication. In the first meeting, the groups also discussed and decided on the topics of their tours. The selection of oriented topics based on the interests of participants ensured their motivation. Three other extra meetings were also organized to give the groups more time to practice English and exchange culturally. The training sessions on touring and communication were also conducted by two lecturers of specialized English for tour guiding to help the students be more confident in joining the tours as the hosts. Those supportive activities contributed to significant changes in students' ICC when participating in the project.

### *Design of the Study*

In order to collect designed data, we employed conversation analysis, which is an inductive, micro-analytic, and predominantly qualitative method for studying human social interactions (Hoey & Kendrick, 2017). Conversation analysis allows the researchers to study the structures of interaction at a micro level, focusing on how the participants make sense of each other in conversation through shared interactional norms (White, 2019). In other words, this method sees activities and identities as constructed by participants in and through social interaction, so it greatly contributes to the understanding of intercultural communication (Zhu, 2015). In addition, participant observation is selected as a secondary research method. This method helps the researchers immerse themselves in a particular social setting or group, observing the behaviors, interactions, and practices of the participants. This can be a valuable method for any research project that seeks to understand the experiences of individuals or groups in a particular social context (George, 2023). The combination of conversation analysis and participant observation is suitable to describe outstanding intercultural communication phenomena in real conversations between our students and foreign guests. Besides helping us understand our students' ICC, this study type helps us generate ideas for improving this skill amongst a bigger number of tourism students in the future.

### *Data collection and analysis*

All the data was collected in the natural setting of the tours. The authors applied the three-stage procedure proposed by Chen (2020). In the first stage, the authors referred to related previous studies to identify four elements that should help detect outstanding intercultural communication phenomena. Those categories of awareness of cultural types, awareness of politeness, awareness of cultural values, and cultural pragmatics acted like data filters so that the process of both data collection and data analysis was simplified and more focused. The tours took place in an authentic environment of food places in the Old Quarter with all existing disturbances of daily life; without those selected categories, the researchers could not efficiently get expected data while still playing their other roles assigned by the project. In the second stage, the recorded data was analyzed and generalized to find outstanding intercultural communication phenomena while the communication patterns that had a low frequency were eliminated. In the final stage, the insights into the gathered data and highlighted phenomena were applied. The personal exchanges with participants related to the data and the reference to the data from the participant observation played a significant role in explaining the identified phenomena, thereby concluding the strengths and weaknesses of students in intercultural communication.

During the tours, the researchers worked as participant observers. As guided by George (2023), we participated in the groups' activities while observing their behavior and interactions. There was flexibility in the level of participation, ranging from non-participatory to intensive participation. The goal was to gain a deep understanding of their cultural communication practices from an insider perspective. During the observation, the researchers expanded the notes on the categorized cards. Both data from the conversations and observations were used for the detailed description of the results and discussion.

## **Results and Discussion**

After observing four tours and with the application of conservation analysis, the researchers collected useful data that provided the resources for answering the study's two research questions.

### *Outstanding intercultural communication phenomena*

The analysis of conversations and results of the participant observations were combined, which helped highlight significant intercultural communication phenomena related to awareness of cultural types, awareness of politeness, awareness of cultural values, and cultural pragmatics.

### *Awareness of cultural types*

Every culture has a dominant communication style formed by specific values, social norms, and standards. The high and low context cultures refer to how important contextual signals are in understanding a message. High-context cultures have a communication style based on body language, tone, and overall context, while low-context cultures are more straightforward and explicit in communication (Peterson, 2004).

Both the British and American volunteers come from low-context cultures, so their

communication was explicit, and there was very little dependence on non-verbal communication. However, Vietnamese students growing up in a high-context environment tended to use body language to convey their messages or information during conversations. This contradiction led to their misunderstanding and lack of comfort on their first tours. Some examples were given to illustrate this phenomenon.

On the first tour, the British volunteer expressed his displeasure about what one student in his group did when she was late for the tour. He expected her to say *'I'm sorry'* or explain why she was late. Nevertheless, the student just smiled and joined the group. Actually, in Vietnam, we all would get her message. She felt guilty and embarrassed, then smiled at him as an expression of apology. The American volunteer experienced a similar situation; when one student helped him mix the salad, he politely said *'Thank you'*. He was a bit confused when that student just smiled but did not say *'You're welcome'* or *'My pleasure.'*

On the other tour, the British volunteer felt uncomfortable when one student insisted, *'You eat more spring rolls.'* He explained, *'I had a heavy breakfast'* – which is typical for a British, but she, even the whole group, tried to persuade him to eat more. The students did not have any bad intentions, but they failed to recognize his refusal while he was still smiling because they relied on the body language more than what was spoken.

When we took note of and received plenty of similar indirect feedback, we reminded the students in both training sessions and tours. Basically, by the last tour, the students gradually had the habit of expressing communication content in verbal language despite their limitations in pronunciation, vocabulary, and grammar. They were not reluctant to say *'Thank you'* when assisted or responded to this thank promptly.

### *Awareness of politeness*

From the perspective of sociolinguistics, English is considered the language of politeness. There are many phrases that show politeness in English communication, such as *'please,' 'thank you,' 'could you...?'*, and *'Would you mind...?'*. Besides, structures for different levels of certainty, such as *'maybe,' 'could,' 'would,' 'should,' 'possible'*, and so on, appear more frequently in English. (Gomez, 2021). At the end of the second tour, the British volunteer said, *'Could you possibly consider scheduling our next tour before next Friday?'* instead of the more direct way of saying: *'You have to schedule our next tour before next Friday.'* Perhaps the students were not used to expressing politeness verbally or due to their limited English level, they missed using polite words in many conversations. Some showed their politeness through nonverbal acts such as gestures, smiles, or postures.

On the first tours, the students were criticized for their lack of using words to express politeness. They even did not have the habit of using the most common word like *'please'*. For instance, when a student needed a pair of chopsticks, she asked, *'I need chopsticks,'* and pointed at the holder. Whereas she should have said, *'Could you please pass me/ get me a pair of chopsticks?'*. The failure to say *'thank you'* in their communication was also noticeable as mentioned above. Fortunately, the foreign volunteers, with their experience and high level of cultural adaptation, set great models for polite communicators. They continuously thanked the group for the food and the information during the tour. At the end of each tour, they thanked the whole group for

the tour and wished them a nice weekend. The lecturers reminded the students, then gradually felt less embarrassed and said ‘*thank you*’ more in appropriate situations.

How to take turns in a conversation was also of great concern. While the volunteer exposed excellent polite language by saying, ‘*Excuse me, but may I jump in here?*’, ‘*So sorry to interrupt, but may I ask a question?*’ our students just jumped straight into a conversation.

On the other hand, the students did a good job when applying some Vietnamese polite strategies for social etiquette. They made arrangements so that the seniors, including the lecturers and the volunteers, could have a nice seat. However, they did not say, ‘*Please take a seat*’ in that case. For a tour, each group of 6 people was funded 500,000 VND, which covered all the expenses on food orders and traveling, if any. The group was required to try three dishes on a tour. Therefore, they often ordered a few portions for each type of dish and then shared the food. When it was time to experience the food, they often invited the seniors to try it first. Sadly, they did not say, ‘*Would you like to try it?*’ or ‘*Please try some.*’ Normally, they said, ‘*You can start first.*’ or ‘*Your turn.*’

#### *Awareness of cultural values*

Noticeably, both students and volunteers were eager to share the cultural values of their countries. For example, on the final tour, the students were excited to learn the British afternoon tea customs, while the British volunteer was enthusiastic to be trained in how Vietnamese people invite other family members to family meals. In another conversation, the atmosphere was really joyful when the whole group tried to explain how they should address him in different contexts as a teacher or a senior and had him practice pronouncing Vietnamese words. At the A2 level, the students still lacked lexical resources to describe what they wanted to express and frequently paused to search for words. They also had the habit of thinking in Vietnamese and then translating the information into English. Many times, when they tried to express a point, they discussed it with other members and built up the content in Vietnamese, then translated such information into English. For example, when the American volunteer asked one student about the ingredients for the filling of spring rolls, she understood the question but turned to the group, ‘*Làm nhân nem bằng gì nhi?*’ – ‘*Thường là thịt băm, nấm hương, miến dong và cà rốt*’, another student suggested. That student confirmed, ‘*Nhân nem làm từ thịt băm, nấm hương, miến dong và cà rốt.*’ She continued, ‘*Thịt băm tiếng Anh là gì?...nấm là mushroom, thế nấm hương là gì? Miến dong nói thế nào nhi?*’ The complexity of the Vietnamese language and their habit of word-by-word translation hindered their pace of speaking.

Although the students have a great interest in cultural stories, they did not spend much time searching for their volunteers’ cultural values or cuisine. This perspective made them quite passive in intercultural communication. Normally, it was the volunteers who started this type of exchange.

Interestingly, the students were more motivated to participate in intercultural conversations involving real experience. On one tour, when the British volunteer brought the ingredients for making his favorite cake named scones and taught them how to enjoy it, all students were excited and comfortably practiced both the expressions for a recipe and how they could respond politely when someone helped serve the cake.



### *Cultural pragmatics*

Cultural pragmatics refers to the way in which language is used to express what somebody really means in particular situations, especially when the actual words used may appear to mean something different, and the knowledge about the culture of the speaker should help understand the message (Alexander, 2006). People who speak English as a foreign language often struggle with pragmatics, especially in the context of intercultural communication. Some examples of unsuccessful communication were recognized in the researched conversations.

On one drink tour organized on a hot day, after finishing the sweet soup orders, the leader of the group asked the American volunteer, *'What else would you like to have?'* When he responded, *'I am fine, thank you!'*, the student continued, *'What about a passion fruit juice? It's best for summer.'* The student failed to communicate with the foreign guest due to his low awareness of pragmatics. He supposed the volunteer did not get his question since to English learners, *'I am fine'* should be a response to *'How are you?'* and culturally, Vietnamese people may consider this question as an offer, then expect a refusal or acceptance.

As another example, once the group was talking about local food, one mentioned half-hatched eggs and asked the British volunteer, *'Have you tried this food?'* – *'Well, not yet. I'm a vegan.'* When the group continued to discuss how delicious and nutritious half-hatched eggs are, he sat still, confused, and a bit shocked. The communication situation was unsuccessful because the students did not understand the message when the volunteer said, *'I'm a vegan.'* Supposing that they learned the word *'vegan'* in the second English course but forgot it, the teacher asked for their confirmation and even asked one to define the word. It was disappointing that they all knew the word. They were just less sensitive about vegan culture.

In another conversation, when the British volunteer invited the group to attend the upcoming UK festival, one responded, *'Next weekend, I'm planning to visit my grandparents in the countryside.'* *'What a pity, but have a great time with your grandparents!'* responded the volunteer. Clearly, his cultural pragmatics competence was great, and the conversations ended successfully.

To conclude, the recorded intercultural communication phenomena show both negative and positive aspects of the students' ICC, which will be classified and further discussed in the next finding.

### *Student's strengths and weaknesses in intercultural communication*

The above intercultural communication phenomena illustrate some strengths and weaknesses of the students in intercultural communication as generalized in the following table:

Table 1. Student's strengths and weaknesses in intercultural communication (My Hanoi Project, 2023)

<b><i>Indicators of ICC</i></b>	<b><i>Student's strengths</i></b>	<b><i>Students' weaknesses</i></b>
Awareness of cultural types	- Most students' ICC was improved when their existing problems were notified, and both the lecturers and the volunteers trained them.	- They lacked the awareness of other culture types. If they communicate with people from opposite types (high-context culture), there could be cultural conflicts resulting in discomfort or broken communication. - They lacked the awareness of risk, then applied their communication styles comfortably but did not acknowledge the differences between theirs and the volunteers'. This may cause culture shock without timely professional intervention and direction.
Awareness of politeness	- The students were aware of politeness in their own culture and competently expressed them in Vietnamese. - They were able to enhance their awareness of politeness in other cultures, beginning with building up the habit of using English polite expressions.	- Initially, the students rarely used polite English expressions in their communication. The frequent use of short phrases or too direct sentences did not affect comprehension seriously but may make them appear impolite to people from low-context cultures or may offend the ones with a low level of adaptive culture.
Awareness of cultural values	- They had a good awareness of their own cultural values and were interested in learning other cultures' values.	- The self-awareness of other cultures' values was still limited. They should have spent more time improving their knowledge and demonstrating greater effort regarding recognizing the values of other cultures to promote interpersonal relationships.
Awareness of cultural pragmatics	- If they were already exposed to modes of conversation based on cultural pragmatics, the application was possible, especially for students of higher English levels.	- They had great difficulties in understanding other uses of expressions more than the situations in which they learned to apply them. Therefore, the risk of conversation failure was very high when it came to the need for cultural pragmatics.

As can be seen clearly in the above table, the students' weaknesses in intercultural communication in English outweighed their strengths. They were evaluated better regarding their awareness of Vietnamese culture, but their perceptions of British and American cultures, as well as the application of those perceptions in intercultural communication, were still very limited. This led to their inappropriate encounters, resulting in discomfort, conflicts, and failed conversations as mentioned in the studies by Ting-Toomey (1999), Nguyen Quang (2017), Jandt (2021), and Ting-Toomey and Chung (2022). The researchers also paid attention to the students' general communication skills and mindful listening. While their limited communication skills affected their effort to express themselves politely, their word-by-word translation both slowed the communication down and prevented them from the practice of mindful listening. In addition, since intercultural communication is the culturally interrelated cognitive, affective, and behavioral activity process (Ishii, 2006 & Baker, 2020), the limitation of their perceptions of the volunteers' cultures affected their problematic participation in the conversations both verbally and nonverbally. Fortunately, the volunteers' empathic understanding and coordination throughout the project were highly appreciated; this came from their recognition and respect for cultural differences (Bennett, 2013).

However, the student's progress recorded by both the lecturers and the volunteers in the final tours was clear proof that with appropriate guidance and practice, they could completely overcome their limitations and improve their ICC. This recognized better ICC was related to their created cultural adaptiveness (Nguyen, 2017). As suggested by Nguyen Thi Thuy Lan (2020), the feedback from both the teachers and volunteers helped complete the process of improving the participants' ICC.

The results have covered all the answers to the research questions. Outstanding intercultural communication phenomena were identified in terms of awareness of cultural types, awareness of politeness, awareness of cultural values, and cultural pragmatics. This classification supported the clear indication of students' strengths and weaknesses in ICC. The results are discussed with the explanations referring to the previous studies.

## **Conclusion and Recommendations**

### *Conclusion*

Developing intercultural communication competence is significant to all tourism students so that they can become confident in both their personal lives and future careers with the high possibility of intercultural interactions. Through this small-scale quantitative research on 20 students participating in the My Hanoi project funded by Hanoi Open University, we discovered interesting intercultural communication phenomena related to awareness of cultural types, politeness, cultural values, and cultural pragmatics. The conversation analysis, together with the data from the participant observations, reflected a variety of their intercultural communication situations. The students showed few strengths but a number of weaknesses in their intercultural communication skills. They had a good awareness of Vietnamese cultural values and competently practiced them in Vietnamese. However, they lacked the awareness of other cultures and then made a lot of mistakes, especially regarding their limitations in using

polite expressions and controlling the flow of discourse. Actually, they did get noticeable improvement in their ICC toward the end of the project thanks to their better cultural perceptions and adaptivity as well as the instructions from both the teachers and the volunteers. This not only confirms the effectiveness of the project model in improving the participants' ICC but also helps suggest directions to help improve tourism students' ICC in the future.

### *Recommendations*

Although the small-scale quantitative research was suitable for the intercultural conversation analysis, which is the focus of this study, we recommend *further large-scale studies* on ICC of larger numbers of students at FOT-HOU or even in other tourism schools so that the results are more collective rather than the insight into some typical phenomena. Moreover, if other research tools like *survey questionnaires or interviews* are applied, the reliability of the data should be improved.

Regarding *strategies to improve students' intercultural communication competence*, the authors would like to give our personal suggestions in the actual context of English training programs at FOT-HOU, referring to the model by Nguyen Quang (2017) and the existing strengths and weaknesses of our students recorded in this study. In order to help students achieve the expected improvement in their ICC, both students and lecturers are recommended to follow the process of enhancing students' *awareness, qualities, attitudes, knowledge, skills, and abilities* as follows:

### *Awareness*

Students should improve their ability to perceive the key differences between their own culture and the cultures of English-speaking countries and later cultures of their future target tourists both emotionally and rationally. This effort can start right in English courses at FOT-HOU. When implementing each lesson content, the lecturers can proactively integrate or emphasize cultural differences. Besides the time for intercultural communication, the lesson also aims to achieve other goals. Therefore, both lecturers and students must also be realistic; instead of trying to learn deeply about culture, introducing stereotypes may be a suitable approach. However, lecturers need to emphasize that in low-context cultures, when individuals are highly recognized, these stereotypes are only relative. Furthermore, in role-play activities, students need to be encouraged to use learned expressions to demonstrate their awareness of intercultural communication.

### *Qualities*

Based on the analysis of the students' present weaknesses and strengths in intercultural communication, the researchers suggest a focus on receptiveness, flexibility, and sensitiveness. For everyone, especially students with low-level English proficiency, *receptiveness* is a necessary quality to accept new things and to adjust appropriate behavior in an intercultural environment. To enhance this quality amongst our students, in addition to their own internal motivation, we can organize activities to help students realize the significance of ICC in their future career development. Real cultural stories could be a great idea to illustrate the unfortunate consequences that can occur from the limited ICC. By constantly being aware of the existence

of intercultural communication and making efforts to improve corresponding qualities, students will gradually be able to be more *flexible* and handle situations in effective intercultural interactions. *Sensitiveness* is the target and highest quality to strive for ICC because it helps students see the relevance of intercultural communication interactions without much effort.

### *Attitudes*

All students at FOT-HOU have been taught about appropriate attitudes since their early days. Suitable attitudes in intercultural communication are of great importance since they affect what their partners in a conversation receive, both verbally and nonverbally. They should be respectful, sincere, unbiased, and optimistic when communicating with people from other cultures.

### *Knowledge*

Students must have communication, cultural, and intercultural communication knowledge. While communication knowledge is the initial foundation, cultural knowledge about values, concepts, virtues, and communication styles of both their own culture and other cultures will help the intercultural communication process take place more fluently. Intercultural communication knowledge will help increase the effectiveness of the communication process. Because most students refer to online sources to get knowledge, in addition to helping students receive knowledge through lessons, lecturers need to suggest reliable sources for students to improve their knowledge on their own. The lecturers' instruction on reading skills should enable students to absorb knowledge more easily.

### *Skills*

Both technical skills and interpersonal skills should be developed for a better ICC. Technically, the skills of using both verbal and nonverbal elements or the awareness of communicational contexts should be built up and developed throughout English lessons. Lecturers set a specific objective for each lesson, design guided practice, organize free practice, and give feedback on their achievements at the right time. Interpersonal skill is at a higher level in which students know how to use and combine elements of technical skills and implement communication strategies to achieve different communication goals. Students need to know how to start and participate in conversations interestingly and positively, discuss things that others are interested in, listen attentively, respect other people's opinions, and avoid negative criticism.

### *Abilities*

The ability to apply knowledge and skills about language and culture based on awareness, qualities, and positive attitudes in intercultural communication events will help students connect their ICC and performance. As a result, they can communicate effectively in a multicultural environment.

A clear awareness of the journey and the essential factors for developing ICC needs to be closely linked to practice in hypothetical situations and then real situations. Participation in activities outside the classroom is essential; activities such as English clubs and projects like My Hanoi are great opportunities for students to practice English and intercultural communication in English.

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## References

- Alexander, J. (2006). *Cultural pragmatics: Social Performance between Ritual and Strategy*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511616839.002>
- Baker, W. (2012). From Cultural Awareness to Intercultural Awareness: Culture in ELT. *ELT Journal*, 66(1), 62-70. <https://doi.org/10.1093/elt/ccr017>
- Baker, W. (2020). *Exploring Intercultural and Transcultural Communication in ELT*. University of Southampton Press.
- Bennett, M. (2013). *Basic Concepts of Intercultural Communication: Paradigms, Principles, & Practices*. Intercultural Press. <https://api.semanticscholar.org/CorpusID:142169293>
- Beydilli, E.T. & Kurt, M. (2020). Comparison of Management Styles of Local and Foreign Hotel Chains in Turkey: A Cultural Perspective. *Tourism management*, 79(4), 109-124. <https://doi.org/10.1016/j.tourman.2019.104018>
- Chen, M. (2020). *Customer Conversation Analysis Simplified: 3 Tools to Do It All*. Pure Speech Technology. <https://www.purespeechtechnology.com/conversational-ai/customer-conversation-analysis-simplified-3-tools-to-do-it-all/>
- Clyne, M. (1994). Intercultural Communication at Work: Cultural Values in Discourse. *Language in Society*, 25(3), 452-456. <https://doi.org/10.1017/S0047404500019266>
- Coperías, A. M. J. (2007). Dealing with Intercultural Communicative Competence in the Foreign Language Classroom. *Intercultural Language Use and Language Learning*, 10(4), 59-78. [https://doi.org/10.1007/978-1-4020-5639-0\\_4](https://doi.org/10.1007/978-1-4020-5639-0_4)
- Council of Europe. (2001). *Common European Framework of Reference for Languages: Learning, Teaching, Assessment*. Cambridge University Press. <https://rm.coe.int/16802fc1bf>
- George, T. (2023). *What is Participant Observation? – Definition & Examples*. Scribbr. <https://www.scribbr.com/methodology/participant-observation/>
- Gomez, C. (2021). *How to be Polite in English*. Kaplan International Languages Blog. <https://www.kaplaninternational.com/blog/working-internationally/eng/how-to-be-polite-english>

- Hall, E. T. (1959). *The Silent Language*. Anchor Books.  
<https://api.semanticscholar.org/CorpusID:143072138>
- Hoey, E. M. & Kendrick, K. H. (2017). *Conversation Analysis*. Wiley Blackwell Publisher.  
[https://www.researchgate.net/publication/306037543\\_Conversation\\_Analysis](https://www.researchgate.net/publication/306037543_Conversation_Analysis)
- Ishii, S. (2006). *Complementing Contemporary Intercultural Communication Research with East Asian Sociocultural Perspectives and Practices*. China Media Research.  
<https://api.semanticscholar.org/CorpusID:146645403>
- Jandt, F. E. (2021). *An Introduction to Intercultural Communication: Identities in a Global Community*. SAGE Publications, Inc.
- Liu, Y., Liu, J. & King, B. (2022). Intercultural Communicative Competence: Hospitality Industry and Education Perspectives. *Journal of Hospitality, Leisure, Sport & Tourism*, 30(3), 50 - 69. <https://doi.org/10.1016/j.jhlste.2022.100371>
- Martin, J., & Nakayama, T. K. (2010). *Intercultural Communication in Contexts*. McGraw-Hill.
- Milhauser, K.L., & Rahschulte, T.J. (2010). Meeting the Needs of Global Companies through Improved International Business Curriculum. *Journal of Teaching in International Business*, 21(3), 78 -100. <https://api.semanticscholar.org/CorpusID:154605527>
- Nguyen, H. (2019). Intercultural Communication Competence from an Identity Constructionist Perspective and its Implications for Foreign Language Education. *VNU Journal of Foreign Studies*, 35(1), 1 – 15. <https://doi.org/10.25073/2525-2445/vnufs.4334>
- Nguyen, Q. (2017). Intercultural Communicative Competence: A Proposed Model. *VNU Journal of Foreign Studies*, 33(4), 129 – 142.
- Nguyen, T. H. B. (2023). Community of Practice: A narrativized Account of a Full-time Multicultural Worker. *AsiaCALL Online Journal*, 14(1), 30–39.  
<https://doi.org/10.54855/acoj.231413>
- Nguyen, T. T. L. (2020). From the Importance of Intercultural Communicative Competence to Redefining the Purposes of Learning English for Vietnamese Learners. *Ho Chi Minh City University of Education Journal of Science*, 17(2), 1521 – 1528. .  
<https://doi.org/10.54607/HCMUE.JS.17.8.2836.2020>
- Pennycook, A. (2016). *Critical Approaches to Language Teaching*. Shanghai Foreign Language Education Press.
- Peterson, E., & Coltrane, B. (2003). Culture in Second Language Teaching. *Eric Clearinghouse on Languages and Linguistics*, 40(4), 182-183.  
[https://www.researchgate.net/publication/237500367\\_Culture\\_in\\_Second\\_Language\\_Teaching](https://www.researchgate.net/publication/237500367_Culture_in_Second_Language_Teaching)
- Peterson, M. F. (2004). Review of Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies. *Administrative Science Quarterly*, 49(1). <https://doi.org/10.2307/4131493>

- Ting-Toomey (1999). *Understanding Intercultural Communication*. Oxford University Press.
- Ting-Toomey, S. & Chung, L. (2022). *Understanding Intercultural Communication*. Oxford University Press.
- Tran, T. K. T. (2021). Teaching and Learning English for Tourism After the Covid-19 Pandemic in Universities and Solution Proposals. *Proceedings of the 17th International Conference of the Asia Association of Computer-Assisted Language Learning (AsiaCALL 2021)*, 135–140. <https://doi.org/10.2991/assehr.k.210226.017>
- Tran, T. T. T. & Vo, T. P. (2023). Needs Analysis about Intercultural Communicative Competence among Undergraduate Tourism Students. *Journal of Psycholinguistic Research*, 52(5), 100 - 112. <https://doi.org/10.1007/s10936-023-10012-1>
- White, S. J. (2019). *Handbook of Research Methods in Health Social Sciences: Conversation Analysis - An Introduction to Methodology, Data Collection, and Analysis*. Springer. [https://doi.org/10.1007/978-981-10-5251-4\\_107](https://doi.org/10.1007/978-981-10-5251-4_107)
- Zhu, H. (2015). *Research Methods in Intercultural Communication: A Practical Guide*. John Wiley & Sons Inc. <https://doi.org/10.1002/9781119166283.ch20>

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## Vietnamese EFL Students' Perception on Using Dictogloss in Listening and Note-taking Classes

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### ABSTRACT

#### Keywords:

dictogloss, listening and note-taking, perception

This study investigates the use of dictogloss to improve listening and note-taking skills for Vietnamese EFL learners. The study was conducted in two Listening AE1 classes at International University, VNU-HCMC, with 47 students over a period of 15 weeks. The dictogloss method involved the teacher reading a short text out loud and the students working in groups to recreate the text from week 2 to week 14. The study aimed to explore the effectiveness of the dictogloss method through the students' perception and performance. The results showed that there was a significant improvement in the listening and note-taking performance of the students. Moreover, the majority of students found the dictogloss method to be effective in improving their listening skills as well as enhancing their engagement with peers and teachers. However, some students reported experiencing stress and anxiety when using this method. The study suggests that dictogloss can be further studied and employed in the teaching of listening and note-taking skills classes.

### Introduction

With the growing role of English as a global language in the modern world, teaching English as a Foreign Language (EFL) in non-English speaking countries has gained great attention from English Language Teaching (ELT) researchers and lecturers. However, in most scenarios, teaching listening skills gained the least awareness from research worldwide compared to Speaking, Reading and Writing (Zhang & Sheng, 2023). Nunan (2010) termed listening skills the Cinderella skill due to their less important role in skill teaching. In Turkey, where English is the foreign language that has the most learners, listening skill still needs to be addressed in the curriculum from primary schools to high schools. (Ulum, 2015).

In Vietnam, Listening skill is considered less important than reading, writing and grammar. Especially in Vietnamese high schools, students have very few chances to practice their listening skills (Tran & Duong, 2020). This can be their first time studying this skill for many university students. At International University (IU), Vietnam National University, HCMC,

where English is the medium of instruction, Listening and Note-taking course (Listening AE1) is one compulsory course for students in all majors. While the course is very necessary, the students find it hard to achieve the required passing grade, and they often lose motivation towards the end of the course. This urges the need for a better method and approach to teaching listening to college students.

Despite the small amount of research, numerous efforts have been made to introduce methods for teaching listening to EFL learners. To be more specific, a study carried out among a group of students at Binh Duong University in Vietnam also finds that the mass media plays a key role in helping students boost their listening skills (Vo & Cao, 2022). Also, listening skills have been proven to be improved by using Lyric Training, a lyric training app (Nguyen, 2022). Among the variety of methods, dictogloss, which was formerly introduced in 1990 by Wajnryb as an innovative way to learn grammar (McGuire, 1997), has now increasingly been used in listening classes (Alawiyah & Arrasyid, 2016; Akib & Saputra, 2019; Minh Hai & Hanh, 2021). However, this concept is still new for most Vietnamese EFL students. Plus, there is a lack of dictogloss literature in the Vietnamese teaching context. This study thus seeks to find out whether the dictogloss method is really useful in enhancing students' listening skills as well as exploring students' perceptions of the use of this new method. The result of the study should be of great importance in the research field for this new method, as well as in the teaching of listening skills.

## Literature review

### *Dictogloss*

Dictogloss was originally designed to teach grammar (Kidd, 1992). Dictogloss, which involved 4 stages: preparation, dictation, reconstruction, and analysis and correction, was defined as a way students work together in groups to reconstruct texts that are read aloud by their teachers. (Kidd, 1992). Students have more engagement in this method of study throughout the four stages (Nabei, 1996). By applying the dictogloss method, students are better concentrated, and the group work becomes more effective in the classroom (Kurtaj, 2021). To be more specific, the students must pay more attention in order to combine multiple skills in the dictogloss class. (Campos, 2023)

Dictogloss reaches out from grammar class to other skill classes. Kooshafar et al. (2012) used this method to teach writing to a group of Iranian students. They found out that dictogloss brought about better results than the traditional explicit teaching method. Dictogloss was also found useful in helping Arabic learners reinforce and produce imperative verbs and other vocabulary (Husseinali, 2013).

### *Dictogloss in listening classes*

Using dictogloss in listening class receives the most attention from educators and researchers. The benefits gained from improving listening skill is not just the side effects of teaching grammar anymore. Instead, the dictogloss method has been found to improve listening comprehension and improve linguistic knowledge (Vasiljevic, 2010). By listening to the lecturer's voice and reconstructing the script in group work, the students have the opportunity to practice the new vocabulary both in written and spoken forms (Ngo & Le, 2020). Most

importantly, dictogloss method helps lift up students' motivation to study better (Asrobi & Amni, 2017). Last but not least, the learners actively practice the skills rather than the traditional method of teaching, which places listening as a receptive and passive skill (Minh Hai & Hanh, 2021).

#### *Previous studies involving dictogloss in listening classes*

Alawiyah and Arrasyid (2016) and Akib and Saputra (2019) used dictogloss in a quasi-experimental study to measure the outcome for two groups of learners; one group received the dictogloss method as the treatment. Both studies found a clear improvement in the treatment group in the post-test. In Vietnam, Minh Hai and Hanh (2021) used a qualitative study in action research to see if the dictogloss method has a good effect on non-English majors' listening comprehension. Forty students were asked to join in focus group interviews, and their listening notes in the class were analyzed. The results revealed that students enjoyed the engagement with this method, and they had acquired a greater awareness of linguistics knowledge. They also believed that the method benefited their listening skill considerably.

However, the previous studies just focused on the perception of the students. There is still a lack of experimental study for this method for Vietnamese university students. In other words, a study with dictogloss used as a treatment should be employed to see the possible effects. This study thus aims at carrying out the study both qualitatively and quantitatively with a group of Vietnamese students.

#### *Research Questions*

With all the aforementioned purposes, the study was conducted in order to answer these two questions:

1. Is there a significant improvement in the students' listening pre-test and post-test regarding the use of the dictogloss method?
2. What are the students' perceptions towards the use of the dictogloss method in the listening and note-taking classes?

## **Methods**

#### *Pedagogical Setting & Participants*

The research was conducted at the International University, Vietnam National University, HCMC, Vietnam. The researchers used the convenience sampling method since the school offers the Listening AE1 course every semester, which made it possible for the researchers to apply the method as well as to invite participants for the research. A group of 47 freshmen (30 females and 17 males) from 2 Listening AE1 classes (with a level of IELTS 6.0 and equivalence) volunteered to participate in the study. These students all major in Business Administration, and they all take the Listening AE1 course as part of the requirement of their training curriculum.

#### *Design of the Study*

The research combines both the quantitative and qualitative design to achieve the purpose. Quantitatively, a paired-sample t-test was carried out to see if there was any improvement in the listening performance tasks. The paired samples t-test is the right test to use since it can

measure the same group of participants at two different time points (Ross & Willson, 2017). Qualitatively, the follow-up survey results were analyzed to determine the participant's perception of the use of dictogloss in the class.

### *Data collection & analysis*

The researchers started the dictogloss for the entire academic semester. Early in week 2, the researchers started introducing the concept of dictogloss for the two Listening AE1 classes in which they were the lecturers in charge. The students were well aware of the dictogloss method and agreed to participate in the study. In week 4, a pre-test was conducted, and the scores were recorded. The researchers continued to use the dictogloss method weekly until week 14, and a post-test was conducted in the same week to find out if there was any improvement in the students' listening and note-taking skills. A follow-up survey was conducted using Google Forms, and the link for the survey was posted on Blackboard - the online learning system - of the class.

The procedure for conducting the dictogloss method in the class can be summarized in Table 1 below.

**Table 1**

#### *Procedure of carrying out the dictogloss research*

Week	Activities	People in charge
2&3	Introduction of the dictogloss method	Lecturers
4	Pre-test	Lecturers and students
5-14	Applying the dictogloss method	Lecturers and students
14	Post-test	Lecturers and students
15	Survey completion	Students

The procedure for conducting the dictogloss method was described in table 2 below.

After all data was collected, the researchers input the students' scores on Minitab 20 for analysis. The paired samples t-test was run. Also, the answer to the survey was collected via the Google form and demonstrated in Google sheet.

**Table 2***Steps of a listening class using the dictogloss method*

Steps	Activities	Notes
1	Students formed groups of 3-4 students and chose one student to stay inside the class, the rest of the students would wait outside the classroom	
2	Lecturers recited one short paragraph or short passage using the topic of the unit lessons.	The researchers prepared the materials for each class in advance.
3	One member from each group listened to the teachers reciting the paragraphs/ passages and took notes.	
4	All students would return to class and begin their group work. The students who remained in the class would recite the notes to the rest of the groups.	The members took turns staying in the class. No same student would stay in class for two consecutive weeks.
5	All the students worked on the follow-up activities provided by the lecturers.	The activities varied each week.
6	The lecturers showed the script and the answers of the activities.	

## Results/Findings and discussion

### *Listening improvement*

The results showed an improvement in the scores of the post-test compared to the pre-test. The participants' mean scores were 74.49 (SD=13.79) and 77.57 (SD=13.26) in the pre-test and post-test, respectively. To see if the improvement was statistically significant, the researchers ran the paired samples t-test at the 0.05 level of significance. The null hypothesis was that there was no significant difference between the results of the two tests. The result is displayed in Tables 3 and 4 below.

**Table 3***Descriptive statistics for the pre-test (quiz 1) and post-test (quiz 2)*

Sample	N	Mean	StDev	SE Mean
Quiz 1	47	74.49	13.79	2.01
Quiz 2	47	77.57	13.26	1.93

Table 4

Paired samples t-test for *the pre-test (quiz 1) and post-test (quiz 2)*

95% CI for					
Mean	StDev	SE Mean	$\mu$ _difference	t-value	p-value
-3.09	11.90	1.74	(-6.58, 0.41)	-1.81	0.039

 $\mu$ \_difference: population mean of (Quiz 1 - Quiz 2)

A paired samples t-test was used to compare the pre-test and post-test results for the same group of participants. Table 4 shows the t-value of -1.81 and p-value of 0.039, which is smaller than 0.05. The null hypothesis was rejected. Thus, the mean score of the pre-test was significantly smaller than that of the post-test. 47 students in the study made little yet obvious improvement in their listening performance.

#### *Students' perceptions of the dictogloss method*

For the perception survey, Q1 (see Appendix) reveals a mean score of 4.553 out of 5, which asked about the frequent use of the dictogloss method in the classroom. Q2-5 (see Appendix) showed high agreement and satisfaction from the participants with the use of the dictogloss method in the class. The results for the 7 Likert scale questions are shown in Table 5.

Table 5

*Mean scores for the perception related to the use of dictogloss method*

Questions	Content	Mean (out of 5)
2	being comfortable with the method	3.9
3	being necessary for improving listening skills	4.5
4	creating more engagement between teachers and students	4.1
5	enhancing students' motivation in the class	4.1

From Q6-7 (see Appendix), the students trusted that the dictogloss method was effectively used by the lecturers (mean score 4.3 out of 5), and it greatly improved their listening skills (mean score 4.1 out of 5).

Q8-10 further explored the perceptions of students related to this new method. Most students believed that the best part of dictogloss was the “*high engagement*” between lecturers and students. Instead of the traditional and passive one-way audio, they found it more engaging when listening to the lecturer’s voice and then took turns recreating the script. One student highlighted the good aspect of the lecturer’s voice as he mentioned, “*When the teacher read the passage out loud, we can easily focus on each word. Moreover, she can directly control the speed of the information, which helps us a lot in listening, and when we listen by that method with the voice of the teacher, it can be more familiar to us in the first step of practice listening.*” The high motivation for studying and listening was also reported by many students in the survey.

Besides, some drawbacks of the method could be summarized as follows. Firstly, it created certain stress for the students with poor listening skills since they needed to be responsible for taking notes and reciting the script for the rest of the groups, as mentioned in the response, "I often feel pressure when I'm the one who stays inside the class and listen to the context since I will play a major role in my group and my work can affect the others' performance." Also, some students admitted that they were quite new to the method, and it took more time for them to get acquainted with it. The students also suggested that the lecturer could solve this problem by giving more bonuses for the group work or creating more fun activities to check comprehension besides the traditional question types such as the True-False statements or Fill-in-the-blank practice.

The improvement of the students in the post-test was aligned with other studies in the field (Akib & Saputra, 2019; Alawiyah & Arrasyid, 2016). The engagement aspect from students' perception also agreed with Vasiljevic (2010) and Minh Hai and Hanh (2021), who proposed that students worked better when they worked together to reconstruct the script in order to do the follow-up listening activities. Unfortunately, the scope of the study was limited, with only two classes and 47 students. It was quite subjective to jump to a big generalization. However, the result of the study revealed the potential of carrying out the dictogloss method on a larger scale. Lecturers may consider using this method in different types of listening classes to create better engagement and higher motivation among students. The study also suggested that dictogloss could be further exploited in different listening courses so that students would not consider listening as a receptive and boring skill.

## Conclusion

The study was conducted to assess the effectiveness of the dictogloss method in teaching listening and note-taking for Vietnamese university students. The findings of this study indicated that the dictogloss method was advantageous in improving students' listening comprehension, creating better engagement between teachers and students, and lifting up students' motivation in class. Being familiar with the lecturer's voice adds a bonus to the students' overall classroom experience. Besides the good points, it was also worth acknowledging the potential stress it may bring for students. Therefore, it is recommended that more studies using the method should be carried out to delve deeper into the impacts of this method. Also, educators and curriculum designers should consider how to strategically apply dictogloss in the lesson plans so as to take advantage of the method while alleviating the possible stress it may cause to learners.

## References

- Akib, M., & Saputra, D. (2019). Effects of the Dictogloss Method in Teaching Listening Skills to Students. *Qalam: Jurnal Ilmu Kependidikan*, 8(2), 69. <https://doi.org/10.33506/jq.v8i2.769>
- Alawiyah, T., & Arrasyid, F. I. (2016). The effectiveness of Dictogloss Method on Listening Skill of Narrative Text at Tenth Grade Students of Ma Al Iman adiwerna tegal. *ELT Echo : The Journal of English Language Teaching in Foreign Language Context*, 1(1), 42-52. <https://doi.org/10.24235/eltecho.v1i1.967>



- Asrobi, M., & Amni, K. (2017b). The use of Dictogloss in teaching listening comprehension for EFL learners. *VELES Voices of English Language Education Society*, 1(1), 61-70. <https://doi.org/10.29408/veles.v1i1.394>
- Campos, M. (July 6, 2023). ESL Classroom activities: Dictogloss. *EnglishPost*. [https://englishpost.org/dictogloss/#google\\_vignette](https://englishpost.org/dictogloss/#google_vignette).
- Husseinali, G. (2013). Using Dictogloss to Advance Proficiency and Accuracy in Teaching Arabic. *Dimension*, 46–58. <https://doi.org/https://files.eric.ed.gov/fulltext/EJ1211103.pdf>
- Kidd, R. (1992). Teaching ESL grammar through dictation. *TESL Canada Journal*, 10(1), 49-61.
- Kooshafar, M., Youhanaee, M., & Amirian, Z. (2012). The effect of Dictogloss technique on learners' writing improvement in terms of writing coherent texts. *Journal of Language Teaching and Research*, 3(4), 716-721. <https://doi.org/10.4304/jltr.3.4.716-721>
- Nabei, T. (1996). Dictogloss: Is It an Effective Language Learning Task?. *Working Papers in Educational Linguistics*, 12(1), 59-74
- Minh Hai, N. T., & Hanh, L. D. (2020). Effects of dictogloss on Non-English majored undergraduates' listening comprehension. *VNU Journal of Foreign Studies*, 36(3), 70-81. <https://doi.org/10.25073/2525-2445/vnufs.4557>
- Nguyen, M. T. H., & Tran, L. T. (2021). Using Dictogloss to enhance Listening Comprehension Skills for English Majors at Thai Nguyen University of Education. *American Journal of Humanities and Social Sciences Research (AJHSSR)*, 5(5), 87–92. <https://doi.org/https://www.ajhssr.com/wp-content/uploads/2021/05/L21558792.pdf>
- Nguyen, T. G. M. (2022). The Impacts of Lyrics Training on Improving Listening Skills for ESL Students. *AsiaCALL Online Journal*, 14(1), 18-29. DOI: <https://doi.org/10.54855/acoj.231412>
- Nunan, D. (2010). Listening in Language Learning. In Richard & Renandya, *Methodology in Language Teaching*, pp.238-241. Cambridge University Press.
- Ross, A., & Willson, V. L. (2018). *Basic and advanced statistical tests writing results sections and creating tables and figures*. Sense Publishers.
- Ulum, Ö. G. (2015). Listening: The Ignored Skill in EFL Context. *International Journal of Humanities Social Sciences and Education (IJHSSE)*, 2(5), 72–80. <https://doi.org/https://files.eric.ed.gov/fulltext/ED577306.pdf>
- Vasiljevic, Z. (2010). Dictogloss as an interactive method of teaching listening comprehension to L2 learners. *English Language Teaching*, 3(1), 41-52. <https://doi.org/10.5539/elt.v3n1p41>
- Vo, T. H. C., & Cao, T. M. H. (2022). Investigating the Effects of Mass Media on Learning Listening Skills. *AsiaCALL Online Journal*, 13(5), 45-67. <https://doi.org/10.54855/acoj.221354>
- Wajnryb, R. (1997). Grammar Dictation: The Dictogloss Procedure as a Means to Explore and Shift Learners' Hypotheses about Language. *The Japan Association for Language Teaching*, 21(9). [https://doi.org/https://jalt-publications.org/old\\_tlt/files/97/sep/wajnryb.html](https://doi.org/https://jalt-publications.org/old_tlt/files/97/sep/wajnryb.html)

Zhang, L. J., & Shen, Y. (2023). What two decades of research into L2 listening in system tells us: Looking back for looking forward. *System*, 112, 102970. <https://doi.org/10.1016/j.system.2022.102970>

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**Appendix**

**Survey questions for students**

Student’s name: ..... Student's email address: .....

Description:

1. Dictogloss is a language learning activity that combines listening, speaking, and writing skills. In dictogloss, the teacher reads a short text out loud to the students, who then work together in small groups to reconstruct the text as accurately as possible.
2. Dictogloss is often used in listening classes as a way to improve students' listening and writing skills. It challenges students to focus on important details, such as key vocabulary, grammar, and sentence structure, and helps to develop their ability to take notes and summarize information. It can also help students to develop their ability to recognize the context and meaning of new vocabulary words and to practice using them in a natural context.

A. On a scale of 1-5, answer the following questions

Question 1: How often do your teacher use the dictogloss method in class to practice your listening skills?

Never      1                  2                  3                  4                  5                  Very often

Question 2: How comfortable are you with the dictogloss method?

Not at all   1                  2                  3                  4                  5                  Very comfortable

Question 3: Do you feel that the dictogloss method is necessary for improving your English listening skills?

Not at all   1                  2                  3                  4                  5                  Very necessary

Question 4: Do you feel that the dictogloss method creates more engagement between teachers and students in the listening and note-taking classes?

No, not at all   1                  2                  3                  4                  5                  Yes, significant improvement

Question 5: Do you feel that the dictogloss method enhances students' motivation in the listening and note-taking classes?

No, not at all   1                  2                  3                  4                  5                  Yes, significant improvement

Question 6: How effective do you feel the teacher's use of the dictogloss method is in class?

Not at all   1                  2                  3                  4                  5                  Very effective

Question 7: How would you rate the effectiveness of the dictogloss method in improving your listening skills?

Not at all   1                  2                  3                  4                  5                  Very effective

B. Provide extended answer for the following questions

Question 8: What do you like about the dictogloss method?

Question 9: What do you dislike about the dictogloss method?

Question 10: What suggestions would you have for the teacher to use the dictogloss method more effectively in class?

## Students' Perceptions of the AI Technology Application in English Writing Classes

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### ABSTRACT

**Keywords:** Artificial intelligence (AI), AI writing tools, Perceptions, English writing, Vietnamese students.

With the rapid advancement of information technology, numerous cutting-edge techniques and technologies have been developed to improve learning generally and English learning specifically. The utilization of artificial intelligence (AI) technology in teaching and learning at universities is an inevitable trend in the Industry 4.0 era. This paper aims to investigate students' perceptions of AI technology application in English writing classes. 100 students from four General English classes at Vietnam National University (VNU) took part in this study. To achieve the research purpose, I combined quantitative and qualitative research methods through questionnaires and in-depth interviews. The findings of the study indicate that students' attitudes regarding AI writing tools were favourable in terms of their accessibility, adaptability, and simplicity. However, some challenges are unavoidable when employing these tools, resulting from factors like learners' technology anxiety and lack of tool variety. I hope this research serves as a valuable resource for teachers looking to diversify their teaching methods and encourages students to enhance their interest and motivation in using AI tools for English learning.

### Introduction

The industrial revolution 4.0 is transforming the world, and it is inevitable that education in general and foreign language learning in particular are also deeply affected by these changes. Schools and training institutions must promote the application of modern technology to make radical changes in teaching and learning methods. One of the most mentioned technologies in recent years, contributing to creating strong breakthroughs and bringing about "miracle" results is Artificial Intelligence (AI). The term "Artificial Intelligence" was first used in reference to a scientific idea by J. McCarthy. AI research is used to develop systems and devices that imitate learning and mental processing activities, as well as to precisely explain parts of intellectual processing and learning (to acquire knowledge) (McCarthy et al., 1955). According to Russell

and Norvig (2016), AI is an interdisciplinary field of philosophy, psychology, neuroscience, mathematics, cybernetics, science computers, linguistics, and economics. In the upcoming years, AI will be one of the "levers" that will help IT advance and become more pervasive in daily life.

Currently, AI is becoming a trend in education in general, foreign languages in particular, especially English. According to education experts (Woolf, et al., 2013; Kurshan, 2016), with the support of AI, learning English will become an exciting and active experience, because each student will have a "native teacher" who always accompanies and helps in correct listening and speaking practice, grading, correcting errors and giving personalized exercises according to each person's level. AI helps control the quality of students' learning and training through big data systems, helping students look up and track their progress every day. When researching new trends and challenges from AI for foreign language teaching and learning, Desmet (2006) specifically pointed out 7 development trends, in which the exploitation of digital resources related to four skills (listening, speaking, reading and writing) are the first trends listed and popular in the foreign language teaching environment, not only in those with a well-developed educational background, but also in somewhat less developed countries, such as in Vietnam. Therefore, the current trend is the use of AI in education, particularly in the teaching and learning of English.

Of the four English skills, the fundamental skill for lifelong learning is writing (UNESCO, 2017). Peter and Singaravelu (2020) also stated that writing is a tool for self-expression, communication, information interpretation, recording experiences, and effective learning. In the meantime, teaching and learning have both benefited from the usage of AI technology, particularly in writing courses. AI could enhance learners' writing abilities (Mediyawati et al., 2021), increase writing quality (Fitria, 2021), motivate learning participation (Gayed et al., 2022), and promote learning outcomes (Ng et al., 2022). From these studies, the use of AI in English writing classes is becoming increasingly widespread, and while integrating this technology, it is crucial to investigate how the students will react to it. According to Köse and Arslan (2015), learners' approval has been demonstrated to be a crucial sign of the effectiveness of integrating technology to boost performance. Learning performance may be enhanced when the learners could accept using the technology. Thus, understanding how students view the use of technology in their education is one method to gauge their acceptance.

In Vietnam, numerous studies in the context of EFL classrooms have demonstrated the significance of students' views in the integration of technology, but relatively few have done so for AI technology in writing. Given that AI technology is beginning to saturate EFL classrooms and that integrating technology takes into account students' perceptions, this study was conducted to investigate how EFL students at Vietnam National University (VNU) perceive about using AI technology in their writing classes.

## Literature review

### *Review of Studies on the Students' Perceptions of AI Technology Application in International Settings*

Numerous studies highlighted the virtues of AI in language acquisition as it brings the promise of personalized learning. In the very early studies, the ability of AI technology to interpret student language input, assess students' grammar, and provide complex feedback has been demonstrated (Bailin, 1987; Holland et al., 1993; Nagata, 1996). More recent research demonstrates that AI has more potential, along with advancements in computer technology. For instance, it has been discovered that using AI in language schools has the following advantages for the students. Lu (2018) claimed that AI can provide meaningful conversations. Besides, AI can be helpful in collaborative positions (Tafazoli et al., 2019). In terms of EFL benefits, speaking performance and reading comprehension can be enhanced by AI applications (El Shazly, 2020; Yin et al., 2021). Furthermore, Bailey et al. (2021) also confirmed that using AI tools in EFL classes can increase students' motivation and inspiration. The study of Sumakul et al. (2022) showed that all teachers reported favorable opinions on using AI in the classroom. The teachers concurred that AI may aid in teaching and student learning. Similarly, Alhalangy and AbdAlgane (2023) also reported that AI positively impacts the field of English language teaching (ELT) and learning.

Regarding writing skills alone, some studies also show the benefits of AI to learners. Focusing on Google Translate, Naver Papago, and Grammarly, the study of Kim and Han (2021) showed that all these tools aided students in learning English writing. Specially, learning vocabulary, grammar, and sentence structure with GT/NP was really beneficial. Similarly, another study of Sumakul et al. (2022) indicated that the students' attitudes on using the AI app were favorable. The lessons were enjoyable for the pupils, and the AI app aided them in their writing. More specifically, Utami et al. (2023) mentioned three advantages of AI utilization in an academic writing class in Indonesia: (1) AI-based learning tools aid students in academic research planning, topic development, and paper draft development; (2) AI-based learning tools are flexible, accessible; (3) Students seek AI technology in academic writing for engaging learning.

Nevertheless, despite these encouraging results, some research has produced conflicting conclusions. The optimistic views of AI in language studies were criticized as being exaggerated and misunderstood in its early stages (Last, 1989; O'Brien, 1993). In more recent studies, AI is not a reliable tool for learning, according to Gallacher et al. (2018), and the language it generates is frequently inappropriate and unnatural (Pace-Sigge & Sumakul, 2021), as well as decontextualized (Wilson et al., 2021). The limited pedagogical design of the AI apps or the teachers' insufficient pedagogical understanding may be the root of the problems with the implementation of AI in the classroom, according to Rieland (2017) and Zawacki-Richter (2019). Although technology has been shown to aid language learners, Kukulska-Hulme and Lee (2020) note that little is known about teachers' responsibilities in implementing it in the classrooms. Besides, the data that is currently available indicates that there are significant issues with incorporating chatbot technology into teaching. The personal information of students, including their names, email addresses, and academic records, can be collected by chatbots (Liden & Nilros, 2020). As a result, users' concerns about security and privacy significantly

impact their desire to use chatbots in the classroom (Shumanov & Johnson, 2021). In addition, Cassidy (2023) has frequently brought up concerns regarding the possibility of cheating by using ChatGPT, which could have a negative impact on evaluations.

Concerning some disadvantages of AI application with writing skills in particular, besides giving the above undeniable benefits, the authors also mentioned some drawbacks that need to be taken into consideration. According to Arnold and Ducate (2015), language teachers are still unable to fully utilize technology's pedagogical benefits. Moreover, Susanto and Yosephine (2019) discovered that the excessive time and effort needed might prevent teachers from utilizing technology to its full potential. Thus, Ding et al. (2019) argued that in order for teachers to see how technology might improve their classrooms, it is necessary to support them. More specifically, Kim and Han (2021) pointed out that one of the weaknesses of Google Translate and Naver Papago is inaccurate translation and too frequent use of AI-based English writing learning tools may hinder students' ability to learn English or English writing. Besides, according to Sumakul et al. (2022), AI faces obstacles in available features, especially in Indonesian text editing, and optimization.

#### *Review of Studies on the Students' Perceptions of AI Technology Application in Vietnam*

The application of AI technology in the classroom in the Vietnamese context has received moderate attention in the literature. Several studies in Vietnam also highlighted the benefits of applying AI in the EFL classroom. Action research of Tran and Nguyen (2021) was conducted to investigate the effects of technology-based communication on either students' writing performances or their views of the use of the new teaching approach. The findings demonstrated participants' positive views about technology-based communication and their increased self-assurance in line with positive attitudes toward writing classes as a result of their awareness of how these lessons encourage critical thinking and error-finding (Tran & Nguyen, 2021). Besides, according to Nguyen and Nguyen (2022), many essential tools, including word processing and computer-based activities, have been used to help students produce high-quality writings as a result of technological advancement. Phan and Chen (2020) investigated how a group of engineering students at a university in Southern Vietnam utilized Google Translate to acquire TOEIC. The results demonstrated that GT provided a variety of advantages, including its quick speed and user-friendly interface, which pleased its users. According to Tran and Dinh (2021), AI will significantly improve general and higher education by reducing administrative procedures, automating tasks like grading papers and attendance, personalizing curriculums, and introducing virtual tutors/assistants. AI also creates excitement for learners with real-time informational feedback, increasing interaction time and providing immediate support (Tran & Dinh, 2021). Vo (2022) investigated the tools that have AI application in teaching English writing and claimed that the application of information technology and AI in teaching and learning English is indispensable, especially in teaching and learning English. More specifically, studying the use of ChatGPT in writing classes, Nguyen (2023) stated that ChatGPT provides students with diverse educational materials, aiding in learning and developing ideas for writing assignments. It also provides standardized examples, enabling students to analyze and produce well-structured pieces.

Besides some benefits, the AI negative effects on teaching and learning writing also received

moderate attention from Vietnamese scholars. Phan and Chen (2020) also admitted that some AI tools like Google Translate significant shortcomings that needed to be fixed to meet the needs of language users. Complex and specialized word translations are challenging for GT application. In addition, participants were frequently dissatisfied by the meaning and context of translated terms. Post-editing or alteration was necessary to improve the translation quality (Phan & Chen, 2020). The study of Tran and Dinh (2021) also mentioned some challenges in implementing AI in education, highlighting that technology and AI are tools for supporting human elements. Improvements in policies, fairness, and uniformity are needed, along with teacher capacity building for AI implementation. Nguyen (2023) also mentioned some potential concerns over the use of ChatGPT in writing lessons. Students over-rely on ChatGPT responses, potentially compromising critical thinking and problem-solving abilities. Moreover, the author underlined that because ChatGPT may produce samples of standardized writing, students may copy these written products, leading to biased grading in writing classes (Nguyen, 2023).

### *Research Gap and Research Questions*

Through the review of the above studies, it can be seen that although the AI technology application in EFL classes is a topic of great interest in the world, in Vietnam, the number of studies on this topic is not much, especially in the context of the English Writing class. Therefore, it is important to have a study on the perceptions of students at VNU about applying AI to support writing skills. The purpose of the study could be achieved by answering two research questions:

1. What are the advantages of AI technology application in English writing classes?
2. What difficulties did students encounter when applying AI technology in English writing classes?

## **Methods**

### *Pedagogical Setting & Participants*

100 students from four General English classes at VNU took part in this study. These are the courses that I was assigned to directly teach in the 2022–2023 academic year. The learning objectives for these English sessions are at the B1 level (equivalent to Level 3 according to the 6-level Foreign Language Competency Framework).

In the General English course, writing skill is taught in each session along with other skills. During writing class, some AI technology applications were used to support writing skills mainly including Grammarly (to detect grammar and spelling errors), Google Translate (to offer suggestions on expressions), and Paraphrasing Tool (to diversify expressions and make passages easier to understand).

### *Data Collection & Analysis*

For the quantitative phase, I used a questionnaire to investigate the benefits and drawbacks of AI-based learning tools in English writing classes (Appendix 1). The questionnaire is a suitable tool to measure several independent variables, including facts, preferences, and behaviors



(Kabir, 2016). In this study, the questionnaire items were adapted from the criteria and questionnaire of Utami et al. (2023). The questionnaire has two main parts, based on two research questions. Part 1 contains 10 statements about the benefits of AI-based learning tools with writing skills. Part 2 focuses on exploiting the disadvantages when students use AI-based learning tools in writing class. In this section, I divided it into main groups: factors related to AI-based learning tools and factors related to learners themselves. In both sections, the question format is a 5-point Likert scale (strongly disagree, disagree, neutral, agree, strongly agree) to elicit the participants' opinions.

For the qualitative phase, the interview method was used to clarify the data gathered from the questionnaire during the qualitative phase, resulting in more accurate and real data for the study (Appendix 2). With the intention of gathering additional information that students have not clarified in the questionnaire, I divided the 10 questions in the interview based on the subject. Specifically, the first four interview questions outlined some of the advantages students received from using AI technology. Then, students were required to describe some of the challenges they encountered when using AI technology in the following four sentences. For the last two questions, I wanted to investigate how students viewed the potential applications of AI technology as well as their ideas on how to employ it most effectively. Through purposive sampling, 20 students were selected for interviews (5 students per class). The goal is to select the most diverse group possible based on the questionnaire results from the quantitative phase to collect a range of information about students' different perspectives and experiences on using AI technology in writing classes. I gave the students the option of using Vietnamese in the interviews so they could more readily grasp the questions and communicate their thoughts.

## Results/Findings and Discussion

### *Research Question 1: What are the advantages of AI technology application in English writing classes?*

To investigate the benefits of AI-based learning tools in supporting writing, I used a questionnaire combined with students' opinions from interviews. The results obtained from the survey are presented in Table 1.

The Table 1 shows that all students recognized the importance of AI-based learning tools in enhancing their writing abilities and improving the quality of their writing ( $M=4.28$  &  $4.19$ , respectively). Majority of students agreed that AI-based learning tools helped them achieve their learning goals ( $M=3.92$ ). This is not difficult to explain, because even the generations born as early as the late 1980s were those born in the cradle of IT and the Internet (Enochsson & Rizza, 2009), so for the current generation, the use of IT is an integral part of their daily life. Accordingly, all students ( $M=4.13$ ) used AI-based learning tools to enrich their vocabulary and grammar during their writing.

Table 1.

## Advantages of AI technology applications

Advantages of AI technology applications	Mean	Median	Mode
1. AI-based learning tools enhance learners' writing abilities.	4.28	4	4
2. AI-based learning tools aid learners to get learning objectives.	3.92	4	4
3. AI-based learning tools can enrich both vocabulary and grammar.	4.13	4	4
4. AI-based learning tools improve the quality of writing.	4.19	4	4
5. AI-based learning tools are accessible.	4.83	5	5
6. AI-based learning tools have a friendly interface for users.	4.79	5	5
7. AI-based learning tools are adaptable.	4.69	5	5
8. AI-based learning tools have various features.	2.75	3	3
9. AI-based learning tools make learners more engaged in learning.	3.52	3	3
10. AI-based learning tools increase learners' interest.	3.76	4	4

In interviews, all students confirmed these benefits. Some students shared:

I think apps have helped with writing a lot. Sometimes I have an idea but don't know how to express it, so I can use Google Translate to help. In addition, Grammarly helps me check basic grammar and vocabulary errors in the lesson. (S1)

When writing articles, I often get repetitive expressions and structures. At that time, I used the Paraphrasing Tool application to help me get more suggestions on using other structures and vocabulary but with the same meaning. (S2)

The fields of English language teaching (ELT) in general and writing in particular are favourably impacted by AI, according to Alhalangy and AbdAlgane (2023). Besides, in the study of Utami et al. (2023), the majority of participants (86%) agreed that using AI-based learning tools improves their writing performance. The result is also in line with the finding of Kim and Han (2021) when these authors claimed that Google Translate was very beneficial in acquiring vocabulary, grammar, and sentence structure and Grammarly was quite useful in identifying and correcting problems.

Regarding some features of AI-based learning tools, their accessibility, adaptability, and simplicity were all highly appreciated by students. This is also the group with the highest mean score in the survey ( $M > 4.5$ ). Students explained these points more clearly in the interview. One benefit highlighted by all the interviewers is that these tools are freely available online, so anyone can use them at all times. In terms of the Grammarly tool, one student shared that: *"The Grammarly tool is simple to use and features are user-friendly. Another benefit of this tool is its speedy detection of grammatical and spelling mistakes, which may be used to recommend improvements"* (S3). With Paraphrasing tool, another student emphasized some of its beneficial features: *"The website of the Paraphrasing tool is free. Users can use it right away without installing software. Tools help learners understand faster; teach words effectively, and build better vocabulary"* (S4). Additionally, students had a lot of experience using Google Translate (GT) for writing exercises. The swift speed, which saves a lot of time, is the most significant factor for the group of students interviewed. One student shared that, *"I typed unfamiliar English terms into the GT box, and their definitions would show up. To find words I didn't understand, I used GT"* (S5). Some students used GT to do other assignments in addition to

translating. One student claimed that GT enabled him to check the spelling of English words. *“I have to choose the right term to fill in the blanks for some exercises, like gap-filling, Sometimes GT helps me seek for the correct spelling if I believe a term has a spelling error”* (S6), he explained. These findings are supported by a variety of studies in the world such as Jaganathan et al. (2014), Chandra and Yuyun (2018), Kol et al. (2018). Medvedev (2016) also found that Omani students in an English Foundation Program preferred GT because it is free to use, practical, and simple to use. Besides, these results are reported by a number of Vietnamese and foreign authors. According to Vo (2022), the free online grammar checker Grammarly aids authors in word counts, spelling checks, grammar and punctuation checks, expression checks, word choice improvements, self-evaluations of goal structure usage, and English pronunciation checks. Besides, in the study of Utami et al. (2023), the general accessibility rating was 4.09 out of 5. The majority of participants reported that using learning tools with AI was not challenging for them. This is related to the general state of most knowledgeable individuals about information technology and how to use it (Utami et al., 2023).

In terms of students' motivation and interest, most students also agreed that AI-based learning tools make learners more engaged and interested in learning ( $M > 3.5$ ). In the interview, one student admitted, *“I did feel happy with these tools. When I received assistance with digital tools, I felt more imaginative and self-assured. I also like it because I was able to do it more quickly”* (S7). In addition, with AI-based learning tools, the participants were eager to learn. The majority of participants in the interview expressed excitement about gaining new experiences while using the learning tools. The participants then perceived that by reducing their writing challenges, adopting AI-based learning tools helped them meet their needs. The excitement of students when learning with AI-based tools was explained in the research of Tran and Dinh (2021) when the authors revealed that students were excited by some factors from AI such as real-time informational feedback, longer contact times, and prompt assistance.

From the results obtained from the survey, students had a good understanding of the role of AI-based learning tools in their writing learning process and a positive attitude towards many features of AI tools, which brought them undeniable benefits. However, it can be seen that there are still factors that did not gain a very high mean score, such as the diversity of AI-based learning tools ( $M = 2.75$ ). Therefore, in addition to the aforementioned advantages, it is also important to understand students' challenges while utilizing these programs during writing courses. The following section contains this information.

### *Research Question 2: What difficulties did students encounter when applying AI technology in English writing classes?*

To learn about some disadvantages of AI-based learning tools, part 2 of the survey was divided into two factors: objective (factors related to tools) and subjective (factors related to learners). Table 2 below illustrates the part 2 of questionnaire results.

Table 2.

## Disadvantages of AI technology applications

<b>Factors related to AI-based learning tools</b>	Mean	Median	Mode
<b>Grammarly</b>			
1. Learners only view suggestions for fixing mistakes, not usage details.	3.54	4	4
2. Websites with just one input form can be monotonous and boring.	4	4	4
<b>Paraphrasing Tool</b>			
3. This tool has limited suggestions for synonyms.	2.93	3	3
4. Paraphrasing long paragraphs is not always accurate.	4.24	4	4
<b>Google Translate</b>			
5. The quality of the translation is not reliable.	4.26	4	4
6. GT is culturally insensitive, making the translation unnatural.	4.22	4	4
<b>Factors related to learners</b>			
7. Learners are too dependent on tools when writing.	4.25	4	4
8. Learners have problems connecting to the Internet when using tools.	3.03	3	2
9. Learners fear lack of digital knowledge to use the tool.	2.94	3	2
10. Learners feel unmotivated to use AI-based tools when writing.	2.35	2	2

Table 2 shows that students' difficulties might come from both objective and subjective factors.

First, in terms of objective factors related to AI-based learning tools, all participants believed that each instrument has drawbacks. Students all agreed that the single-input form of the Grammarly website might be repetitive and uninteresting (M=4). This result is quite consistent with the rather low mean score of statement 8 in part 1 mentioned above. This disadvantage of Grammarly was also reported in the study of Vo (2022). This is also a suggestion for teachers to pay attention to flexibly applying a variety of applications to make students' writing activities more interesting. In addition, the main drawback of the Paraphrasing tool is that it sometimes fails to paraphrase lengthy passages (M=4.24) accurately. This finding aligns with the study of Vo (2022) and Sumakul et al. (2022). Google Translate seems to be the application with more disadvantages than the other two applications.

The translation quality of Google Translate is not always accurate (M=4.26). This was explained more clearly by the students in the interview. One student said: *"I only use Google Translate to translate short sentences. If the sentence is too long, the accuracy of the sentence will not be high"* (S8). Besides, Google Translate is culturally insensitive, making the translation unnatural (M=4.22). All participants expressed dissatisfaction with the accuracy of translated specialized terminologies, unusual structures, and difficult grammatical elements. One student, for instance, stated, *"GT does a wonderful job of bringing the source texts' common meanings together. However, occasionally the meaning of the translated Vietnamese grammatical structures was strange, so I couldn't grasp them"* (S9). The inability of GT to give context appropriateness for translated texts was another prevalent restriction that was brought up by every participant. They expressed their dissatisfaction: *"The translated language is inappropriate for statistical language. Reading the outcome made me angry since the words did not make sense in the situation"* (S10) and another student shared that, *"When dealing with lengthy sentences or intricate portions, GT frequently makes context-dependent mistakes"*

(S11). Phan and Chen (2020) and Kim and Han (2021) reported these weaknesses of Google Translate. Accordingly, the use of GT to complex and specialized word translations is difficult. Participants were usually unhappy with the translations' context and meaning as well (Phan & Chen, 2020).

Second, as regards subjective factors related to learners themselves, the biggest challenge belongs to the fact that students become too dependent on AI-based tools when writing (M=4.25). In fact, nowadays, students invest less in writing; or rather go easy on writing practice. With a problem when encountering a word, an idiom they do not understand, they feel uncomfortable and have to find a way to find out the meaning immediately (with a dictionary on the phone or online) without reading carefully and guessing the meaning of new words by themselves in a specific context of the problem. This problem was also mentioned in some studies of Kim and Han (2021), Nguyen (2023). Accordingly, the capacity of students to learn English or English writing may be hampered by the overuse of AI-based English writing learning aids. This problem was confirmed in the interviews with students. One student shared that:

I feel a bit lazy to think. Instead of searching for ideas, having references to articles on the same topic, searching for language elements/behaviors that are appropriate for my level, I just need to copy/paste and enter; then I will have a quick translation from Vietnamese or English. (S12)

However, it is good that some students recognized this dependence. One student said that with this way of learning, students are unlikely to be able to build and accumulate language capital and even less able to analyze language accurately because they do not know how to detect errors in translation. Another student claimed that relying on support tools could cause students to only deal with assignments, not actually learning to gain knowledge. Having such a tool available, time is no longer a concern for students to complete assignments by the deadline. Teachers need to warn students of the consequences if they overuse and depend on AI-based tools. This is very important because many learners are not aware of the negative side of the problem.

Other difficulties related to Internet access, digital knowledge or motivation did not gain high ratings of mean scores (M<3.5). One student stated that, "*Nowadays, we have access to information technology quite early, so accessing these tools is quite easy*" (S13). Students felt inspired when AI technology was applied in writing lessons, so most disagreed with statement 10. One student claimed that, "*AI technology makes the activities in our writing class quite diverse and interesting. If you learn to write in the traditional way, class time will be quite sleepy and boring*" (S14). This is in full agreement with the results obtained above about the undeniable benefits of AI-based learning tools in terms of accessibility, simplicity, and flexibility. This result is also consistent with the study of (Utami et al., 2023) in which the majority of participants reported that using learning tools with AI was not challenging for them.

## Limitations and Implications

Despite my best attempts to assess the data analysis, the study, within its scope, has a number of unavoidable limitations. It was not possible to poll every student enrolled in B1 classes at VNU due to scheduling constraints. Only B1 students I directly instructed were chosen to participate in the study. In addition, this study mainly focused on three AI tools utilized in my classes (Grammarly, Google Translate, and Paraphrasing tools), despite the wide range of AI technology applications in writing. I tried to involve every student in my class in completing the surveys to offset the drawback of participant numbers somewhat. I also carefully examined the interviewers' responses in order to gather a range of viewpoints from the students. If more time is given for research, I want to conduct a sizable survey with more willing and representative participants and more diverse AI writing tools in order to acquire more reliable and accurate findings.

This study shows that technology in general and AI in particular should only be used to supplement, not entirely replace, the role of humans in education. I suggest that there should be cooperation and agreement between teachers and students to utilize the potential of this technology effectively. AI technology can help teachers with lesson planning, course preparation, and student question responses. However, it is crucial for educators to be aware of the limitations of AI technology and not to rely on it exclusively. They should alter the knowledge supplied by AI technology, use it as a supporting tool, and critically assess it. For students, AI technology can help with information retrieval, addressing inquiries, and assisting with the creation of papers and theses. Students should comprehend or think creatively about the information from AI technology. They should become more capable of independent information analysis and critical thinking.

## Conclusion

This study was conducted to investigate the perceptions of 100 students at VNU about the application of AI-based learning tools in English writing classes. Research results show that students had a positive attitude about the role of AI-based applications in their writing-learning process. Undeniably, AI tools with outstanding accessibility, adaptability, and simplicity have greatly supported learners in the writing process. Thanks to these apps, students can enhance their writing abilities, enrich their grammar and vocabulary, leading to better quality of writing, and get their learning objectives. Another highlight is the fact that AI creates excitement and motivation for learners with real-time informational feedback. Thus, learners will increase their interaction time with the system due to the feeling of immediate and enthusiastic support. Undoubtedly, the application of AI will need to be extensively encouraged for education in general and higher education in the near future due to AI's benefits.

However, the article also pointed out some major difficulties and challenges when applying AI in education. According to the research findings, subjective and objective factors contribute to difficulties deploying AI-based learning systems. Regarding the objective aspect of AI-based learning aids, several notable drawbacks, such as inaccurate application recommendations or repetitive website input formats, might make students feel uninterested and bored. Additionally,

it would be impossible to ignore the issues brought on by the students themselves. In other words, learners who rely too much on supporting tools become lazy, incapable of acquiring linguistic knowledge, and even less able to interpret language effectively.

The findings from this study demonstrate that while developing AI in education on the basis of in-depth research on education, it is vital to strengthen policies, maintain fairness, and assure consistency. Along with that is the capacity building of teachers to be able to apply AI in education. I hope my research serves as a crucial foundation, laying the groundwork for future study and development to rigorously and efficiently build the right models and approaches for implementing AI in academic instruction rigorously and efficiently.

## References

- Alhalangy, A. G. I., & AbdAlgane, M. (2023). Exploring the Impact of AI on the EFL Context: A Case Study of Saudi Universities. *Journal of Intercultural Communication*, 23(2), 41–49. <https://doi.org/10.36923/jicc.v23i2.125>
- Arnold, N., & Ducate, L. (2015). Contextualized views of practices and competencies in call teacher education research. *Language, Learning and Technology*, 19(1), 1-9. <http://dx.doi.org/10125/44394>
- Bailey, D., Southam, A., & Costley, J. (2021). Digital storytelling with chatbots: mapping L2 participation and perception patterns. *Interactive Technology and Smart Education*, 18(1), pp. 85-103. <https://doi.org/10.1108/ITSE-08-2020-0170>
- Bailin, A. (1987). Artificial intelligence and computer-assisted language instruction: A perspective. *CALICO Journal*, 5(3), 25–45. <https://doi.org/10.1558/cj.v5i3.25-45>
- Cassidy, C. (2023). *Australian universities to return to 'pen and paper' exams after students caught using AI to write essays*. [The Guardian news]. Retrieved from <https://www.theguardian.com/Australia/news/2023/jan/10/universities-to-return-to-pen-and-paper-exams-after-students-caught-using-ai-to-write-essays>
- Chandra, S., & Yuyun, I. (2018). The use of Google Translate in EFL essay writing. *LLT Journal*, 21(2), 228-238. <https://doi.org/10.24071/llt.2018.210212>
- Desmet, P. (2009). L'enseignement/apprentissage des langues à l'ère du numérique: tendances récentes et défis. *Revue française de linguistique appliquée*, 11, 119-138.
- Ding, A. C. E., Ottenbreit-Leftwich, A., Lu, Y. H., & Glazewski, K. (2019). EFL teachers' pedagogical beliefs and practices with regard to using technology. *Journal of Digital Learning in Teacher Education*, 35(1), 20–39. <https://doi.org/10.1080/21532974.2018.1537816>
- El Shazly, R. (2021). Effects of artificial intelligence on English speaking anxiety and speaking performance: A case study. *Expert Systems*, 38(3), e12667. <https://doi.org/10.1111/exsy.12667>
- Enochsson, A., & Rizza, C. (2009). ICT in Initial Teacher Training: Research Review. *OECD*

- Education Working Papers*, 38, OECD Publishing, Paris. <https://doi.org/10.1787/220502872611>
- Fitria, T. (2021). Grammarly as AI-powered English writing assistant: Students' alternative for writing English. *Metathesis: Journal of English Language, Literature, and Teaching*, 5(1), 65-78. <https://doi.org/10.31002/metathesis.v5i1.3519>
- Gallacher, A., Thompson, A., & Howarth, M. (2018). "My robot is an idiot!" – Students' perceptions of AI in the L2 classroom. In P. Taalas, J. Jalkanen, L. Bradley & S. Thouësny (Eds), *Future-proof CALL: Language learning as exploration and encounters – short papers from EUROCALL 2018* (pp. 70-76). Research-publishing.net. <https://doi.org/10.14705/rpnet.2018.26.815>
- Gayed, J. M., Carlon, M. K. J., Oriola, A. M., & Cross, J. S. (2022). Exploring an AI-based writing assistant's impact on English language learners. *Computers and Education: Artificial Intelligence*, 3, 100055. <https://doi.org/10.1016/j.caeai.2022.100055>
- Holland, V. M., Maisano, R., Alderks, C., & Martin, J. (1993). Parsers in tutors: What are they good for? *CALICO Journal*, 11(1), 28–46. <https://doi.org/10.1558/cj.v11i1.28-46>
- Jaganathan, P., Maryam, H., & Ilangko, S. (2014). An Analysis of Google Translate Use in Decoding Contextual Semanticity among EFL Learners. *Asian Journal of Research in Social Sciences and Humanities*, 4(9), 1-13. <https://doi.org/10.5958/2249-7315.2014.00962.9>
- Kabir, S. M. S. (2016). Methods Of Data Collection. *Basic Guidelines for Research: An Introductory Approach for All Disciplines* (first ed., pp. 201-275).
- Kim, H. K., & Han, S. (2021). College students' perceptions of AI-based writing learning tools: With a focus on Google Translate, Naver Papago, and Grammarly. *Modern English Education*, 22(4), 90-100.
- Kol, S., Schcolnik, M., & Spector-Cohen, E. Google Translate in Academic Writing Courses? *The EuroCALL Review*, 26(2), 50-57. <https://doi.org/10.4995/eurocall.2018.10140>
- Köse, U., & Arslan, A. (2015). E-Learning experience with artificial intelligence supported software: An international application on English language courses. *GLOKALde*, 1(3), 61-75.
- Kukulska-Hulme, A., & Lee, H. (2020). Intelligent assistants in language learning: An analysis of features and limitations. In K.-M. Frederiksen, S. Larsen, L. Bradley & S. Thouësny (Eds), *CALL for widening participation: Short papers from EUROCALL 2020* (pp.172-176). Research-publishing.net. <https://doi.org/10.14705/rpnet.2020.48.1184>
- Kurshan, B. (2016). *The Future of Artificial Intelligence in Education*. <https://www.forbes.com/sites/barbarakurshan/2016/03/10/the-future-of-artificial-intelligence-in-education/#35b8ffc42e4d>
- Last, R. (1989). *Artificial intelligence techniques in language learning*. Ellis Horwood.
- Lidén, A., & Nilros, K. (2020). *Perceived benefits and limitations of chatbots in higher*



- education. Kalmar: Linnaeus University. Retrieved from <https://www.diva-portal.org/smash/get/diva2:1442044/FULLTEXT01.pdf>
- Lu, X. (2018). Natural language processing and Intelligent ComputerAssisted Language Learning (ICALL). *The TESOL encyclopedia of English language teaching*, 1–6. <https://doi.org/10.1002/9781118784235.eelt0422>
- McCarthy, J., Minsky, M. L., Rochester, N., & Shannon, C. E. (1955). A Proposal for the Dartmouth summer conference on artificial intelligence. *AI Magazine*, 31 Aug, 1-13. <http://jmc.stanford.edu/articles/dartmouth/dartmouth.pdf>
- Medvedev, G. (2016). Google Translate in Teaching English. *The journal of teaching English for specific and academic purposes*, 4(1), 181–193. Retrieved from <http://espeap.junis.ni.ac.rs/index.php/espeap/article/view/318/221>
- Mediyawati, N., Young, J. C., & Nusantara, S. B. (2021). U-tapis: Automatic spelling filter as an effort to improve Indonesian language competencies of journalistic students. *Cakrawala Pendidikan [Educational Horizon]*, 40(2), 402-412. <https://doi.org/10.21831/cp.v40i2.34546>
- Nagata, N. (1996). Computer vs. workbook instruction in second language acquisition. *CALICO Journal*, 14(1), 53-75.
- Ng, D. T. K., Luo, W., Chan, H. M. Y., & Chu, S. K. W. (2022). Using digital story writing as a pedagogy to develop AI literacy among primary students. *Computers and Education: Artificial Intelligence*, 3, 100054. <https://doi.org/10.1016/j.caeai.2022.100054>
- Nguyen, T. T. H. (2023). EFL Teachers' Perspectives toward the Use of ChatGPT in Writing Classes: A Case Study at Van Lang University. *International Journal of Language Instruction*, 2(3), 1-47. <https://doi.org/10.54855/ijli.23231>
- Nguyen, T. H. N., & Nguyen, T. T. H. (2022). Use of Google Docs in Teaching and Learning English Online to Improve Students' Writing Performance. *International Journal of TESOL & Education*, 2(2), 186–200. <https://doi.org/10.54855/ijte.222210>
- O'Brien, P. (1993). eL: AI in CALL. In M. Yazdani (Ed.), *Multilingual multimedia. Bridging the language barrier with intelligent systems* (pp. 85–139). Intellect.
- Pace-Sigge, M. & Sumakul, D. T. (2021). *What teaching an algorithm teaches when teaching students how to write academic texts* (Manuscript submitted for publication).
- Peter, J., & Singaravelu. (2020). Problems in writing in English among high school learners. *Aegaeum Journal*, 8(9), 1502-1515.
- Phan, T. T. N., & Chen, C. H. (2020). Vietnamese engineering students' perceptions of the use of Google Translation tool. *Journal of Science and Technology*, 48, 156-165.
- Rieland, R. (2017). Is artificial intelligence the key to personalized education? *Smithsonian Magazine*. <https://www.smithsonianmag.com/innovation/artificial-intelligence-key-personalized-education-180963172/>
- Russell, S., & Norvig, P. (2016). *Artificial Intelligence A Modern Approach*, 3rd Global Edition.

Pearson.

- Shumanov, M., & Johnson, L. (2021). Making conversations with chatbots more personalized. *Computers in Human Behavior*, 117(1), 106-627. <https://doi.org/10.1016/j.chb.2020.106627>
- Sumakul, D. T., Hamied, F. A., & Sukyadi, D. (2022). Artificial intelligence in EFL classrooms: Friend or foe? *LEARN Journal: Language Education and Acquisition Research Network*, 15(1), 232-256.
- Sumakul, D. T., Hamied, F. A., & Sukyadi, D. (2022). Students' Perceptions of the Use of AI in a Writing Class. Proceedings of the 67th TEFLIN International Virtual Conference & the 9th ICOELT 2021 (TEFLIN ICOELT 2021). In Strielkowski, W. (Ed.), *Advances in Social Sciences, Education and Humanities Research* (Volume 624). 103-144. Atlantis Press. <https://doi.org/10.2991/assehr.k.220201.009>
- Susanto, D. A., & Yosephine, M. (2019). Teachers' perceptions towards teaching writing using word games: The case study of junior high schools in Semarang, Central Java, Indonesia. *Media Penelitian Pendidikan: Jurnal Penelitian Dalam Bidang Pendidikan Dan Pengajaran*, 11(2), 1-9. <https://doi.org/10.26877/mpp.v11i2.3276>
- Tafazoli, D., María, E. G., & Abril, C. A. H. (2019). Intelligent language tutoring system: Integrating intelligent computer-assisted language learning into language education. *International Journal of Information and Communication Technology Education*, 15(3), 60-74. <https://doi.org/10.4018/IJICTE.2019070105>
- Tran, V. H., & Dinh, T. M. H. (2021). Artificial intelligence in education: Opportunities and challenges for the future of teaching and studying at universities. *Journal of Science and Technology - University of Danang*, 19(2), 38-42. <https://jst-ud.vn/jst-ud/article/view/3613>
- Tran, T. M. L., & Nguyen, T. T. H. (2021). The Impacts of Technology-based Communication on EFL Students' Writing. *AsiaCALL Online Journal*, 12(5), 54-76. Retrieved from <https://asiacall.info/acoj/index.php/journal/article/view/80>
- UNESCO. (2017). *Fostering a culture of reading and writing: Examples of dynamic literate environments: Selected case studies*. Institute for Lifelong learning. <https://unesdoc.unesco.org/ark:/48223/pf0000257933>
- Utami, S. P. T., Andayani, Winarni, R., & Sumarwati. (2023). Utilization of artificial intelligence technology in an academic writing class: How do Indonesian students perceive?. *Contemporary Educational Technology*, 15(4), ep450. <https://doi.org/10.30935/cedtech/13419>
- Vo, T. P. (2022). The tool has the application of artificial intelligence in teaching English writing. *Proceedings of National Scientific Conference (UNC): Research and Teaching Foreign Languages, Linguistics and International Studies in Vietnam*. Hanoi National University Publishing House, volume 2, p. 577-91.
- Wilson, J., Ahrendt, C., Fudge, E. A., Raiche, A., Beard, G., & MacArthur, C. (2021).

- Elementary teachers' perceptions of automated feedback and automated scoring: Transforming the teaching and learning of writing using automated writing evaluation. *Computers & Education*, 168, 104208. <https://doi.org/10.1016/j.compedu.2021.104208>
- Woolf, B. P., Chad, L. H., Chaudhri, V. K., & Kolodner, J. L. (2013). AI Grand Challenges for Education. *AI Magazine*, 34(4), 66-84. <https://doi.org/10.1609/aimag.v34i4.2490>
- Yin, J., Goh, T. T., Yang, B., & Xiaobin, Y. (2021). Conversation technology with micro-learning: The impact of chatbot-based learning on students' learning motivation and performance. *Journal of Educational Computing Research*, 59(1), 154-177. <https://doi.org/10.1177%2F0735633120952067>
- Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education—where are the educators? *International Journal of Educational Technology in Higher Education*, 16(1), 16-39. <https://doi.org/10.1186/s41239-019-0171-0>

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## Appendix 1 – Questionnaire

### *Students' Perceptions of the AI Technology Application in English Writing Classes*

*Hi, everybody. I would like to ask for your help with this questionnaire, which serves as my paper's major source of data. Thank you very much for your help!*

**Circle the number that best describes your choice.**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

#### ***Part 1: Advantages of AI technology applications***

Advantages of AI technology applications	Likert Scale
1. AI-based learning tools enhance learners' writing abilities.	1 2 3 4 5
2. AI-based learning tools aid learners to get learning objectives.	1 2 3 4 5
3. AI-based learning tools can enrich both vocabulary and grammar.	1 2 3 4 5
4. AI-based learning tools improve the quality of writing.	1 2 3 4 5
5. AI-based learning tools are accessible.	1 2 3 4 5
6. AI-based learning tools have a friendly interface for users.	1 2 3 4 5
7. AI-based learning tools are adaptable.	1 2 3 4 5
8. AI-based learning tools have various features.	1 2 3 4 5
9. AI-based learning tools make learners more engaged in learning.	1 2 3 4 5
10. AI-based learning tools increase learners' interest.	1 2 3 4 5

#### ***Part 2: Disadvantages of AI technology applications***

Factors related to AI-based learning tools	Likert Scale
<b>Grammarly</b>	
1. Learners only view suggestions for fixing mistakes, not usage details.	1 2 3 4 5
2. Websites with just one input form can be monotonous and boring.	1 2 3 4 5
<b>Paraphrasing Tool</b>	
3. This tool has limited suggestions for synonyms.	1 2 3 4 5
4. Paraphrasing long paragraphs is not always accurate.	1 2 3 4 5
<b>Google Translate</b>	
5. The quality of the translation is not reliable.	1 2 3 4 5
6. GT is culturally insensitive, making the translation unnatural.	1 2 3 4 5
<b>Factors related to learners</b>	
7. Learners are too dependent on tools when writing.	1 2 3 4 5
8. Learners have problems connecting to the Internet when using tools.	1 2 3 4 5
9. Learners fear lack of digital knowledge to use the tool.	1 2 3 4 5
10. Learners feel unmotivated to use AI-based tools when writing.	1 2 3 4 5

## **Appendix 2 – Suggested Reflection Questions**

1. Please briefly describe some of AI applications used in English writing classes.
2. What is the most popular AI applications used in English writing classes?
3. In what ways do you think the AI applications can benefit English writing learning?
4. Among these benefits, which is the best aspect in your opinion?
5. What challenges or difficulties have you encountered in using AI applications?
6. Among these difficulties, which is the most challenging aspect?
7. Do you think you are more affected by objective or subjective difficulties? Why?
8. What did you do to overcome them?
9. Do you think AI technology applications will be more popular in the future?
10. What would you suggest to use AI applications more effectively?

## Conceptual Metaphor “Media is Fire”

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### ABSTRACT

This study aims to explore the metaphorical concept of "MEDIA AS FIRE" in both Vietnamese and English from the perspective of Cognitive Linguistics. This research utilizes the Metaphor Identification Procedure of the Pragglejaz Group (2007), in conjunction with descriptive approaches, statistical analysis, and classification strategies, to scrutinize the conceptual metaphor "Media is Fire" and its underlying metaphors. A total of 193 metaphorical expressions from media discourse are examined (113 in Vietnamese and 80 in English), revealing three primary cognitive models: "Media is Heat," "The ability to transmit the energy of Media is the ability to transmit energy of Fire," and "Media is Burning," along with the mapping mechanism from the source domain to the target domain. Furthermore, this research emphasizes the similarities and differences in the conceptualization of fire-related metaphors between the two languages. The findings of this study offer valuable insights for teaching, learning, and translating conceptual metaphors, thereby enhancing cross-cultural communication skills for Vietnamese English learners."

**Keywords:** conceptual metaphor; mapping; media; fire; teaching & learning

### Introduction

The discovery and utilization of fire marked a significant advancement in human evolution. Fire has undergone extensive study and discussion throughout history, including its metaphorical representations in literature and various aspects of life. In his work "Metaphor: A Practical Introduction" (Kövecses, 2003), Kövecses explores metaphors such as "EMOTION IS HEAT OF FIRE," "A SITUATION IS HEAT OF FIRE," "ANGER IS FIRE," "LOVE IS FIRE," and "LIFE IS FIRE." Lakoff's research (1987) in "Women, Fire, and Dangerous Things: What Categories Reveal about the Mind" investigates the metaphorical link between anger and fire. Additionally, a 2016 study by Pham Thi Chau Pha and Tran Thi Phuong Ly delves into the lexical and semantic characteristics of the concepts of "Water" and "Fire" within the Vietnamese language. While previous studies have explored fire metaphors in French and Vietnamese (Le Lam Thi, 2016), there remains a gap in examining the metaphor of "MEDIA AS FIRE" from a

cognitive linguistics perspective. This study aims to fill this gap by comprehensively analyzing this conceptual metaphor.

## Literature review

### *Conceptual Metaphor*

Metaphor is the central concept of cognitive semantics. Unlike the traditional view that considers metaphor as a literary device, an ornamental and novel way of expression often used in poetry, cognitive linguistics defines metaphor as a tool of thought, penetrating our daily life not only in language but also in thought and action. Conceptual Metaphor Theory argues that metaphor operates at the level of thinking and is pervasive in everyday language (Kövecses, 2020; Lakoff and Johnson, 2003). The essence of a conceptual metaphor is understanding a concept in terms of another through cross-domain mappings, the principal mechanism of meaning transfers in metaphor (Lakoff and Johnson, 2003). The mappings are understood as the systematic, partial, and unidirectional projections of basic knowledge elements from a source to a target through the TARGET DOMAIN IS/AS SOURCE DOMAIN structure (Phan Van Hoa & Ho Trinh Quynh Thu, 2023). The mapping mechanism works as follows: the elements of the source domain are mapped onto the elements of the target domain so that the target domain can be comprehended through the source domain based on a set of mappings. To understand a conceptual metaphor is to know this set of mappings that applies to a given source-target pairing (Pham, T.G. (2023).

This article aims to explore the conceptual metaphor of Media within the Vietnamese language. It will analyze the mapping from the source domain FIRE to the target domain MEDIA and provide a comparative analysis with the English language.

In the statement "Truyền thông thế giới 'bùng cháy' vì cuộc họp báo của ông Trump" (World media is 'on fire' because of Trump's press conference), the metaphorical expression "bùng cháy" (translating to "on fire" in English) describes the heightened state of the world media. This metaphor originates from the concept of "MEDIA IS FIRE," with "FIRE" as the source domain and "MEDIA" as the target domain. In this metaphor, "FIRE" symbolizes attributes such as intensity, rapid dissemination, and attention-grabbing qualities, while "MEDIA" serves as the target domain, allowing these attributes to characterize media characteristics. The phrase "bùng cháy" (on fire) metaphorically portrays the world media as exceptionally active, rapidly disseminating information, and attracting significant attention, similar to the swift spread of fire. Consequently, it conveys that the world media is highly dynamic and prominent due to Trump's press conference. This usage harnesses the qualities associated with the source domain "FIRE" to vividly depict the target domain "MEDIA." This metaphorical expression is the focus of our paper, and we will provide further clarification.

### *Media and Fire*

Media is a complex concept that encompasses various definitions and perspectives. In "Media - Theory and Basic Skills" by Nguyen Van Dung and Do Thi Thu Hang (2018), it is described as an ongoing process of exchanging information, ideas, emotions, skills, and experiences

among individuals with the aim of fostering mutual understanding, shaping perceptions, influencing behavior and attitudes, and meeting the evolving needs of individuals, groups, communities, and society.

The Oxford Advanced Dictionary defines fire as the result of burning, encompassing flames, light, heat, and often accompanied by smoke. It also includes the notion of uncontrollable flames that can cause destruction to buildings, trees, and the like. The Cambridge Dictionary defines fire as the state of burning, resulting in flames that emit heat and light, potentially accompanied by smoke. Additionally, it mentions the concept of a controlled fire, typically employed for heating or cooking purposes.

### *Research Questions*

To fulfill the purpose of the study, the survey was seeking to answer the following research questions:

1. How is the conceptual metaphor “MEDIA IS FIRE” conceptualized in Vietnamese and English?
2. What are the similarities and differences in the conceptual metaphor “MEDIA IS FIRE” between Vietnamese and English?

### **Methods**

The conceptual metaphor "Media is Fire" explores how language and thought patterns shape our understanding of media. This metaphor suggests that we metaphorically use the characteristics and attributes associated with fire, such as intensity, rapid spread, and attention-grabbing qualities, to describe various aspects of the media landscape. Understanding this metaphor can illuminate how we perceive and interact with media in different contexts.

To meet the research criteria, we obtained a combined total of 113 Vietnamese and 80 English samples from a corpus of articles in both languages. These articles were sourced from various websites and reliable online newspapers, including, but not limited to, Dan Tri, Nhan Dan, Thanh Nien, Tuoi Tre, and Tien Phong, as well as international sources like the New York Times, CNN, The Guardian, Forbes, NBC News, and The Washington Post. The conceptual metaphor of "Media as Fire" was analyzed using the theoretical framework of cognitive linguistics. The analysis employed descriptive and semantic analysis methods, complemented by statistical analysis and classification techniques.

The authors identified metaphorical samples using the Metaphor Identification Procedure (MIP) proposed by the Pragglejaz Group (2007). This procedure involved four steps: (i) Reading to understand the content related to media; (ii) identifying words/phrases describing or relating to fire; (iii) examining the words preceding and following them to determine if they had any figurative meaning, as opposed to their literal meaning; (iv) if so, considering them metaphorical expressions. This study employed a descriptive approach to analyze, classify, and identify implicit meanings. Statistical and inference methods were used to identify the source and target domains projected onto each other, creating implicit cognitive structures related to media. Through these methods, the paper presents discussions on the identified implicit



cognitive structures associated with media.

## Results/Findings and Discussion

The Mapping structure between the two domains of Media and Fire is displayed in Table 1 below:

Table 1.

Mapping structure of Conceptual metaphor MEDIA IS FIRE

SOURCE: FIRE	Mapped onto	TARGET: MEDIA
High temperature	→	The news is of high interest and significance, exciting, important, and attention-grabbing
Low temperature	→	The information is old, outdated, and no longer of interest to the audience
Rapid expansion of fire	→	The rapid spread of information or attention
Fire	→	negative and harmful information
Extinguish a fire to prevent destruction	→	Eliminate false information and manage and suppress rumors to prevent their harmful consequences

Much like fire, media wields significant influence and can profoundly impact individuals and society. In the mapping process, specific attributes from the source domain are activated and then projected onto the target domain, following the principle of partial mapping. The target domain, represented by the recipient 'Media,' selectively incorporates certain attributes from the source domain, thus gaining knowledge associated with the source domain of 'Fire.' Statistics on metaphorical expressions in the conceptual metaphor 'MEDIA IS FIRE,' connecting these two conceptual domains, can be illustrated through the concept of 'media as fire,' as depicted in Table 2 below.

Table 2.

Metaphorical Expression Statistics of Conceptual Metaphor MEDIA IS FIRE

The similarities between the source and target domains	Metaphorical expressions	Vietnamese	English	Total number of metaphorical expressions
		Occurrences	Occurrences	
Intensity	Hot	44	28	193
	Cold	6	9	
	Boil over	16	2	
Suddenness, impact	On fire	5	4	
	Spread	9	9	
	Explore	9	4	
Harm, danger	Flame, Fire	12	5	
	Extinguish	12	6	
<b>Total</b>		<b>113</b>	<b>80</b>	

The concept of Media can be understood through the concept of Fire, a tangible expression of temperature, thanks to metaphorical mapping. Fire is an entity that emits heat, burns, is extinguished, and is sustained by coal, firewood, oil, etc. Media is the target domain, perceived through the words of the source domain, Fire. In the metaphorical model, MEDIA IS FIRE, the underlying mapping is the recognition of heat, warmth, the activities of fire, and human activities related to fire, which then evoke Fire. The model appears simultaneously in both English and Vietnamese news broadcasts. Based on the mapping structure of the conceptual metaphor MEDIA AS FIRE in Table 1, we establish the cognitive metaphor models of Media, with the source domain being Fire, as follows.

Table 3.

The cognitive metaphor models of Media is Fire

Cognitive metaphor models	Vietnamese		English	
	Occurrences	(%)	Occurrences	(%)
Media is Heat	66/113	58	39/80	49
The ability to transmit the energy of Media is the ability to transmit energy of Fire	23/113	20	30/80	38
Media is Burning	24/113	22	11/80	14
<b>Total</b>	<b>113</b>	<b>100</b>	<b>80</b>	<b>100</b>

The conceptual metaphor MEDIA IS FIRE involves mappings from the source domain of FIRE to the target domain of MEDIA. The paper analyzed 193 metaphorical expressions and identified three cognitive models: (1) Media is Heat; (2) The ability of Media to transmit energy is like the ability of Fire to transmit energy; (3) Media is Burning. These models encompass terms such as press, social media, fake news, rumors, advertising, and media. In Vietnamese, the most prominent model is "Media is Heat" (58%), followed by "Media is Burning" (22%) and "The ability of Media to transmit energy is like the ability of Fire to transmit energy" (20%). In English, the most prominent model is "Media is Heat" (49%), followed by "The ability of Media to transmit energy is like the ability of Fire to transmit energy" (38%), and "Media is Burning" (14%).

#### *The conceptual metaphor "Media is Heat"*

(1) *Báo chí Mỹ sục sôi vụ Tổng thống Trump 'cấm cửa' phóng viên CNN (The US press boiled over the case of President Trump 'banning' CNN reporters)*

In its literal sense, "sục sôi" means boiling due to high temperature or intense energy. In this context, it describes the intense reaction of the American media. Both "sục sôi" and heated situations convey high intensity. "Sục sôi" represents boiling, while in the media context, it signifies heightened activity and emotion. Like boiling water, media reactions can be agitated, transferring attributes of intensity and agitation from "heat" to "media." This metaphor implies the media's intense, energetic, and agitated response to President Trump's actions, adding vividness and depth. It suggests the incident with President Trump and CNN reporters sparked a lively reaction from the American media. In summary, "sục sôi" in this context is a powerful linguistic device conveying the energetic response of the American media to Trump's actions,

enriching the description of the dynamic media landscape at that moment.

**(2)** *Tu-160M2 Nga chưa cất cánh, truyền thông Mỹ ‘sôi sùng sục’ (Russian Tu-160M2 has not taken off, US media ‘boiling’)*

In its literal sense, "sôi sùng sục" means vigorous boiling, signifying high temperature or intense boiling. In this context, it metaphorically characterizes the fervent reaction of the American media. Both "sôi sùng sục" and intense heat convey high intensity. Here, intensity relates to the media's excitement, interest, or activity. Boiling water is actively enthusiastic, much like the media's response to a particular event. This metaphor transfers attributes from "The Heat" (intensity, enthusiasm) to the "Media" domain, implying that the American media's response to Russia's Tu-160M2 news is extremely intense and fervent, resembling boiling or bubbling. It vividly portrays the media's reaction as exceptionally charged and enthusiastic. In short, "sôi sùng sục" in this context underscores the media's enthusiastic and intense response to the news, drawing parallels between the literal and figurative domains to convey heightened excitement and interest in their coverage.

**(3)** *Quyết không một dòng tin nguội lạnh (Determined not to let a cold message prevail)*

"Nguội" denotes a lack of warmth or low temperature. In the context of "Media," it pertains to information, news, or messages categorized as either "hot" (emotionally charged, urgent, or significant) or "cold" (lacking emotional impact, urgency, or significance). The metaphor "tin nguội lạnh" transfers the concept of "nguội" to describe uninteresting or unimportant information within the realm of media. This usage underscores that such information lacks emotional or sensational content, similar to how "cold" lacks warmth or excitement. Therefore, saying "quyết không một dòng tin nguội lạnh" emphasizes a determination to avoid uninteresting or unimportant information, highlighting its lack of emotional or significant impact, akin to the absence of warmth and intensity in something cold.

**(4)** *'Hot news from the Super League!'*

In its original sense, "hot" refers to high temperature or heat. This term is metaphorically applied to news, transferring attributes of intensity, freshness, and attention-grabbing quality from heat to news. This use of "hot" implies that the Super League news is recent, exciting, important, and captivating, making it more appealing to the audience. In summary, the metaphorical use of "hot" in the news conveys the idea that the news is not only current but also highly noteworthy and significant, engaging readers and viewers.

**(5)** *Cold news on boiler repairs because I was not a 'tenant'*

In this metaphorical usage, "cold" conveys that the news about boiler repairs is not presented in an enthusiastic or engaging manner. It suggests that the news might be delivered without much warmth or concern, possibly making the speaker feel uninteresting or unwelcome. The use of "cold" here emphasizes the lack of emotional engagement or positive attitude associated with the news. In summary, the metaphorical use of "cold" in the context of news transfers its attributes of lack of emotion, indifference, or unwelcome surprise from the domain of temperature to the domain of news. This helps convey the idea that the news about boiler repairs is not presented in a positive or engaging way, possibly due to the speaker's lack of involvement

or interest. This sentence may imply that the speaker is not a tenant. Therefore, the news about the repair of the boiler does not affect them or that they are not responsible for this, which can cause a feeling of disinterest or coldness.

(6) *The Republican presidential hopeful John McCain let his frustration with the US **media boil over** today for its saturation coverage of Barack Obama's visit to the Middle East and Europe*

In the metaphor, "boil over," attributes from the domain of "Heat" are transferred to the domain of "Media." When a liquid reaches its boiling point, it overflows uncontrollably, which shares an attribute with the concept of frustration. Frustration, as an emotion, can also intensify and become uncontrollable, akin to the uncontrollable nature of boiling water. The term "saturation" in media coverage suggests excessive coverage, mirroring the idea of overflow. In essence, the metaphor effectively conveys that John McCain's frustration with the media has become intensely overwhelming, like boiling liquid spilling uncontrollably from its container, signifying his inability to contain or control his frustration.

The analysis provided for each example effectively demonstrates how metaphors related to temperature and intensity are used to describe the media's reactions and coverage. These metaphors help convey the level of enthusiasm, interest, or emotional impact associated with different news stories or situations. They illustrate how language can be employed to make media descriptions more vivid and engaging, drawing parallels between literal and figurative meanings to enhance understanding and create a more immersive narrative.

*Conceptual metaphor "The ability to transmit energy of Media is the ability to transmit energy of Fire"*

(7) *Mạng xã hội bùng nổ trước thông tin BlackPink tổ chức concert tại Việt Nam (**Social media exploded** with news that BlackPink held a concert in Vietnam)*

In the realm of "Fire," "bùng nổ" signifies a rapid, intense ignition and spread of energy, akin to how fire swiftly engulfs its surroundings. In the context of "Media" or "Social Media," this term metaphorically likens these platforms to a source of energy or information that rapidly and intensely disseminates, mirroring the behavior of fire. This metaphor implies that news of BlackPink's concert on social media ignited a powerful, widespread reaction among users, akin to how fire engulfs with intensity. "Bùng nổ" in this expression conveys the idea that the information about the concert swiftly and explosively spread on social media, generating a high level of excitement, interest, and activity. It captures the rapid and intense impact of social media in disseminating information and creating buzz about an event.

(8) *Mạng xã hội "nổ tung" với hình ảnh kín đặc người tại các khu du lịch trong dịp nghỉ lễ (Social media "exploded" with crowded images at tourist areas during the holiday season)*

Fire literally explodes, emitting heat and light. In social media, "nổ tung" metaphorically suggests a sudden surge in activity, posts, interactions, and information sharing. Social media platforms become intense and highly active during holidays, dominating the online space. Like fire, they grab immediate attention due to their unpredictability. In summary, "nổ tung" parallels the explosive energy release of fire with the sudden, intense surge in social media activity

during holidays, vividly describing its overwhelming nature.

**(9) Bill Gates: "Tin giả lan truyền nhanh hơn tin thật trên mạng xã hội" (Bill Gates: "Fake news spreads faster than real news on social media.")**

"Lan truyền" literally means something spreading from one point to another, applicable to information, ideas, or phenomena. Bill Gates uses the metaphor "Tin giả lan truyền nhanh hơn tin thật trên mạng xã hội," meaning "Fake news spreads faster than real news on social media." Fire and media information share the attribute of speed, with fire spreading rapidly in ideal conditions, and online information going viral swiftly. Both propagate energy or data. Fire and media information can be powerful and impactful. Bill Gates' metaphor underscores the negative aspect of fake news spreading uncontrollably, likening it to a destructive fire. It implies that fake news can cause harm and far-reaching consequences, similar to an uncontrollable fire. In summary, the metaphor "lan truyền" draws parallels between the rapid spread of fire and information on social media, emphasizing the destructive potential of fake news.

**(10) Truyền thông thế giới "bùng cháy" vì cuộc họp báo của ông Trump (The global media is "on fire" because of Mr. Trump's press conference.)**

The metaphor transfers the characteristics of intensity, rapid spread, attention-grabbing, and transformation from the domain of fire to the domain of global media. Saying that "Truyền thông thế giới 'bùng cháy'" vividly describes the heightened state of activity, excitement, and coverage in global media caused by Mr. Trump's press conference. It conveys the idea that the event has ignited widespread interest, intense coverage, and rapid dissemination of information across various media platforms, similar to a fire rapidly spreading and capturing attention.

**(11) Researchers looked at thousands of spider news stories to study how sensationalized information spreads**

Fire rapidly spreads energy through combustion. In media, "transmitting energy" means disseminating information via channels like newspapers and websites. Both "Fire" and "Media" share the attribute of spreading or transmitting, though differently: Fire's combustion transfers intense, often destructive heat energy, while media spreads information, such as sensationalized news, rapidly and extensively. The metaphor "spreads" vividly portrays how sensationalized information gains widespread attention, leveraging the shared attribute of swift and pervasive transmission between fire and media, emphasizing their rapid and extensive influence.

**(12) Lady Hale (and her brooch) sets social media on fire**

"Lady Hale's brooch ignited social media": In this metaphor, Lady Hale's brooch, likely unique or eye-catching, sparked a rapid and intense response on social media platforms, sharing attributes with fire in terms of its ability to spread rapidly, capture attention, generate engagement, and have a significant impact on discussions. This vividly conveys the remarkable and influential nature of Lady Hale and her brooch in generating widespread attention and discussion on social media.

In all these cases, the metaphor helps convey the dynamic and powerful nature of media in disseminating information and generating reactions, likening it to the energy and intensity associated with fire.

### *The conceptual metaphor “Media is Burning”*

(13) *Dùng mạng xã hội như dùng lửa. Biết cách dùng thì lửa sưởi ấm cuộc sống, không biết cách dùng thì cháy nhà, chết người. (Using social media is like using fire. Knowing how to use it, fire warms our lives; not knowing how to use it, it burns down homes and kills people)*

The term "lửa" is associated with its potential for both positive and negative effects. Fire can provide warmth and utility but can also cause destruction if mishandled. In the context of "Media" and social media, the metaphor draws parallels between the potency and consequences of using social media and fire. Just as fire can be harnessed for warmth or destruction, social media can be a tool for positive communication or harmful outcomes when used unwisely. "Dùng mạng xã hội như dùng lửa" suggests that using social media is akin to handling fire. If used wisely, it can enrich one's life like fire provides warmth. However, careless or malicious use of social media can have destructive consequences, similar to how fire can lead to house fires and loss of life. This metaphor, “**Media is Burning**” reflects the importance of responsible social media use, likening it to the careful handling of fire to avoid unintended negative consequences.

(14) *Trước những thông tin xấu độc được đưa ra trên mạng xã hội, nếu có thông tin phản biện ngay, vào cuộc xử lý sớm, sẽ ngăn chặn kịp thời sự lây lan; dập tắt đốm lửa ngay từ đầu sẽ không bùng lên thành đám cháy (Faced with harmful and false information being spread on social media, if there is a prompt response with counter-information and early intervention, it will prevent the timely spread of the news; extinguishing the spark right from the beginning will prevent it from turning into a blaze)*

In the context of fire, "đốm lửa" means a small spark or flame, while in media, it metaphorically represents a minor instance of negative or harmful information. It signifies the initial occurrence of something negative in the media. Conversely, "đám cháy" literally means a large, uncontrollable fire, but in media, it metaphorically represents the rapid and uncontrollable spread of negative information. Both metaphors highlight the importance of early intervention and prevention, comparing them to controlling fires before they escalate. They emphasize that addressing issues when they are still "đốm lửa" can prevent them from becoming widespread "đám cháy" in the media landscape. These metaphors vividly convey the idea that prompt action can prevent minor issues from becoming major crises in the media.

(15) *Nhà báo cần có nghĩa vụ vạch trần và dập tắt tin giả (Journalists have a duty to expose and extinguish fake news)*

In its original literal context, "dập tắt" means "to extinguish" or "to put out," typically used for fires or stopping something from spreading. In the example sentence, it's used metaphorically in journalism and media to signify the act of controlling or suppressing harmful content, specifically fake news or false information. The sentence "Nhà báo cần có nghĩa vụ vạch trần và dập tắt tin giả" conveys that journalists have a duty to uncover and suppress fake news, similar to extinguishing a fire to stop its spread. This metaphor underscores journalists' responsibility to uphold information accuracy and integrity. It draws upon the shared attribute of harm or danger between "Fire" and "Media" to emphasize the journalist's role in combating

false information and protecting the truth.

(16) *The White House is busy trying to **extinguish rumors** President Trump is ready to fire more staffers*

The word "extinguish" in its literal sense means to put out or quench a fire or a flame. It involves the action of eliminating or stopping something that is burning or in a state of combustion. The word "extinguish" in example (16) is used metaphorically to convey the idea that the White House is actively working to stop or eliminate rumors about President Trump firing more staffers, drawing a parallel between the control of information (media) and the act of extinguishing a fire, both involving the cessation or containment of something potentially harmful. This metaphor relies on attribute similarity between the concepts of "Media" and "Fire" in terms of their potential to spread or escalate if not managed.

(17) *But let's face it, with the newest advances in technology, we can be connected at all times. We can always be available for impromptu brainstorming or the occasional **social media fire**. Smartphones and mobile devices give us access to constantly check our emails in case of any type of work emergency.*

In its original sense, "fire" refers to the combustion process symbolizing energy, intensity, and swift propagation. When used metaphorically in "social media fire," it doesn't involve real flames but describes a phenomenon on social platforms. This shift in meaning is based on shared attributes between "fire" and "social media." Just as fire is intense and spreads rapidly, certain social media topics or discussions can quickly gain popularity or controversy. When content goes viral or attracts widespread attention, it can be compared to a "fire" for its rapid dissemination. Fire signifies energy and excitement; similarly, on social media, topics generating enthusiasm or passion are called a "fire" due to their high activity and buzz. Fire spreads swiftly, and likewise, on social media, information or content can spread rapidly. When something becomes a "social media fire," it implies that it is spreading quickly across the platform and gaining substantial attention. This metaphorical usage encapsulates the notion of a lively, fast-spreading phenomenon on social media, mirroring the attributes of actual fire.

### *Similarities and Differences of the Conceptual metaphor of "MEDIA IS FIRE" in Vietnamese and English*

The research shows the significant similarities and differences in the "MEDIA IS FIRE" conceptual metaphor between Vietnamese and English.

Both English and Vietnamese languages employ metaphorical mappings for "MEDIA IS FIRE," with corresponding expressions. To be more specific, they both use terms like "Hot/ nóng" and "Boil/ sôi" to convey the excitement and importance of media, as well as "Spread/lan truyền" and "Explore/nỗ tung" for the rapid dissemination of information. Negative aspects are portrayed with words like "Extinguish/dập tắt" and "on fire/bùng cháy". Survey data reveals a similar frequency of "MEDIA IS FIRE" metaphorical expressions in both languages, with 113 in Vietnamese and 80 in English, indicating a shared understanding of this metaphor. The metaphor can be deconstructed into three subcognitive metaphors: Media as Heat, Media's Energy Transmission Capability as Fire's Energy Transmission Capability, and Media as

Burning. In both languages, "Media as Heat" dominates, followed by the other two, highlighting a common cognitive structure. Both Vietnamese and English employ similar metaphorical expressions related to "Fire" to describe various aspects of media, emphasizing attributes like intensity, suddenness, impact, harm, danger, and more.

The "MEDIA IS FIRE" metaphor appears 113 times in Vietnamese and 80 times in English. While English has fewer occurrences and less diversity, specific fire-related expressions are more frequent in Vietnamese, such as "hot" (44 times in Vietnamese vs. 28 in English) and "boil over" (16 times in Vietnamese vs. 2 in English). Despite these quantitative differences, both languages effectively use the "MEDIA IS FIRE" metaphor to convey the concept of media, making it a powerful linguistic tool.

The "MEDIA IS FIRE" metaphor exhibits remarkable similarities between English and Vietnamese, reflecting its universal cognitive and linguistic significance. Both languages have some similar conceptual metaphorical expressions to convey the dynamic nature of communication and some nuanced differences to reflect their cultural perspectives.

## **Conclusion**

This study has provided compelling evidence that language plays a fundamental role in shaping and expressing our thoughts. Through a thorough examination of the metaphor "MEDIA IS FIRE," the research has demonstrated the existence of this type of metaphor in both Vietnamese and English. The investigation led to the identification and analysis of three distinct metaphorical models: (1) Media is Heat; (2) The ability to transmit the energy of Media is the ability to transmit the energy of Fire, and (3) Media is Burning. These models shed light on the prevalent use of fire-related terminology when discussing media-related topics, offering valuable insights into the cognitive processes underlying media perceptions among both English and Vietnamese speakers. As a result, the findings significantly contribute to understanding these two languages' cognitive foundations.

To gain a deeper understanding of these linguistic variations, a suggestion is that it is imperative to undertake further research that delves into the distinct cultural characteristics of each ethnic group. Additionally, the existence of other prevalent conceptual metaphors associated with MEDIA, such as "MEDIA IS WAR," "MEDIA IS WEATHER," and "MEDIA IS PLANT," among others should be continued to identify for further research. This broader exploration will enrich our understanding of language and thought and enhance our ability to communicate effectively across linguistic and cultural boundaries.

The paper is effective and holds significant value in the fields of teaching and research, serving as a valuable reference source. The research provides a deeper understanding of how both Vietnamese and English speakers perceive and comprehend the objective world through the lens of communication. Moreover, the research results offer substantial support for translation, teaching, and research efforts within language departments at universities and colleges.



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## References

- Kovecses, Z. (2010). *Metaphor: A Practical Introduction* (2nd ed.). Oxford University Press.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by* (2nd ed.). The University of Chicago Press.
- Lakoff, G., & Johnson, M. (1987). *Women, Fire and Dangerous Things: What Categories Reveal about the Mind*. The University of Chicago Press.
- Lê, L. T. (2017). *Ảnh dụ Phạm trù Lửa trong tiếng Pháp và Tiếng Việt từ góc độ ngôn ngữ học tri nhận* [Doctoral dissertation, Đại học Khoa học, Đại học Huế].
- Nguyễn, V. D., & Đỗ, T. T. H. (2018). *Truyền thông - Lí thuyết và kỹ năng cơ bản*. Nxb Thông tin & Truyền thông, 12-14.
- Phạm, T. C. P., & Trần, T. P. L. (2016). Đặc điểm trường Từ vựng - Ngữ nghĩa của “Nước” và “Lửa” trong tiếng Việt. *Tạp chí Khoa học Đại học Văn Hiến*, 5(1), 32-37
- Pham, T. G. (2023). Conceptual metaphor “WOMEN ARE ANIMALS” in 20<sup>th</sup> century Vietnamese literature. *ICTE Conference Proceedings*, 3, 26-40. ISSN: 2834-0000. ISBN: 979-8-9870112-2-5. DOI: <https://doi.org/10.54855/ictep.2333>
- Phan, V. H., & Ho, T. Q. T. (2023), A cognitive Investigation into the Love-Life Relationship Expressed in Poetry, *Metaphor and Symbol*.38(2), 174-183. <https://doi.org/10.1080/10926488.2022.2058398>

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## AI and Plagiarism: Opinion from Teachers, Administrators and Policymakers

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### ABSTRACT

The emergence of AI applications like ChatGPT is becoming a big concern in recent times. In the field of education, AI promises to bring important breakthroughs to improve teaching and learning efficiency, but it also raises great concerns. Teachers fear that learners may turn to ChatGPT or other AI applications to generate ideas, correct mistakes, or even write complete essays. The educational forums have also revolved around how to accurately assess learners' competence when they currently have too many support tools from AI applications. Teachers, administrators, and policymakers themselves have divergent views on whether the use of AI applications in academic writing is plagiarism. This study focuses on understanding the views of teachers, administrators, and policymakers on the issue of AI and plagiarism. The research instrument is a questionnaire designed to clarify their acceptance or disapproval of learners' use of AI applications in academic writing and the extent of acceptable use. The research results show that AI applications have become increasingly popular in teaching and learning practices, and participants are quite open to this trend. Meanwhile, most participants are aware of the negative impacts that such applications may bring about. The research data also reveal that surveyed teachers and administrators/policymakers have varied or even opposing perceptions of the use of AI applications in academic writing. These research findings should be considered for developing or adjusting legal documents in the field of education to keep these documents updated with the actual situation.

**Keywords:** AI application, academic writing, plagiarism

### Introduction

In the present research, Artificial intelligence (AI) attracts much attention and is claimed to bring great support to English teaching and learning (Gawate, 2019; Fitria, 2021). However, researchers, educators, and teachers also mentioned possible threats that AI may cause, including negatively affecting the role of teachers (Aljohani, 2021) while making learners less creative and dependent and even proliferating plagiarism (Francke & Alexander, 2019). Such fear results from the invention of powerful AI tools, including chatbots like ChatGPT, which can generate ideas, correct mistakes, and even compose full essays based on users' demands. Accordingly, people working in the education field have varied viewpoints on the application

of AI tools, especially in academic writing. This research was conducted with the purpose of collecting teachers', administrators', and policymakers' opinions concerning their acceptance or disapproval of learners' use of AI applications in academic writing and the extent of acceptable use. The ultimate purpose is to propose how legal documents like regulations on plagiarism should be developed or adjusted appropriately.

## Literature review

### *Key terminologies – AI and AI applications*

An early definition of AI was mentioned by Rich and Knight (1991), who defined AI as the analysis of how computers do tasks that people currently do better. More recently, AI was defined as a device that makes intelligent decisions autonomously (Ginsberg, 2012). This terminology is also commonly referred to as Machine Intelligence. In this sense, AI is about adding human intelligence to the machine for task execution (Mehrotra, 2019). In the field of education in general and the teaching and learning of English in particular, AI is actually the application of AI systems or tools to support teaching and learning practices (Pettela, 2020; Mukhallafi, 2020).

Numerous AI applications have been created to help English teachers and learners overcome their difficulties, such as machine translation, automatic speech recognition, information retrieval techniques, text-to-speech techniques, writing evaluation techniques, etc. Fitria (2021) named the most common AI applications for the time being, including Google Translate, Text to speech, Elsa (English learning speech assistant), Chatbot, and Duolingo. Among the mentioned applications, chatbots have gained increasing popularity and using them has become a trend in teaching and learning English.

### *Benefits of AI applications*

There has been not a small number of research conducted on the benefits that applications of AI tools may bring to learners and teachers.

Pettela (2020) carried out research on the use of AI applications to teach and learn English to secondary-level students. The author claimed that employing AI applications, including programmed learning and other open sources of high technology, is a current trend in the field of experimental research. The benefits of AI applications are the ability to tailor support to suit individual learners' specific needs and abilities. Moreover, AI tools may be superior to teachers in the way that they provide immediate feedback and unlimited guidance whenever learners need it. One of the areas that AI can be used to help learners overcome their difficulties in learning English is the field of paragraph and essay writing. Besides, AI can be used to develop students' reading comprehension, translation skills, and speaking skills – especially pronunciation and enrich their vocabulary. In short, it seems that AI has revolutionized traditional education into an automated education.

Fitria (2021) also shared similar research results when emphasizing that AI can be considered a tutor for language learning. Specifically, AI tools offer tireless and individualized training and provide learners with a large volume of feedback. As for chatbots, a recently popular AI tool, they can be used as an English conversation partner. Conversations can be carried out in either oral or written form, through which learners can practice and improve their productive skills. Besides, learners can also get corrections and assessments of their practice, receive comments regarding the location of errors, and suggestions for replacing words. Consequently, AI is expected to shorten the time learners need to develop their language competence. The two most

mentioned language components that AI applications boost in learners are oral language skills (Ahmed-Ali, 2020) and grammar skills (Kim, 2019).

For such impressive benefits, some even think that AI may replace teachers in English classrooms (Shin, 2018), though many other researchers disapprove of this prediction. Instead, teachers in Education 4.0 should collaborate with AI in their teaching process. Teachers' language literacy is now in a neat combination with digital literacy to create global competence (Srivani et al., 2022).

### *Perceptions of AI applications*

Perceptions of stakeholders in the field of education on the effects of AI applications are also a topic of great concern.

Research shows that most teachers and learners have a positive attitude towards the use of AI in teaching and learning English (Aljohani, 2021). However, in the research conducted by Francke and Alexander (2019), the issue of the potential influence of AI on plagiarism in higher education was raised. The research results show that all respondents believe that AI could proliferate plagiarism in higher-education institutions' assessments. Besides, respondents all do believe that there is a need for universities to respond to the threat of AI on plagiarism. Proposed suggestions include changing assessment methods, developing rules around the applications of AI tools, and conducting more research on the issue. In reality, the use of AI applications, especially chatbots, has elevated the worries of plagiarism in academic work as they can massively generate full essays and other high-quality texts. As a result, many educational institutions have restricted or even prohibited the use of chatbots (Khalil & Er, 2023).

This study was carried out to clarify how university teachers, administrators, and policymakers in Vietnam perceive the application of AI tools. Within the limited scope of this research, the focus is just their acceptance or disapproval of learners' use of AI applications in academic writing and the extent of acceptable use.

### *Research Questions*

The study aims to answer three research questions:

1. What are common AI tools that are used in teaching and learning academic writing?
2. What are teachers, administrators, and policymakers' perceptions of the applications of AI tools in academic writing? Do they accept or disapprove of learners' use of AI tools?
3. What is the extent of acceptable use of AI tools in these stakeholders' opinions?

## **Methods**

### *Pedagogical Setting & Participants*

As academic writing is mostly taught at higher education levels, the study focused on exploring the stakeholders' perceptions at this level. The total sample involves 68 lecturers at the undergraduate and graduate levels. The participants come from eighteen different colleges, academies, and universities in the northern, central, and southern areas of Vietnam. Of those participants, more than 85 are female lecturers. The most typical degree is a master's (61.76%), while those with a doctoral degree account for 22.06%, and the number of participants with a bachelor's degree is 16.18%. The majority of participants teach English (80.88%), and those who teach other foreign languages account for 19.12%. Most of them are experienced teachers – 30.88% have more than 15 years of experience, 42.65% have taught English from 10 to less

than 15 years, 17.65% have from 5 to 10 years of experience, and just 7.35% have been English lecturers for less than 5 years. In terms of the level that they are working at, 88.24% work with undergraduate learners, while 26.74 of them work with graduate learners (some of the participants work at both levels). The participants (82.35%) mainly work in public or state educational institutions. Among 68 participants, 22 of them (32.35%) are also in certain leading positions – they are considered administrators and policymakers in this study.

### *Data collection & analysis*

To collect data and answer three research questions, an online questionnaire was built on Google Forms – one of the most common data collection tools at present. The questionnaire was designed with three main parts. The first part focuses on gathering personal information about participants, as clarified in the previous part. The second part aims to explore the participants' and their learners' real experiences with AI tools in teaching and learning academic writing. The questions in this part focused on the kinds of AI tools that the participants and their learners use and the frequency level of each tool. The target of the last part of the questionnaire is to explore how the participants (teachers versus administrators/policymakers) perceive the use of AI tools in the field of academic writing and which tools are acceptable. Most of the questions are Likert-scale type. The scale is from 1 to 4 or 5, showing the degree of agreement (from strongly agree to strongly disagree), degree of mastery (from not knowing the application to mastering the application), or frequency (from very often to never). There are also some open-ended questions to collect more detailed information about the participants' opinions. Regarding the data analysis method, descriptive statistics were applied to present and interpret the collected data.

## **Findings**

### *Common AI tools used in the teaching and learning of academic writing*

As mentioned in the section Data Collection and Analysis, the second part of the questionnaire focuses on the teacher's and learners' experiences with AI tools in the field of academic writing.

In order to clarify the teachers' experiences, the questionnaire provides a list of AI applications with appropriate functions for teaching academic writing. The following table illustrates the listed applications and their outstanding functions as advertised by the applications' providers in their official websites:

Table 1. The listed applications and their outstanding functions

Name of applications	Outstanding functions
1. ChatGPT	- Generate content - Evaluate writing pieces - Make correction and provide suggestions
2. Textero AI	- Gather information - Find references - Generate content - Summarize text
3. Jasper Chat	- Generate ideas - Revise content
4. Writer X	- Provide templates - Generate content
5. CopySmith	- Generate high-quality content
6. QuillBot	- Paraphrase - Check grammar - Summarize text
7. Wordtune	- Rewrite sentences - Adjust tone and formality
8. Grammarly	- Check grammar and spelling - Provide suggestions

The collected data shows that ChatGPT, Grammarly, and QuillBot are the three most common AI applications. As for other applications, most participants either do not know about them or know but have not used them.

Table 2. Teachers' experiences with AI applications and their degree of mastery

Degree of mastery	Not know about the application (1)	Know but not use the application (2)	Use but not master the application (3)	Master the application (4)	Mean
Application					
<b>ChatGPT</b>	<b>1.47%</b>	<b>27.94%</b>	<b>41.18%</b>	<b>29.41%</b>	<b>3.0</b>
Textero AI	75.00%	20.59%	4.41%	0.00%	1.3
Jasper Chat	73.53%	20.59%	5.88%	0.00%	1.3
Writer X	73.53%	20.59%	5.88%	0.00%	1.3
CopySmith	67.65%	25.00%	7.35%	0.00%	1.4
<b>QuillBot</b>	<b>39.71%</b>	<b>27.94%</b>	<b>16.18%</b>	<b>16.18%</b>	<b>2.1</b>
Wordtune	69.12%	20.59%	4.41%	2.94%	1.4
<b>Grammarly</b>	<b>10.29%</b>	<b>32.35%</b>	<b>35.29%</b>	<b>22.06%</b>	<b>2.7</b>

It is noticeable that there is a slight difference between the participants who are teachers and those who are also administrators and policy makers.

Table 3. Teachers vs. administrators/policy makers' experiences with AI applications and their degree of mastery

Applications	Mean of teachers	Mean of administrators/policy makers
ChatGPT	2.9	3.1
Textero AI	1.2	1.4
Jasper Chat	1.3	1.4
Writer X	1.3	1.3
CopySmith	1.4	1.4
QuillBot	2.1	2.1
Wordtune	1.3	1.7
Grammarly	2.6	2.9

As can be seen from the data, the means of administrators or policymakers are either equal to or slightly higher than those of teachers, which indicates that participants as administrators/policymakers have more experience with AI applications. They seem to know more about and master these applications better than teachers with no leading positions.

As for learners' experiences with AI applications, 59 out of 68 participants claimed that their students do make use of AI applications in learning academic writing. For the question about whether the students frequently use AI tools in academic writing or not, 10 teachers said that they had no information. Among 58 other participants, 17 claimed that their students frequently use AI tools in academic writing.

The question about the kinds of AI tools that students use provides more detailed information. In reality, students use all three kinds of applications: applications that help them generate whole essays like ChatGPT and Textero AI; those provide paraphrasing functions and suggestions like QuillBot and Wordtune; and those that check their written essays for grammar and spelling errors like Grammarly.

Table 4. Students' experiences with AI applications and their degree of frequency

Degree of frequency	Never	Rarely	Sometimes	Often	Very often
	(1)	(2)	(3)	(4)	(5)
Application					
Applications that help create the whole essays	1.47%	7.35%	<b>33.82%</b>	<b>25.00%</b>	4.41%
Applications that help paraphrase	7.35%	7.35%	<b>29.41%</b>	<b>27.94%</b>	5.88%
Applications that check grammar and spelling	5.88%	1.47%	<b>29.41%</b>	<b>29.41%</b>	<b>14.71%</b>

The research results show that students either sometimes or often use various AI applications to support their learning of academic writing. Among the three kinds of AI applications, those that help them check grammar and spelling are popular the most.

The participants also named some other AI applications that they have used. Among the listed names are Bing Chat and Bard, which are similar to ChatGPT or Jasper Chat, or Zoho Writer, which shares some functions with Textero AI or Writer X in the given list. Besides, participants

added Google Translate – the one listed in the literature review section, and Turnitin – an application that helps check plagiarism.

*Teachers, administrators and policy makers' perceptions on the applications of AI tools in academic writing*

The third part of the questionnaire provides information concerning stakeholders' perceptions of AI tools – those identified in the previous part - in academic writing. A number of statements revealing both possible advantages and disadvantages of AI applications are given for the participants to give their personal opinions.

5 = Strongly agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly disagree

Table 5. Participants' perceptions of AI applications in academic writing

Statements	5	4	3	2	1	Mean
1. Applying AI tools is a form of plagiarism.	4.41%	19.12%	<b>45.59%</b>	<b>27.94%</b>	2.94%	2.9
2. AI applications may reduce learners' creativeness.	16.18%	<b>32.35%</b>	<b>27.94%</b>	22.06%	1.47%	3.4
3. AI applications may lead to wrong evaluation.	<b>27.94%</b>	<b>47.06%</b>	17.65%	4.41%	2.94%	3.9
4. AI applications help reduce learners' pressure in academic writing.	<b>11.76%</b>	<b>63.24%</b>	11.76%	10.29%	2.94%	3.7
5. Making use of AI applications is also a way of learning academic writing.	10.29%	<b>47.06%</b>	<b>22.06%</b>	16.18%	4.41%	3.4

The data show that participants are quite neutral and even tend to disagree that using AI applications is a form of plagiarism. As for the two statements claiming that AI applications may reduce learners' creativeness and that making use of AI applications is also a way of learning academic writing, they both lead to opposing views among participants; however, it seems that more participants agree with these statements. As for the statements that AI applications may lead to wrong evaluation and that they help reduce learners' pressure in academic writing, more consensus opinions were received among participants.

Not only having different experiences, but the two groups of participants – teachers vs. administrators/policy makers – show differences in their perceptions.



Table 6. Teachers vs. administrators/policy makers' perceptions of AI applications in academic writing

Statements	Mean of teachers	Mean of administrators/ policy makers
1. Applying AI tools is a form of plagiarism.	3.0	2.7
2. AI applications may reduce learners' creativeness.	3.4	3.3
3. AI applications may lead to wrong evaluation.	4.0	3.7
4. AI applications help reduce learners' pressure in academic writing.	3.7	3.7
5. Making use of AI applications is also a way of learning academic writing.	3.5	3.4

4 out of 5 means of teachers are higher than those of administrators/policymakers, which means teachers have a higher degree of agreement on most of the given statements. Administrators and policymakers seem to be more cautious about the nature of AI applications (whether it is a form of plagiarism) as well as their benefits and drawbacks.

#### *The extent of acceptable use of AI tools in these stakeholders' opinion*

In response to the questions about whether or not AI applications are acceptable in academic writing, only 3 in 68 participants thought that AI applications must be banned in the field of academic writing. Among the rest, half of them (32 participants) selected the option that AI applications can be used but only in learning academic writing, not in testing and assessment. The other half (33 participants) thought that AI applications could be used selectively in the teaching and learning of academic writing.

In case some AI applications can be used in academic writing, up to 27 participants thought that AI applications that help learners generate whole essays are acceptable – which may be opposite to the predicted research result. 32 participants accepted AI applications that help learners paraphrase and edit their essays, while 49 participants agreed with the learners' use of AI applications to check grammar and spelling.

## **Discussion**

The collected data show that AI applications have become quite popular in teaching and learning practices at higher education levels in Vietnam. About half of the surveyed participants have at least known or actually used some common AI tools like ChatGPT, Grammarly, and Google Translate. As for other applications with similar functions, like Textero AI and Jasper Chat, they are still new names to most English teachers in Vietnam.

One noticeable research result is that participants who are also administrators or policymakers tend to have more experience with AI applications. It may be a part of their leading position, which requires them to explore new things and consider them for possible and wider application in the future. This is the nature of any change in society in general and in education in particular; some pioneers explore a new field and share knowledge and experience with their partners or

followers. AI is still a new trend that is expected to have more positive effects on education in the future. Groups of pioneers, including researchers, teachers, and administrators/policymakers, should be formed to figure out effective and practical ways to apply AI in the teaching and learning of English to maximize its potential while minimizing possible risks or downsides.

As for students, they often make use of AI applications in their learning. The exact degree of frequency may be higher or lower as the information is taken indirectly from teachers, not students themselves. However, teachers have witnessed their students' usage of different AI tools that support the learning of academic writing – from checking grammar and spelling to paraphrasing and even composing full essays.

In terms of stakeholders' perceptions of AI applications, participants are either neutral or have opposing views. It is also understandable as AI applications are still new in the field of education, administrators/ policymakers and teachers should be cautious about them. The data analysis does reveal such caution among participants who are administrators/ policymakers. It is a good sign as these participants are the ones who compose educational policies affecting their entire educational institutions or even a larger scope. It is crucial that they pay due consideration to both the benefits and risks of AI applications and propose appropriate regulations.

Specifically, participants have not made up their minds about whether using AI is a form of plagiarism. There is even a slight bias towards the "Disagree" option. They tend to be neutral about the claim that AI reduces learner's creativity or the confirmation that using AI is a way to learn academic writing. Meanwhile, they seem to be more agreeable to the possibility that AI applications lead to wrong evaluation but reduce learners' pressure in learning. In short, participants tend to avoid being too assertive while being aware of existing problems that AI applications may bring to the field of academic writing.

However, both groups of participants, i.e., teachers vs. administrators/ policymakers, are all open to AI applications, as only a few strongly disapprove of learners' use of AI tools. The surveyed participants mostly accept that learners can use AI tools in academic writing with certain conditions – either only in the learning process, not in assessment, or with careful selection of allowable applications. This finding proves that AI tools will undoubtedly be applied more widely in the future.

## Conclusion

From the above-mentioned research results, it is advisable that more research should be conducted concerning both effects, especially the adverse effects of AI applications, and stakeholders' perceptions before adding AI applications to legal documents on plagiarism. Direct information from students should be collected so that the research findings can be more precise and thorough.

Besides, there should be adjustments in both teaching and assessing academic writing for the proper and effective use of AI applications as follows:

- Teachers are advised to give assignments or tasks that go beyond the basics or common topics – those that AI can replace or even do faster and better than human learners. Instead, the given assignments or tasks should require more personal engagement and

critical thinking to ensure that learners may use AI tools to support them without losing their creativity or becoming dependent on these applications.

- Teachers should inform their students of the possible limitations of AI applications and the potential consequences of relying on them. They should also provide clear guidelines and expectations about each writing assignment and the whole course for the students so that students know clearly their expectations and requirements.
- Students should take advantage of AI applications, considering them their language tutors who help them improve their language competence, including writing skills. However, they should not see them as a substitute for real effort and original thinking while composing their pieces of writing.
- Educational institutions should conduct more research to create clear and appropriate guidelines and policies for the use of AI applications.

In short, research results seem to be in line with what has been concluded in previous studies. AI applications are a rising trend and have raised great concern, even disagreement among stakeholders in the educational field. Whether using AI is plagiarism is one of the currently debated issues. Teachers and administrators/ policymakers are cautious about deciding the relationship between using AI tools and the act of plagiarism. Meanwhile, they are aware of both the positive and negative sides of AI applications and suggest AI applications should be used with careful consideration.

## References

- Ahmed-Ali, S. G. (2020). Using an artificial intelligence application for developing primary school pupils' oral language skills. *Journal of Education - Sohag University*, 75(part 3), 67–110. Retrieved from: <https://doi.org.sdl.idm.oclc.org/10.12816/EDUSOHAG.2020.97643>
- Aljohani, R.A. (2021). Teachers and students' perceptions on the Impact of Artificial Intelligence on English language learning in Saudi Arabia. *Journal of Applied Linguistics and Language Research*, 8(1), 36-47.
- Fitria, T.N. (2021). The use technology based on artificial intelligence in English teaching and learning. *ELT Echo: The journal of English language teaching in foreign language context*, 6(2), 213-223. Retrieved from: <https://doi.org/0.24235/eltecho.v%0vi%i.9299>
- Francke, E. & Alexander, B. (2019). The potential influence of Artificial Intelligence on plagiarism: A higher education perspective. The proceedings of European Conference on the Impact of Artificial Intelligence and Robotics (ECIAIR 2019), 131-140.
- Gawate, S. P. (2019). Artificial Intelligence (AI) Based Instructional Programs in Teaching-Learning of English Language. *International Journal of English Language, Literature and Translation Studies (IJELR)*, 6, 69-73.
- Ginsenberg, M. (2012). *Essentials of Artificial Intelligence*. CA: Morgan Kaufmann Publishers. Retrieved from: <https://dl.acm.org/doi/pdf/10.5555/2974989>
- Khalil, M & Er, E. (2023). Will ChatGPT get you caught? Rethinking of plagiarism detection. The proceedings of Learning and Collaboration Technologies (LCT 2015), 475-487.
- Kim, Na-Young. (2019). A Study on the Use of Artificial Intelligence Chatbots for Improving English Grammar Skills. *Journal of Digital Convergence*, 17(8), 37–46. Retrieved from: <https://doi-org.sdl.idm.oclc.org/10.14400/JDC.2019.17.8.037>

- Mehrotra, D. D. (2019). *Basics of Artificial Intelligence & Machine Learning*. Notion Press.
- Mukhallafi, T. R. A. (2020). Using Artificial Intelligence for Developing English Language Teaching/Learning: An Analytical Study from University Students' Perspective. *International Journal of English Linguistics*, 10(6), 40. Retrieved from: <https://doi.org/10.5539/ijel.v10n6p40>
- Pettela, R. (2020). Artificial intelligence applications to teach/learn English to the secondary level students. *Journal of critical reviews*, 7(5), 2896-2906.
- Rich, E. & Knight, K. (1991). *Artificial Intelligence*. New York: McGraw-Hill.
- Shin, M.H. (2018). How to use artificial intelligence in the English language learning classroom. *Indian Journal of Public Health Research & Development*, 9(9), 557. Retrieved from: <https://doi.org/10.5958/0976-5506.2018.01058.6>
- Srivani, V., Hariharasudan, A., Nawaz, N., Ratajczak, S. (2022). Impact of Education 4.0 among engineering students for learning English language. *PLoS ONE* 17(2): e0261717. Retrieved from: <https://doi.org/10.1371/journal.pone.0261717>

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## An Investigation into the Phenomena of Meaning Making and Wording in Non-Fiction Novel from Systemic Functional Linguistics

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### ABSTRACT

In the light of Systemic Functional Linguistics, language is both a source of meaning-making and a source of wording modes in texts. To further clarify this ideology in practice, the article uses the phenomenon of wording in the non-fiction novel "Silent Spring" by Carson - the world's most famous female writer for her environmental protection works- for analysis aiming at teaching grammatical metaphor to the students of English at a University. The article briefly introduces the theory of Systemic Functional Linguistics, including the Grammatical metaphor (GM). Next, descriptive, qualitative, quantitative, and quasi-experimental methods are used with more than 200 samples selected to determine the relationship between the lexicogrammatical and semantic aspects in the impact of the context; the article pays special attention to congruent expressions and metaphorical expressions. Based on applying the quasi-experimental method to English classes of 373 students, the writers describe the three stages of teaching (GM), analyze the data related, and present research results. The conclusion consists of application suggestions in terms of language research and language education, such as reading, understanding, evaluating, and building relevant types of text.

**Keywords:** Grammatical metaphor, meaning-making resource, wording, application

### Introduction

#### *Background of the study*

In the 1960s, Systemic Functional Linguistics (SFL) appeared as a new trend initiated by Halliday. SFL takes semantics as its foundation, and its expressions are through three types of clauses: Clause as representation including ideational meaning, clause as an exchange with interpersonal meaning, and clause as a message with textual meaning. This article focuses on the resource for making ideational meaning through congruent expressions, especially metaphorical ones. According to Halliday (1994, p.341), when some aspect of the structural configuration of a proposition, whether in its ideational or interpersonal function or both, is in some way encoded, the easiest to understand of the selected meanings, grammatical metaphor appears. Grammatical metaphors (GM) are a series of linguistic operations that involve

transformations in the expression of meaning and are a resource for creating meaning (Halliday, 2014). However, mastering GM theoretically and then applying this new aspect to English teaching and studying are still limited in the context of Vietnam. Most students were not confident about their presentation skills because of making mistakes in vocabulary usage, grammar, and fluency when giving presentations (Pham et al., 2022) or the grammatical errors made by IELTS test participants (Xiangmin, 2022). These are the reasons why GM should be introduced and applied widely in English education. To introduce the way of applying GM in English teaching and learning, based on multiple methods, including quasi-experimental, with 200 samples collected from the book “Silent Spring” by Carson as a model in transforming congruent expressions into metaphorical ones and otherwise, this paper hopes to be a part of the contribution to applying GM in improving English skills, especially writing skill.

### *Aims of the study*

The article aims to apply grammatical metaphors to increase English students’ ability to interpret and create English text.

### *Scope of the study*

The scope of the article's research is the context of teaching GM to English students at a university and the application of the quasi-experimental method to find out the results. This paper solves the issues relating to ideational grammatical metaphor, not interpersonal grammatical metaphor. However, the paper explains interpersonal grammatical metaphor as a theoretical part.

### *Research Questions*

To fulfill the purpose of the study, the survey was seeking to answer the following research questions:

**Question 1:** How is the application of grammatical metaphor carried out through teaching English to students at the University of Foreign Language Studies- Da Nang University?

**Question 2:** How are the modes of congruent and metaphorical expression applied to English teaching in improving students’ interpreting and creating skills?

## **Literature review, theoretical background, and the work "Silent Spring."**

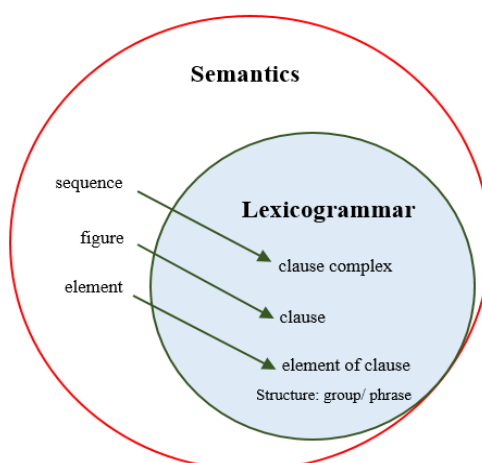
### *Literature review*

Historically, Systemic Functional Linguistics (SFL) is rooted in anthropology by Malinowski (1935), and its earliest formulation as a linguistic theory dates back to Firth (1957). SFL was originally proposed by Halliday (1961). In "An Introduction to Functional Grammar," one of the newest movements of language, Halliday (1985) gives a lot of new concepts, among which GM is one of the most concerning in Systemic Functional Linguistics. GM has been dramatically developed by Halliday through his series of research (1985, 1994, 1999, 2004, 2014) and by other SFL linguists like Martin (1992), Matthiessen (1999), Geoff Thompson (1996, 2004), Devrim (2015), David Banks (2019), Bloor, Eggins...In Vietnam, GM was first introduced by Hoang Van Van (2005) through his Vietnamese version of Halliday’s book

(1994), Phan Van Hoa (2007a,b), Nguyen Thi Thuy (2017), Le Thi Giao Chi (2014, 2020), Phan Van Hoa and Gia Thi Tuyet Nhung (2020, 2021, 2022, 2023) have studies related to GM.

*A sketch of Grammatical Metaphor*

According to Halliday (1985), language is a resource organized into three strata that are related using realization. The first stratum is **semantics**, or the system of meaning realized by lexicogrammar, namely the system of wording, including grammatical structures and lexical items. The second one is **lexicogrammar**, which is realized by the third system: **phonology**, namely the system of sounding. The phenomenon has **three semantic components**, which are correspondingly expressed by three linguistic units in lexicogrammar. A **phenomenon** is considered the most general experiential category. It is anything that can be construed as part of human experience. It is a phenomenon that is the environment from which meanings are created in the process of construing human experience through language. Functional grammar shows three levels of complexity in the phenomena: the first is elementary or a single **element**, the second is a configuration of elements called a **figure**, and the third is a complex of figures called a **sequence**.



**Figure 1.** Typical realization of sequences, figures, and elements (Halliday 1999, p.55)

The way of wording by Luther King below can be used for illustration of the semantic functions of elements, figures, and sequences:

		One hundred years later	the Negro	is still languishing	in the corner of American society.
Elements		<i>Circumstance</i>	<i>Participant</i>	<i>Process</i>	<i>Circumstance</i>
FIGURE 1					
	<b>and</b>	finds	himself	an exile	in his own land
Elements	<i>Relator</i>	<i>Process</i>	<i>Participant</i>	<i>Participant</i>	<i>Circumstance</i>
FIGURE 2					
SEQUENCE (type: extension): Figure1 + Figure2 by <i>relator and</i>					

**Figure 2.** Semantic functions of element, figure, and sequence

Halliday (1985) discusses several grammatical phenomena and regards these as “metaphorical modes of expression”. Grammatical metaphor (GM) is “the phenomenon whereby a set of agnate forms is present in the language having different mappings between the semantic and the grammatical categories” (Halliday & Matthiessen, 1999, p.7). GM is a substitution from one grammatical class to another, resulting from the transition from congruent to metaphorical expressions (Halliday,1985). Halliday (1985,1994) explains that congruent expressions are natural expressions that language encodes to express meaning; for example: “action” is performed by “verb,” while “person,” “place,” and “thing” are carried by “noun.” However, in metaphorical expressions, “noun” is used to refer to “process” or “adjective” is called an “epithet” (Banks, 2003), for example, the metaphorical expression “Her cleverness...” instead of the congruent form “She is clever.”. In this case, the relative process “is” is omitted. Cullip (2000) emphasizes GM as an effective tool for creating text and often appears in written discourse, allowing writers to express many valuable meanings. According to Halliday (1985), there are two types of GMs: metaphors of transitivity and metaphors of mood (including modality). In terms of semantics functions, these are, respectively, ideational grammatical metaphors and interpersonal grammatical metaphors.

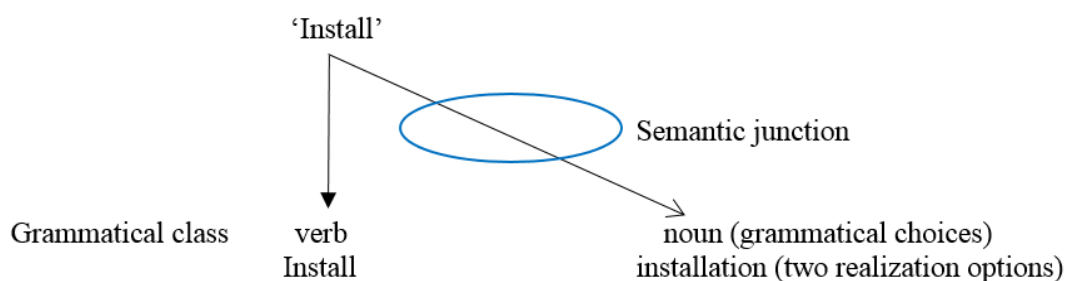
#### *Ideational grammatical metaphor*

Halliday (1994, p.343) claims that ideational grammatical metaphor (IGM) is a metaphor of transitivity. It means that this term is used to refer to the transference from congruent to metaphorical mode in grammar. IGM's function is concerned with the relationship between the external world and the internal world of our experience of the world. It reflects the speaker's experience of the inner and outer worlds through language use. It is the content function of language through which language encodes the cultural experience and the individual's experience as a member of the culture (Halliday, 1978, p.112). In IGM, a metaphorical shift occurs between two or more classes: participant (entity), process, and Circumstance. In IGM, the feature of the process may coincide with the feature of an entity (verb and noun). This is the case in IGM of transitivity, as shown in Figure 3 below:

(1) a. Metaphorical expression: *Installation of cylinder...*

(1) b. Congruent expression: *How to install the cylinder.*

Semantic category                      Process (action, event)                      Entity (person, Thing)



**Figure 3.** Grammatical metaphor (ideational grammatical metaphor)

It will be recognized that both (1a) and (1b) above are based on nominalization: the meaning of



"How to install the cylinder" is reencoded as "Installation of cylinder...". In this figure, a process is remapping from the verb to the noun "to install" into a nominal form, "installation," so an ideational grammatical metaphor occurs. In grammatical metaphor, ideational grammatical metaphor plays an essential part in generating various expressions from the given meaning, enriching the representation of the clause in SFL. The main shift of elements falls into Thing as a nominal group. The Thing or nominal group is derived from the nominalization of verbs, adjectives, relators, Circumstances, etc. Halliday (1994) claims that nominalization is the single most powerful resource for creating grammatical metaphors.

### *Interpersonal grammatical metaphor*

Interpersonal grammatical metaphor is concerned with the relationship between the speaker and the hearer. It represents the component through which the speaker intrudes himself into the context of the situation, "both expressing his attitudes and judgments and looking to influence the attitudes and behavior of others" (Halliday, 1978, p.112). This function is concerned mainly with clauses as exchanges. Interpersonal grammatical metaphor involves metaphor of modality and metaphor of mood. The metaphor of modality is more likely to be found in written language, for instance, the clause.

(2) a. Metaphorical expression: *We know that pesticides contained in runoff from farms and forests are now being carried to the sea in the waters of many and perhaps all of the major rivers.*

(2) b. Congruent expression: *Pesticides contained in runoff from farms and forests are now being carried to the sea in the waters of many and perhaps all of the major rivers.*

In this case, (a) is expressed in the interpersonal grammatical metaphor of modality through the projection clause, while the (b) expression is seen as an alternative non-metaphorical construction. The metaphor of mood construes a discourse semantic speech function through an incongruent mood option in grammar, for example:

(3) a. Metaphorical expression: *Could you give me your notebook, please?*

(3) b. Congruent expression: *Please give me your notebook.*

In example (b), the default encoding of a command is an imperative. A command which is expressed by extra encoding tools such as the interrogative form, the explicit expression of the addressee "you", and the modal verb "could" in (a) is a metaphorical variant of the default imperative.

### *Introducing the author and her work "Silent Spring"*

The book "Silent Spring" was officially introduced in 1962 by zoologist, marine biologist, and environmental protection advocate Rachel Carson (1907-1964). The book is considered a classic work that started environmental protection movements around the world. It is a wake-up call about the environment and contributes to "changing the flow of human history" (Gruening). The book emphasizes the harmful effects of pesticides on the environment and proposes policies.

In terms of content, this is an ideological work, one of the best on the most topical

environmental issues, and highly educational for all fields, not just language education.

In terms of linguistic expression, from commonly occurring transitivity systems to arguments and scientific evidence in the passage, the author naturally uses both congruent and metaphorical expressions.

## Methods

The article is based on multiple methods, including qualitative, quantitative, and quasi-experimental methods. Observation and interviews are also used to collect the information.

Settings:

One of the paper writers is a lecturer in linguistics who has taught Functional Grammar by Halliday to English students at the University. In this trend of applicable linguistics, GM is considered “an effective tool”, if well-applied, to improve students’ writing skills. He also has taught Stylistics in which many stylistic devices like lexical metaphor, conceptual metaphor, and repetition..., are introduced, except GM. In this context, he introduces GM as "a potential stylistic device" to increase students' writing skills.

*Participants:* The 3<sup>rd</sup> year students at the University of Foreign Language Studies- Danang University. The two tables below show the necessary information.

**Table 1.** Number of students’ Functional Grammar classes

Subject	Class	Number of students
An Introduction to Functional Grammar	Functional Grammar 1	50
	Functional Grammar 2	9
	Functional Grammar 3	50
	Functional Grammar 4	4
	Functional Grammar 5	27
	Functional Grammar 6	26
	Functional Grammar 7	30

**Table 2.** Number of students’ Stylistics classes

Subject	Class	Number of students
An Introduction to Stylistics	Stylistics 1	28
	Stylistics 2	27
	Stylistics 3	51
	Stylistics 4	71

*Materials:* An Introduction to Functional Grammar (Halliday, 2014a), Construing Experience Through Meaning (Halliday & Matthiessen,1999), and 200 samples of congruent and metaphorical expressions collected from “Silent Spring” by Carson.

The research consists of three stages: Pre-teaching GM, While-teaching GM, and Post-teaching GM. They are not the same as a teaching plan; these macro designs reflect a strategic plan to apply GM into a university teaching program. It means that all the activities in these three stages are not teaching plans but are designed as a strategic plan for applying GM in English teaching.

### *Pre-teaching grammatical metaphor stage*

The main purpose of this stage is to prepare the student's perception of GM learning; its activities are:

- Informing students of their learning program including GM.
- Providing them with materials involved in GM; for these materials, the students are guided to pay attention to the terms involved in GM, such as congruent expressions, incongruent/metaphorical expressions, nominalization, packing information, and unpacking information.
- Providing them with the book “Silent Spring” by Carson as a model text relating to “environment protection” in the aspect of content and to natural writing that persuades readers in the aspect of effective writing.
- Ask students to focus on how the author writes in argumentative and descriptive paragraphs (of the book).
- Providing students with a brief questionnaire and collecting the information:
  1. Have you ever read or learned about GM?
  2. Do you think that you know and use GM in academic writing?
  3. Do you want to apply for GM to improve your English skills?

The results of this stage will be explained and discussed later.

### *While – teaching GM stage*

The main purpose of this stage is to provide the students with basic knowledge of GM and the application of GM to improve their writing.

- Teaching SFL the most.
- Helping students recognize the significance of GM.
- Teaching GM through textbooks, texts, and doing exercises (using samples from “Silent Spring”).
- Helping students identify congruent expressions and metaphorical expressions and transform them.
- Asking students to prepare and present some topics of GM.

The results of this stage will be explained and discussed later.

### *Post-teaching GM stage*

The main purpose of this stage is to evaluate the results of the three stages through the students’ demonstration of their knowledge and performance of GM.

- Building the criteria for evaluating the student’s ability to identify congruent and metaphorical expressions.
- Having the students do exercises in identifying and transforming congruent and metaphorical expressions.

The results of this stage will be explained and discussed later.

## Findings and discussion

### *Pre-teaching grammatical metaphor stage*

After quickly asking students about using GM in academic writing as well as applying linguistic theories to improve writing skills, the initial research obtained the following results:

**Table 3.** The percentage of students in recognition and application of GM

Questions	Functional Grammar classes		Stylistics classes	
	Number of students	Percentage	Number of students	Percentage
Have you ever read or learned about GM?	33 /196	16,8%	21/177	11,8%
Do you think that you know and use GM in academic writing?	17/196	8,7%	14/177	7,9%
Do you want to apply for GM to improve your English skills?	13/196	6,6%	11/177	6,2%

From the information in Table 3, the research team continued to get more specific information through the system of exercises. The results are as follows:

**Table 4.** The percentage of students doing the system of exercises

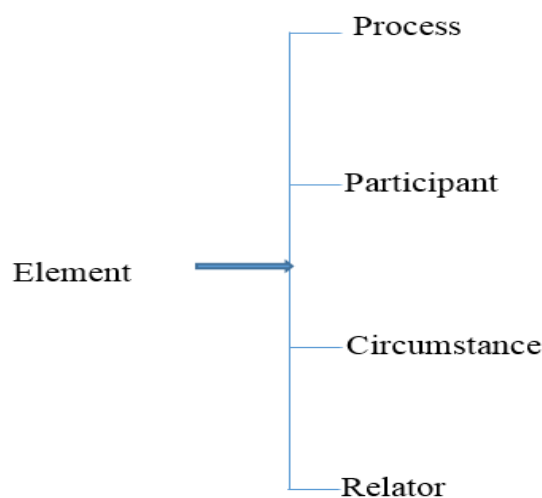
The contents of the system of exercises	Functional Grammar classes		Stylistics classes	
	Number of students	Percentage	Number of students	Percentage
Identifying the congruent expressions in the text	102/196	52%	85/177	48%
Identifying the metaphorical expressions	15/196	7,6%	11/177	6,2 %
Transforming congruent to metaphorical expressions	13/196	6,3%	13/177	7,2 %
Transforming metaphorical to congruent expressions	18/196	9,1%	11/177	6,2%

The results in this stage show that a large number of students couldn't identify and transform congruent and metaphorical expressions. This also leads to the suggestion that teaching SFL, specifically GM, is extremely urgent and necessary for improving students' interpreting and writing skills.

### *Explaining the basic contents of SFL for students:*

These key terms should be introduced: Element, figure, sequence (semantics), clause complex, clause, phrase/ group, process, participant, Circumstance, grammatical metaphor, congruent expression, metaphorical expression, transformation, nominalization, unpacking, packing, and downgrading. The 4 elements of the transitivity system of construing experience in the

following plate are the leading ones used to express in both congruent and metaphorical modes as well as in transformation.



**Figure 4.** Types of elements (Halliday, 1999, p.59)

Distinguishing congruent expressions from grammatical expressions

*While- teaching grammatical metaphor stage*

*The steps making students understand and identify patterns of transitivity*

**Step 1.** Reading and thoroughly understanding the source text

Before reading the text, readers need to pay attention to the following information as Halliday (1985) suggested:

1. What's this about?
2. What are the Processes?
3. Who/what is involved? Participants
4. What are the relations between these Participants?
5. What are the circumstances around this?
6. Which ideas are most important?
7. How is the author saying this?
8. What impression do you have?

These guiding questions help students understand not only the key elements construing experience, such as process, participant, Circumstance, and relator in congruent and metaphorical expressions but also the content of the text. In addition, the terms "unpacking," "packing," "downgrading," and "nominalization" help identify the meaning of the text and have different choices for expression modes and transformation.

To better understand the function of GM, the article identifies specific changes in both vocabulary and grammar that are carried out during the "unpacking" process and the "packaging" process of information, for example:

(4) a. Congruent expression: *Food loss is defined as the edible food that is lost throughout production, postharvest, and processing, whereas food waste refers to edible food lost at the end of the food chain due to the behavior of retailers and consumers.* (Nance et al., 2016)

### Step 2. Identifying expressions in congruent forms

In this step, students need to explain the meaning of the original expressions as clearly as possible to understand them thoroughly. The process of converting from the original expression with GM to the transformed expression.

(4) b. Congruent expression: *Food loss is the food we can eat but that we discard while it is being produced, after it is harvested, or while it is being processed. Food waste is food we can eat but throw away at the end of the food chain because retailers and consumers choose not to sell or eat it.*

The phrase “edible food” is decompressed into “Food we can eat...”

The nominalization cluster “production, postharvest and processing” is transformed into the processes “is being produced, is harvested,...being processed”.

The word group “due to” functions as a cause-and-effect relation; this leads to using “because” in the ‘unpacked’ clause.

Native English speakers recognize these conversion patterns as normal expressions in communication;

### Step 3. Performing transitivity

In the last step, all the information is “packaged” into a metaphorical expression with the following elements:

(4) c. Metaphorical expression: *Food that is edible but discarded during production is known as food loss, whereas food discarded once it has reached the market is called food waste.*

Which “Food we can eat,” “we discard,” and “while it is being produced” can become adjectives like “edible” and “discarded” and reduce the suffix “during production.”

It should be noted that each congruent or metaphorical expression has its value. The best method of expression is the one chosen most appropriately in the communication situation. For example, Luther King's (1963) clause complex (congruent expression) can be transformed into many metaphorical expressions, but to reveal the problem to be resolved, combined with tone and emotions, Luther King chose a congruent expression:

(5) Congruent expression: *This note was a promise that all men-black men, as well as white men, would be guaranteed the unalienable rights of life, liberty, and the pursuit of happiness.*

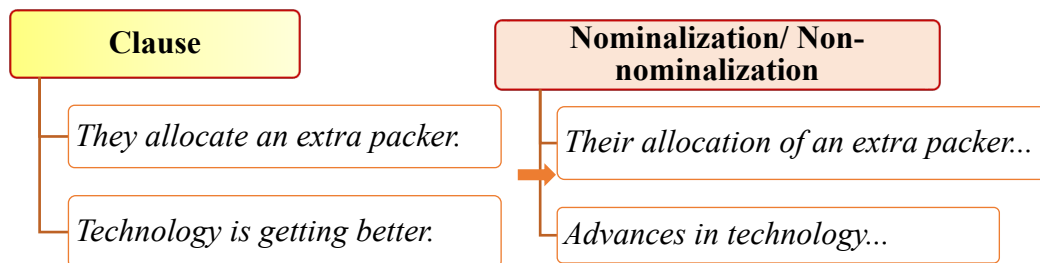
Conversely, in a text that needs to condense and compress information, metaphorical expressions can be chosen as Halliday and Matthiessen (2014) show:

(6) a. Congruent expression: *Tons and tons of rocks pressed down on it.* (a clause)

(6) b. Metaphorical expression: *The pressure down on it by tons and tons of rocks...*(only one-word phrase)

*Steps for transforming*

In an incongruent expression, the process is nominalized to have the function of entity (Thing). In some cases where nominalization is not possible, appropriate words, word groups, or structures are used for conversion; this situation is called denominated.



**Figure 5.** Clauses and transformation through nominalization and non-nominalization (Adapted from Halliday, 2014)

Figure 5 shows that "of an extra packer" and "in technology" transform into sub-clauses or prepositional phrases in the post-complementary situation of "allocation" and "advances." "getting better" is converted into "advances" through non-nominalization.

The structure of classifying elements includes Classifier + Thing; for example: "Alcohol impairment" (Halliday, 2014) is a noun that functions as a thing, has the status of an entity, and can participate in a discourse, some process to expand the meaning without losing semantic characteristics.

<i>...is impaired by alcohol</i>	
Alcohol impairment	...
<b>Thing –Participant</b>	<b>New process</b>

The characteristic of nominalization is to make information denser. This means that a multiple-sense clause can be "packaged" into a noun (described as "stable") rather than into a verb (described as "transient"), thereby opening up a process of nominalization with many expressive possibilities. Harder (2010) believes that the function of any element in language can be observed from two perspectives: (1) the element itself must complete the task; (2) its role is expressed in the larger structure.

Based on the above viewpoints, the article develops basic conversion operations including:

Transforming “relator” into an entity

(7) a. Congruent expression: *He was late because it rained.*

(7) b. Metaphorical expression: *The cause of his being late was the rain.*

In example (a) the connecting element/ or relator “because” is transformed into the entity “the cause” in the metaphorical expression in (b).

Transforming “process” into an entity

(8) a. Congruent expression: *Water transforms into ice.*

(8) b. Metaphorical expression: *The transformation of water into ice...*

In example (a) “transforms” is a process and is nominalized as “transformation” in (b). In other words, “transforms” are transformed into entities.

Transforming “epithet” into an entity

(9) a. Congruent expression: *The price is unstable.*

(9) b. Metaphorical expression: *Instability of price...*

As we can see, a clause with a qualitative function can still be transformed into a qualitative entity.

Transforming “circumstance” to entity

(10) a. Congruent expression: *We went to Nha Trang last year.*

(10) b. Metaphorical expression: *Nha Trang was our destination last year.*

Example (a) shows that “to Nha Trang” is a scene combined with the process “went” to transform into the entity “our destination” in (b).

*The transfer modes in expressing ideational meaning*

***The mode of expressing ideational meaning via transferring from congruent expression to metaphorical expression***

In expressing ideational meaning, from congruent to metaphorical expression, nominalization plays a key role. To convert a congruent expression to a metaphorical one, the following two conditions must be met:

**Condition 1.** There must be nominalization or non-nominalization

(11) a. Congruent expression: *Mary saw something wonderful.*

(11) b. Metaphorical expression: *A wonderful sight **met** Mary's eyes.*

(11) c. Metaphorical expression: *Mary came upon a wonderful sight.* (Halliday & Matthiessen, 2014)

In nominalizing, the process "see" is a mental process that must be changed to "sight," and at the same time, "something wonderful" continues to transform into the full nominal phrase "a wonderful sight" and so on.

**Condition 2.** There needs to be a new process

For example, “met” in (11b) is a material process that expands the meaning. Some processes allow expansion using nominalization; for example: "A wonderful sight" in (11c) has a different function in a clause: "Mary came upon a wonderful sight," and the process "came upon" is close in meaning to "saw" and "met."

Ideational grammatical metaphors have the following main trends: (1) downgrading from clause complex to clause, (2) downgrading from clause to nominal phrase, and even (3)



downgrading from nominal phrase to word. Therefore, first of all, it is necessary to identify how many clauses are in the congruent expression, the potential nominalization in which parts of the clauses, and the potential connection of the key meaning in the clauses. Next, deciding on the selection of conversion factors according to the nominalization expressions and carrying out the transformation is necessary. Finally, there are the testing steps.

This is an explanation for students from congruent expressions to metaphorical expressions:

(12) a. Congruent expression: *Olga Owens Huckins told me of a small world made lifeless that she experienced bitterly, so I attended sharply back to a problem I had long been concerned about.*

Explanation: In structure, the expression (12) is realized by the two complex clauses that are connected by relator ‘and’ another element showing the cause-effect relation ‘so’. Nominalization can help downgrade each complex clause to one clause in the following ways:

The structure "a small world made lifeless that she experienced bitterly" can be transformed: "her own bitter experience of a small world made lifeless." In transforming, process "experienced" is nominalized "experience," circumstance "bitterly" is transferred into "bitter," modifying a "new" noun in the noun group "bitter experience" and "she"- a main participant as the subject becomes "her" in "her bitter experience."

The structure "I attended sharply" can be nominalized as "my sharp attention". This transformation makes the process "attended" become a noun as participant "attendance"; in this case, circumstance "sharply" is transferred into "sharp" as a modifier in "sharp attendance"; participant "I" is changed into "my" in "my sharp attendance."

The structure "a problem with which I had long been concerned" can also be transferred into "a problem of my long concern". Nominalization still happens in this case: Process "concerned" becomes "concern," and this leads the change of the role of "long" as Circumstance to a modifier for nominal group "long concern" and "I" as Participant to Possessive element "my" in "my long concern."

*The process of systematic transformation above leads to the result:*

(12) b. Metaphorical expression: *Olga Owens Huckins told me of her own bitter experience of a small world made lifeless, and her words made my sharp attendance back to a problem of my long concern.*

In terms of component structure, from congruent expressions to metaphorical expressions, the process of nominalization appears throughout and follows the specific expression of each type. This transformation is highly systematic because a nominalized procedural or qualitative element always entails a change in the function and grammatical role of the related elements.

The study offers several symbolic exercises to guide learners in conversion practice as follows; it should be noted that this conversion is for the application of methods, while the effectiveness and adaptability of each conversion result depends on the circumstances of use in each specific context.

*The modes of expressing ideational meaning, from metaphorical expression to congruent expression*

As mentioned, nominalization often plays a decisive role in combining with other elements to create and transform many different expressions without changing the original basic meaning. The following table shows the order of performing congruent expressions and metaphorical expressions. This sequence first advances one or both clauses.

In expansion structures, two or more clauses are often used to express compatibility. For example, in the congruent expression **clause + clause**, the two clauses are connected by the conjunction "because," indicating the cause: "He resigned because they had departed." For metaphorical expression, the following steps are required: Semantically, the "cause-effect" relationship is still maintained, but formally, it is necessary to nominalize at least one clause; one of the two clauses needs to be reduced to an element or elements of the remaining clause. The clause of cause is changed into a prepositional phrase of cause, and thus first nominalize the verb as follows: From a clause "They had departed" change to the nominal phrase "their departure" and combine with "because of" turns into a prepositional phrase with a contextual function indicating the cause "because of their departure". As a result, GM appears to replace the congruent expression: "He resigned because of their departure."

GM opens up many possibilities for choosing different expressions. Both clauses are "reduced" to elements, thereby forming a new clause with a new process indicating cause and effect. In this case, the verb "cause" is used to connect the two previous clauses that have been nominalized "Their departure caused his resignation"; the verb "proved" or the verb "reviewed" is also used as in: "Their departure proves the correctness of his resignation".

Meaning in a situation can be expressed in many different ways, congruent or metaphorical expressions. Whether each type of expression is good or not doesn't depend on congruent or metaphorical expression but on the context of the text itself. Therefore, the metaphorical expression of experience - an expression that has "packed" information, can be "unpacked" to become a congruent expression when the context allows for effectiveness, for example:

(13) a. Metaphorical expression: *Indeed, its existence is so ephemeral that medical researchers are unable, without special procedures, to sample it before the body has destroyed it.*

(13) b. Congruent expression: *Indeed, it exists so ephemerally that if there are no special procedures, medical researchers are unable to sample it before the body has destroyed it.*

*The modes of expressing ideational meaning from metaphorical expression to metaphorical expression*

Halliday (1985) asserted that language is a resource for creating meaning and meaning is chosen depending on the context. Depending on each specific context, there may be many different options, for example:

(14) a. Metaphorical expression: *A reduction of diarrheal disease achieved in Georgia through fly control was wiped out within about a year.*

(14) b. Metaphorical expression: *A diarrheal disease reduction achieved in Georgia through fly control was wiped out within about a year.*

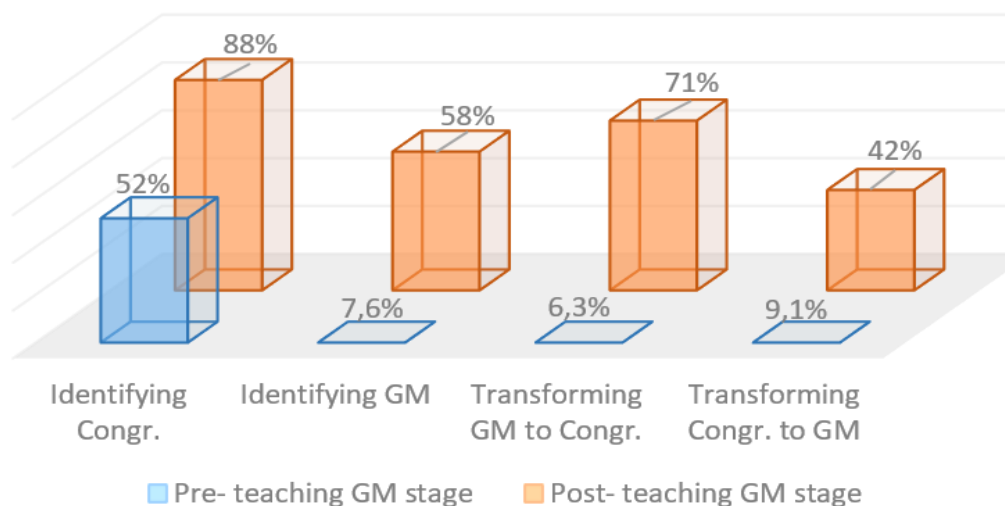
(14) c. Metaphorical expression: *Georgia's achievement in the reduction of diarrheal disease due to fly control was wiped out within about a year.*

*Post-teaching grammatical metaphor stage*

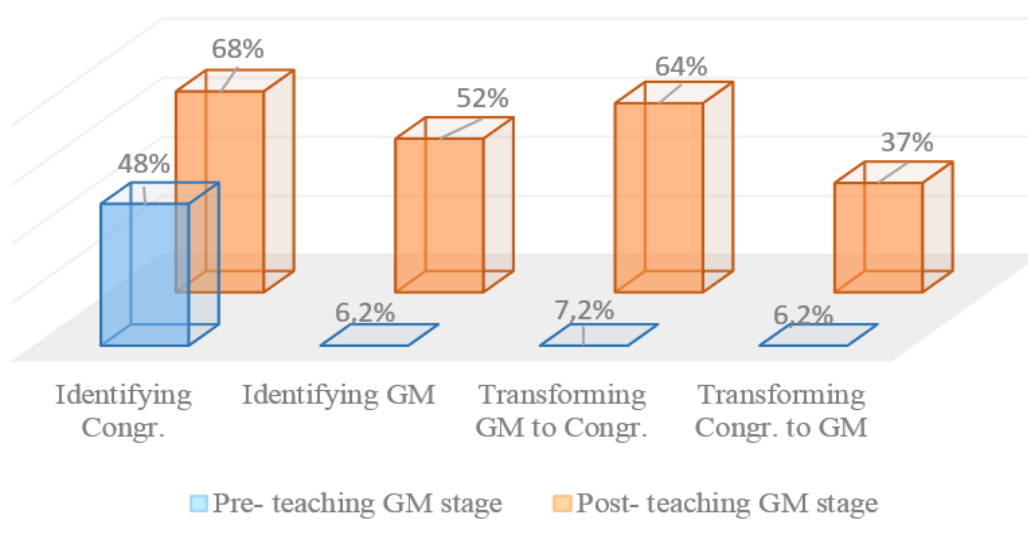
The contents of the two stages above reflect a part of the research in a quasi-experimental method. The research has described procedures for expressing ideational meaning through GM. From there, the research team processed the information directly from 196 students in Functional Grammar classes and 177 students in Stylistics classes through the system of guided exercises; the research obtained the following results:

**Table 5.** The results of applying GM

Criteria for evaluation through the system of guided exercises	Functional Grammar classes		Stylistics classes	
	Number of students	Percentage	Number of students	Percentage
Identifying the congruent expressions	168/191	88%	116/172	68%
Identifying the metaphorical expressions in the text	110/191	58%	89/172	52%
Transforming metaphorical to congruent expressions	135/191	71%	110/172	64%
Transforming congruent to metaphorical expressions	80/191	42%	63/172	37%



**Figure 6.** A comparison between results in pre-teaching GM stage and post-teaching GM stage of Functional Grammar classes



**Figure 7.** A comparison between results in pre-teaching GM stage and post-teaching GM stage of Stylistics classes

The three stages of carrying out the quasi-experiential methods of the research show that the while-teaching GM stage is a decisive one that creates the distance of students' knowledge and application in GM between the pre-teaching GM stage and the post-teaching GM stage. In other words, the more effective the while-teaching GM stage is, the more necessary to apply GM to the teaching program for enhancing English students' interpreting and creating skills.

## Conclusion

Based on the theory of grammatical metaphor in Systemic Functional Linguistics (Halliday, 1985), the article identifies and collects 200 samples of congruent and metaphorical expressions in *Silent Spring* by Carson. Through description and analysis of these samples, the article has generalized 3 groups of transforming methods: (1) from congruent expressions to metaphorical expressions, (2) from metaphorical expressions to congruent expressions, and (3) from one metaphorical expression to another. With the quasi-experiential method, the three stages of teaching GM show that transforming congruent expressions to metaphorical ones and from metaphorical expressions to other metaphorical ones often uses nominalization. This process leads to "downgrading". In contrast, transforming metaphorical expressions to congruent ones tends to "upgrading" without nominalization. In transforming the expressions, most students usually looked back at these in the text "*Silent Spring*" to better understand their meanings in each context. This is the reason why the paper collected all the samples from the same text.

Through applying GM in teaching, initial results have been very positive. The observation during the research shows that almost all students are very interested in learning GM. The post-teaching GM stage results reflected the improvement of students' interpreting and creating skills. This is a good sign that GM applications need to be paid more attention to and replicated in language education. In addition, it is important to find ways of making students aware, at a profound and personal level, of what it is that matters when confronted with the complexities

first of understanding and then of producing language for communication (Lian, 1993).

The paper strongly suggests that GM should be widely applied in English teaching. During the application, different types of texts should be chosen to guide students in interpreting texts and creating essays that condense information and demonstrate creativity.

## References

- Bingjun, Y. (2020). Full realization principle for the identification of ideational grammatical metaphor: Nominalization as an example. *Journal: World Languages* 6(1), 1-14.
- Devrim, D. Y. (2015). *Teaching Grammatical Metaphor: Designing Pedagogical Interventions*. Lady Stephenson Library.
- Dietsch, B. M. (2006). *Reasoning & and writing well*. McGraw Hill.
- Eggs, S. (1994). *An Introduction to Systemic Functional Linguistics*. Frances Pinter.
- Giã, T. T. N. & Phan, V. H. (2023). Ân dụ ngữ pháp trong thi ca. *Journal: Inquiry into Languages and Cultures*, 6(2), 233- 250.
- Giã, T. T. N. & Phan, V. H. (2023). Ân dụ ngữ pháp kinh nghiệm. *Journal: Language and Life*, 3 (337), 15-30.
- Halliday, M. A. K. (1985). *An Introduction to Functional Grammar*. Edward Arnold.
- Halliday, M.A.K. & Matthiessen, C. M. I. M. (1999). *Construing Experience Through Meaning, A language-based approach to cognition*. Continuum.
- Halliday, M. A. K. & Matthiessen, C. M. I. M. (ED.). (2004). *An Introduction to Functional Grammar*. Edward Arnold.
- Halliday, M. A. K. & Matthiessen, C. M. I. M. (ED.). (2014). *Halliday's Introduction to Functional Grammar*. Routledge.
- He, Q. S. & Yang. B. (2019). A study of transfer directions in Grammatical Metaphor. *Australian Journal: Linguistics*, 34(3), 345-360. <https://doi.org/10.1080/0726-8602.2014.898226>
- Hirvela, A & Du, Q. (2013). Why am I paraphrasing?: Undergraduate ESL writers' engagement with source-based academic writing and reading. *Journal: English for Academic Purposes*, 12(2), 87-98
- Phan, V. H. & Giã, T. T. N. (2020). Danh hóa và Ân dụ ngữ pháp từ góc nhìn ứng dụng ngôn ngữ. *Journal: Language and Life*, 1(293), 5-15.
- Phan, V. H. & Giã, T. T. N. (2021). Transforming the Processes of Ideational Meaning Through Grammatical Metaphor. *Proceedings: VietTESOL International Convention 2021- Innovation and Globalization*, Đà Nẵng.
- Pham, M. T., Nguyen, D. N. Q., Nguyen, T. K. C., Nguyen, H. N. M., Hoang, T. A. T., & Pham, V. P. H. (2022). The Reality of English Presentation Skills of English-majored

- Students in Vietnam: A Case Study at Van Lang University. *International Journal of TESOL & Education*, 2(2), 27–46. <https://doi.org/10.54855/ijte.22222>
- Lian, A-P., Hoven, D. L. & Hudson, T. J. (1993). Audio-Video Computer Enhanced Language Learning and the Development of Listening Comprehension Skills. *Australian Second Language Learning Project*.
- Matthiessen, C. M. I. M. & Marvin. L.(2010). *Key Terms in Systemic Functional Linguistics*. Continuum.
- Thomson, G. (1996). *Introducing Functional Grammar*. Arnold.
- Viviana, H. et al (2022). Effects of Blended English Learning in Superior Education: A Case Study. *Vol. 13 No. 5 (2022): Volume 13, Issue 5*. <https://asiacall-acoj.org/index.php/journal/article/view/3>
- Xiangmin, K. (2022). Analyzing the Regular Grammar Mistakes of Chinese Students While Assessing Speaking During an IELTS Speaking Test. *Vol.1 (2022): Proceedings of the 19th AsiaCALL International Conference*. <https://asiacall.info/proceedings/index.php/articles/article/view/43>

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## The Application of ChatGPT in Language Test Design – The What and How

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### ABSTRACT

**Keywords:** artificial intelligence, ChatGPT, language test, test design

ChatGPT, an artificial intelligence-based chatbot, has recently gone viral among users thanks to its ability to create human-like interactive experiences. It is now a trend to make use of this artificial intelligence (AI) tool in different fields of language education, including language testing and assessment. With a concern related to the potential and challenges of applying ChatGPT in designing language tests, this study has investigated the current use of the chatbot among language teachers at different schools and institutions. Participants are expected to share their experiences utilizing the chatbot to assess their learners. Data from a survey and in-depth interviews will reveal initial findings to answer questions related to the popularity of this chatbot among language teachers and its application in language test design. Based on the result discussion, the presentation concludes with some implications for language teachers to make the most of their future use of ChatGPT in the field of language testing.

### Introduction

ChatGPT – an artificial intelligence-based chatbot, has reached one million users only five days after its official launch (Mirati, 2022). This software application has promptly gone viral due to its capabilities to engage in human-like conversation with a huge database created from existing reference sources. As users interact with the system via a question-response form, users can ask about whatever issue they are concerned about and then receive a result within seconds. Therefore, there is no doubt that using ChatGPT is of interest to various groups of people in different fields in general and educators and learners in particular. In the field of language education, ChatGPT has marked its appearance in the classroom context when it can provide authentic language use by initiating real-life conversations and also act as a tool for a personalized learning environment (Hong, 2023). For teachers, ChatGPT is reported to support them in multiple aspects related to planning lessons, assessing students' writing papers, and

generating tasks and scenarios (Rudolph et al., 2023). However, as the chatbot has been recently launched, there are not many existing studies with empirical evidence about the application of ChatGPT in current teaching and learning activities. Available studies seem to start from a review of the benefits, opportunities, and challenges of using the software application. More research on the use of this chatbot in different educational contexts should be implemented to evaluate its effectiveness in real-life situations. As a result, this study is conducted with the expectation of contributing to the research field of ChatGPT application in a certain aspect known as language test design. The researcher aims to investigate how the chatbot supports language teachers in developing different kinds of tests and whether it can become an effective educational tool for teachers to take advantage of in their teaching context.

## Literature review

### *What ChatGPT is*

Being officially launched in November 2022, ChatGPT is considered a “state-of-the-art chatbot” (Hong, 2023). It is “a general-purpose conversation chatbot” and “designed to generate human-like text based on a given prompt or conversation and has the ability to engage in natural, open-ended conversations on a wide range of topics” (Zhai, 2023). It helps compare existing data to provide the most likely relevant responses based on users’ questions. Thus, Hong (2023) makes a precise summary that ChatGPT is a text-generating search engine that may not suggest up-to-date information but excels at mimicking human interactions and filtering out irrelevant information while processing its responses.

### *Opportunities for using ChatGPT in language education*

There is no doubt to mention two main subjects: teachers and learners. A number of studies have reported the benefits of chatbots to teaching and learning activities. On the students' side, ChatGPT acts as a tool to personalize learning and support a personal learning environment. For example, the application can act as a personal language tutor by creating topics for discussion or writing prompts to practice (TESOL International Association, 2023). Also, like using other search engines, students can look for whatever information they wish by giving feasible instructions to the chatbot. According to Kasneci et al. (2023) and Thai (2023), students can enhance their engagement and follow personalized learning with this application with precise answer provision. Interestingly, some studies have investigated the chatbot's ability to generate answers in formal examinations, and the results show that it can reach passing scores (Choi et al. (2023), Dao et al. (2023)). Furthermore, based on the capability to summarize information, ask follow-up questions, and clarify, this chatbot can provide authentic language use for students pursuing language study (Hong, 2023). Consequently, Nisar and Aslam (2023) conclude that ChatGPT can be utilized as a prompt reference and self-studying instrument for learners. There exists an argument that the application may limit students' creativity as almost everything they need is available with the tool. However, according to Zhai (2022), this language model chatbot can encourage the use of creativity and critical thinking skills among users via AI-involved learning tasks solving real-world problems. The application of ChatGPT in enhancing language learners’ critical digital literacies is also investigated in Tran & Tran



(2023).

For teachers, as soon as the chatbot has been promoted, Moore et al. (2022) show that it can help evaluate the quality of students' generated answers. In this sense, ChatGPT acts as a tool to support assessment activities. Later on, through a review of two journal articles and eight preprints on ChatGPT and higher education, Rudolph et al. (2023) summarize that this software application is useful in marking students' writing papers, creating lesson plans, offering suggestions, generating tasks, and initiating scenarios. ChatGPT does play some roles in language assessment. To clarify, the chatbot can help create assessment tasks based on users' instructions. As a text generation tool, the chatbot also produces texts that may be used to compose test items (Tate et al., 2023). Additionally, as Rudolph et al. (2023) discuss, the application supports instructors in assessing their students' writing and then reducing their workload.

### *Challenges of using ChatGPT in language education*

Despite many opportunities ChatGPT may open for both educators and learners, the chatbot also has some negative impacts on teaching and learning activities, as reported by some studies. Yeadon et al. (2022) claim that ChatGPT may become a threat to the credibility of short-form essays as an assessment method. The borderline between plagiarism using the chatbot and using it as a reference seems not to be clear enough for learners. Teachers and policymakers are also aware of the negative impacts of AI tools in this aspect (Nguyen, 2023). This is also what Cotton et al. (2023) are concerned about AI-powered writing assistants. As students using AI may lack creativity and autonomy, it is crucial for teachers to design reliable assessment tasks to evaluate and assess learners' levels while not stopping them from using such tools. The potential negative impacts of the application on students' critical thinking skills are also reported by Thai (2023). Le et al. (2023) also report that the answers ChatGPT generated were inconsistent and may depend on multiple factors. It means that users should not totally rely on the chatbot's responses. For questions that require a higher level of cognitive thinking, like other AI tools, the chatbot also has difficulty giving accurate responses, according to Dao et al. (2023).

From the brief overview of ChatGPT and some existing studies on the chatbot, it can be seen that more research should be implemented to investigate its application in the field of language testing and assessment. What has been reported in recent studies globally and in Vietnam focuses more on how ChatGPT supports teaching and learning activities. As a result, this current study aims to report the use of ChatGPT in language assessment in general and language test design in particular. The gap to be filled in the literature review should be what aspects of test writing involve this software application and how effective the tool is from language teachers' perspectives.

### *Research Questions*

To fulfill the purpose of the study, three following research questions should be answered:

1. To what extent is ChatGPT used among language teachers?
2. What aspects of language test design can ChatGPT support teachers?
3. How effective is ChatGPT in designing language tests as perceived by teachers?

## Methods

### *Pedagogical Setting & Participants*

The research involves the participation of 70 language teachers from different universities and schools in Vietnam. The majority of participants are from universities in the northern region, and the rest are scattered in the central and southern parts. 82.8% of those participants are teaching English at a number of institutions, 8,6% are teachers majoring in Japanese education, while the rest of 8.6% are lecturers and teachers of other languages, including Russian, French, Chinese, German, and Korean. As the data collection is based on convenience sampling, since the researcher specializes in English testing and assessment, it is plausible to see such a gap between English and other languages. Of those respondents, about three-quarters of them have more than 10 years of teaching experience, with 85.7% being female and 14.3% being male. Regarding qualifications, less than one-fifth of the responses are from graduates, while the biggest group includes teachers with Master's degrees at 61.4%, and lecturers with a Ph.D. title comprise 22.9% of the surveyed. That more than half of the participants have fulfilled their Master's program reflects the current situation of teacher's qualifications at Vietnamese language institutions.

Regarding the participants for in-depth data, five educators were invited as they shared in the survey that they had been using ChatGPT regularly and were willing to be asked individually. Four teachers who specialize in English language teaching are from the same university. One educator used to work as a full-time English lecturer but is now a strategy team leader of an education technology company. They have from twelve to fifteen years of working in the field of English language education.

### *Design of the Study*

In order to answer three research questions, the study would employ a mixed method approach of both quantitative and qualitative approaches. According to Cresswell (2016), mixed methods are “an approach to research in which the investigator collects, analyzes, and interprets both quantitative and qualitative data, integrates or combines the two approaches in various ways, and frames the study within a specific type of design or procedure” (p.4). In the scope of this study, a questionnaire and semi-structured interviews were selected to collect data using the mixed method approach. They are expected to collect both at-large and in-depth responses from the participants. The interviews would help fill the questionnaire's gap with more insights.

### *Data collection & analysis*

First, using convenience sampling, an online survey designed on Google Forms was sent to language teachers and lecturers. The questionnaire includes two parts; part 1 aims to collect the participants' relevant background information, while part 2 acts as the main part of compiling responses reflecting participants' use of ChatGPT in language test design. Regarding the application of ChatGPT, the survey focuses on answering two questions: what and how. To be more specific, what aspects of language test design can ChatGPT be involved in, and how effective is it in real-life use? Survey questions were built upon the analysis of findings and discussion in previous studies by Hong (2023) and Rudolph et al. (2023), and based on the researcher's knowledge and hands-on experience of ChatGPT as well. The data is then put into

Excel for analysis. Later on, qualitative data is collected via semi-structured interviews of five participants who completed the survey. The recordings were transcribed and translated into English. The transcript of each participant was coded with numbers, namely T1 to T5, and used for the study purpose only. Relevant themes emerging from the transcription data were individually analyzed and later integrated to provide findings for the study. The interview questions targeted retrieving further information about teachers' application of ChatGPT in test design activities.

### Findings and Discussion

*Research question 1: To what extent is ChatGPT used among language teachers?*

With the purpose of investigating whether ChatGPT is widely used among language teachers, two questions were formed in the questionnaire. Figure 1 presents the extent to which teachers know about the chatbot, while Figure 2 shows its application level among participants.

Figure 1. Levels of knowing about ChatGPT among language teachers (N=70)

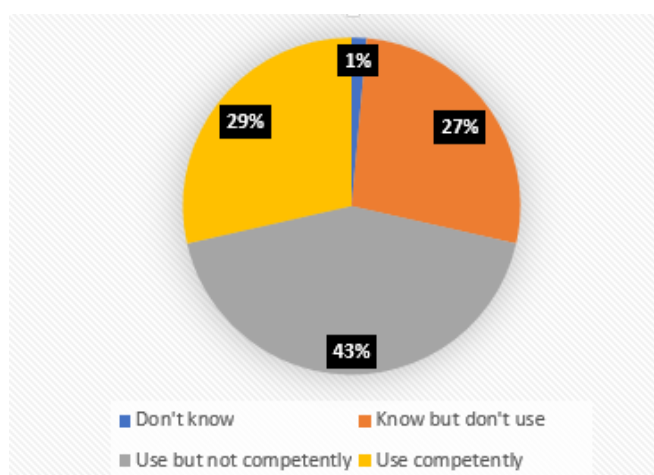
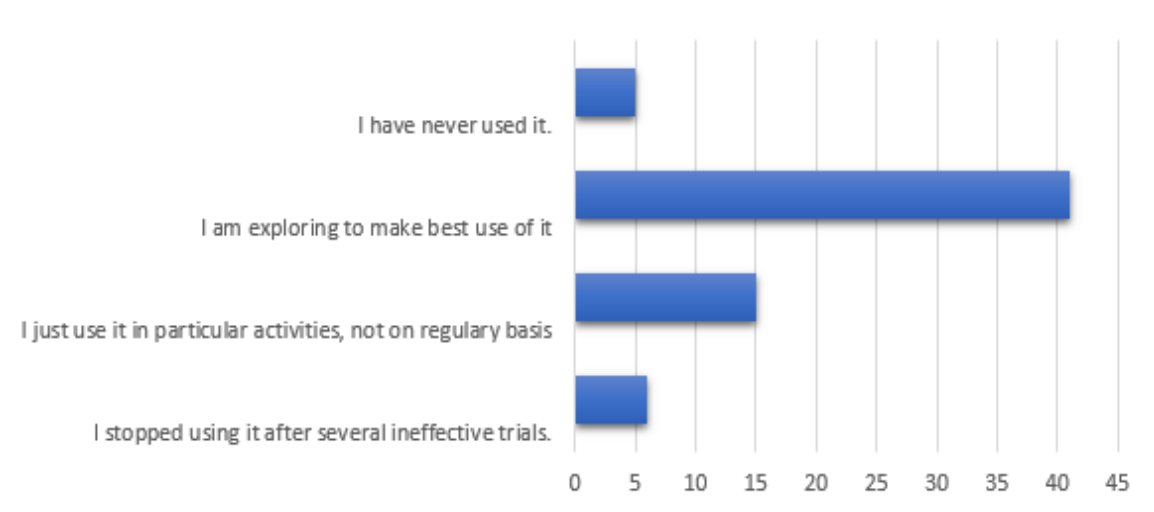


Figure 2: Levels of using ChatGPT among language teachers (N=70)

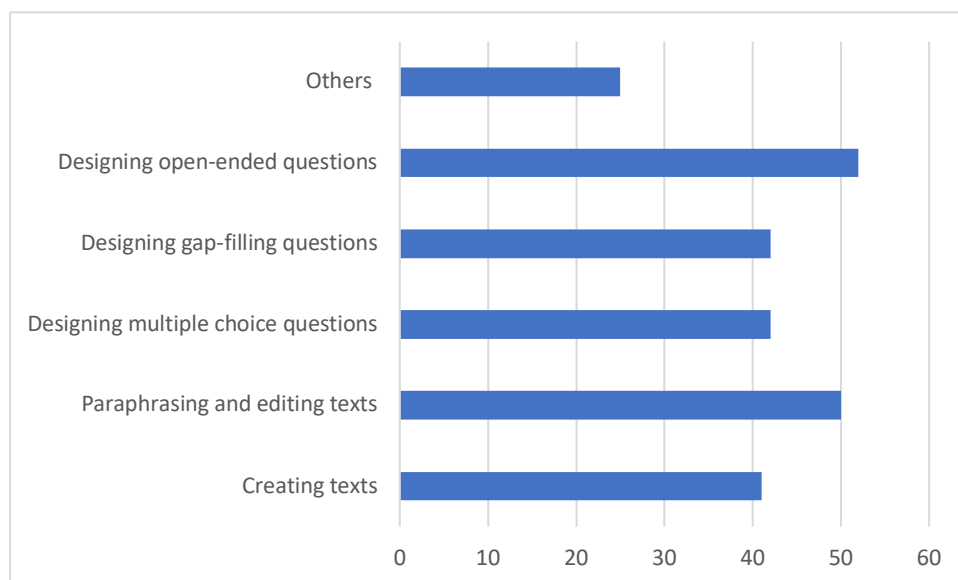


As can be seen from both figures, most of the respondents know about the chatbot, and only 1% of the participants do not know about it. In Figure 1, nearly one-third of them claimed that they had never used it despite knowing the software application. This is reflected in Figure 2, when 11 participants revealed that they had never used or stopped using it after several ineffective trials. The majority in Figure 1 (72%) responded that they utilized ChatGPT, with more people admitting that they were not very competent in using it. This result can be seen in Figure 2, regarding 60 responses in total. It seems that many of them are on the way to exploring the chatbot to take advantage of it, compared to only 15 respondents applying GPT-3 for particular activities. From the two figures, the surveyed group shows an increasing use of ChatGPT. However, the proportion of competent and regular users is still limited.

*Research question 2: What aspects of language test design can ChatGPT support teachers?*

As the study focuses on issues related to designing language tests, the questionnaire raised a question that includes some typical features in the field. They are text generation or adaptation and test item composition.

Figure 3: Aspects of language test design that teachers apply ChatGPT (N=70)



Regarding text generation, more than half of surveyed teachers reported using ChatGPT to create input texts for their own tests. As the chatbot is naturally a text-generation tool, it is understandable to see that many teachers use this function. The application can generate an input text of either Reading or Listening skills based on the user's request. Two out of five interviewed teachers responded that they tried this function by providing detailed guidance for GPT. T1 shared what she did in a reading test:

"ChatGPT can create a reading passage, and everything is based on your instructions. For example, you need to explain in detail the range of word numbers or how many words you wish to have in your text, what text level is like B1 or B2, what topic it is about, and so on. The more descriptions you provide, the more appropriate text you will have."

Having the opinion in common with T1, T2 clarified what T1 described as “put into the test specification to depict what features the text should possess.” The information that T1 shared on word number, text level, topic or domain actually belongs to the test specification’s requirement of input text. If teachers want to stick to the test specification, they should break it down and provide detailed questions for GPT (T2). The use of ChatGPT for text generation is similarly reported in some previous studies such as TESOL International Association (2023), Hong (2023), Rudolph et al. (2023), and Tate et al. (2023).

Regarding text adaptation, a significant proportion of about 70% of participants claimed to use ChatGPT in paraphrasing and editing texts. Not surprisingly, all five interviewed teachers reported their frequent use of this function in their test design. According to T3, as ChatGPT can provide authentic language, teachers should take advantage of this benefit to refine their input text before designing questions. To make it more specific, T4 added:

“If you want to edit your text, you can ask ChatGPT for help by making requests such as simplifying the text to make it easier for level B1 or adding more complex structures to increase its difficulty level. Moreover, ChatGPT helps you refine what you have written as it is a huge database of information, and the language it generates is native-like, so you can make your composition sound much more natural.”

As can be inferred from interviewees' sharing, the chatbot is an applicable tool for revising and editing texts by paraphrasing them based on users' requests. So far, the function of adapting texts actually derives from the item writer’s need, and this helps to extend the use of this chatbot in the field of language assessment present in the literature review.

In terms of designing test items, the survey asked about three main test questions, including multiple-choice, gap-fill, and open-ended. More than half of all participants have used the software application to write such test question types, especially more than 70% of them designed open-ended questions. These figures show a notable role of ChatGPT in supporting teachers in composing test items, which is often considered a time-consuming task. This finding also reflects what Rudolph et al. (2023) summarize in their study about the capacity of software applications to generate tasks. With clear instructions to require what type of question users want the chatbot to create, they will receive relevant responses. Interviewees had similar reflections on this advantage of the application. T2 and T5 both claimed that they had used it on a regular basis to create gap-fill questions or cloze-text ones. The value of this application in creating separate multiple-choice items for vocabulary-grammar tasks is also appreciated by T1 and T5. Interestingly, T4 had some sharing on the application of ChatGPT in creating different question types for a reading passage:

"I often put the text in the system and ask whether the chatbot can create multiple choice questions and short-answer questions on sub-skills such as reading for the main idea, specific details, or vocabulary. As a user, it is very important to provide one by one instruction. You should break up your instructions like the first one is to focus on specific details, which go with multiple choice questions, and which go with short-answer questions. Then, the next request is about creating a multiple-

choice question for the main idea."

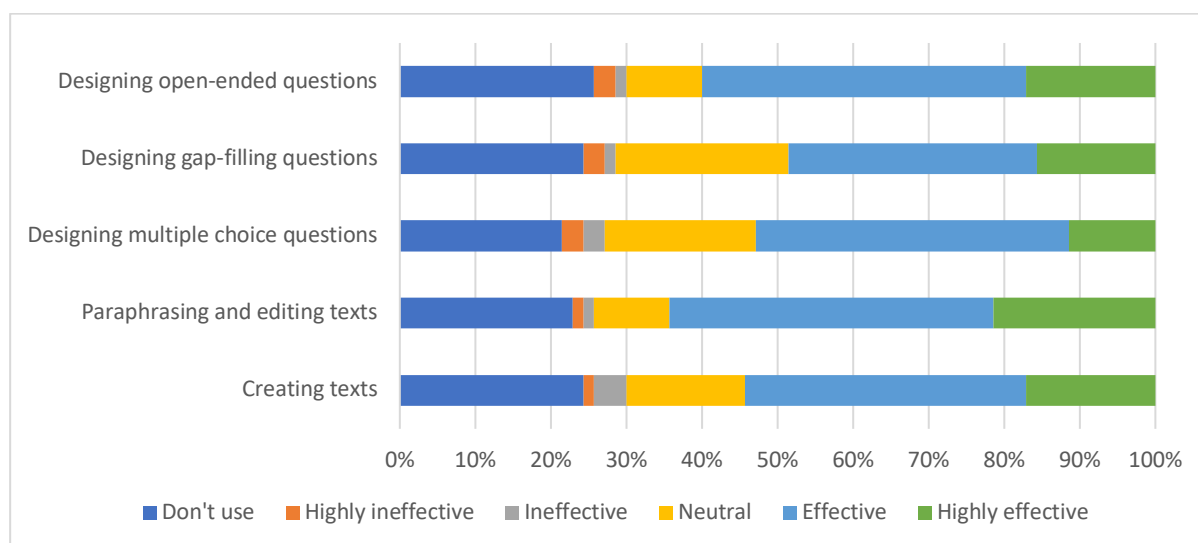
Another type of question is mentioned in this sharing, known as a short-answer one. T4 added True/False/Not Given questions to the list, and T1 also shared her experience in using the chatbot to create matching and summarizing questions. This may explain the reasons why more than one-third of participants added "others" to their list. Others may refer to other questions to be designed in this sense. Additionally, T4 added a different usage of ChatGPT, which can be categorized as "others". It refers to asking the chatbot to refine the instructions of her test tasks. She considered the features of authentic language use in this case. T2 raised another idea of breaking up the test specification into keywords or short sentences to require the chatbot to create relevant test tasks. In this sense, ChatGPT is considered a bridge connecting test specifications to test tasks, then the test itself.

From the quantitative and qualitative data analysis, it is worth noticing that ChatGPT has been utilized in two main aspects of test design investigated in this study. The first one is working with input texts, covering both generating new texts and editing existing ones. The second factor is item composition with a number of suggested question types. The findings from interviews also reveal additional aspects of test design that ChatGPT may contribute to, such as creating test tasks based on an available test specification. The applications of the chatbot related to text and question generation have been presented in Rudolph et al. (2023)

*Research question 3: How effective is ChatGPT in designing language tests as perceived by teachers?*

From surveyed aspects of test design in the second research question, the questionnaire continued investigating teachers' perspectives on how effective that chatbot is in such features of test design. A Likert-scale question is designed to ask for participants' opinions on their evaluation in case they have used ChatGPT. The results are displayed in Figure 4 below.

Figure 4: Teachers' perspectives on the effectiveness of ChatGPT in test design



Apart from about one-fifth to a quarter of participants reported not using ChatGPT, the rest expressed various evaluations of the chatbot's advantages on test design. The evaluation is based on their hands-on experience of using the application.

In relation to how potent the language model in text generation and adaptation is, participants showed their confidence in using ChatGPT to perform these actions when more than half of them agreed that it is effective and highly effective. As can be seen from the figure, respondents were more appreciative of the chatbot's ability to edit and paraphrase texts, with 64% choosing effective and highly effective, compared with 54% in the same categories of text generation. This preference is also clearly disclosed in all five teachers' interview data. They appreciated what was revised and refined by ChatGPT when they put a text and gave specific requests. However, T1 and T5 both shared the opinion that it is very common to ask the chatbot to revise the text repeatedly by editing the instructions until they are satisfied with the result. It may be why the proportion of its considerable effectiveness is not significant enough. T1 even admitted that after her check with specialized text analysis tools, the readability and vocabulary level requirement cannot be fulfilled. Hence, a question is raised about whether it takes more time and effort for teachers to use the chatbot rather than polish texts by themselves. However, the interview responses advocated the chatbot as teachers think it is still time-consuming. The more teachers use it, the better their requests will be to navigate it (T4).

Discussing the application of ChatGPT in designing questions, all three investigated question types were reported to be effective and highly effective by nearly 50% to 60% of participants. In this group, the gap-filling questions received the lowest percentage (48%), while open-ended ones gained the highest (60%). Therefore, the proportion for "neutral" opinions also accounted for about one-fifth of respondents in multiple-choice and open-ended questions. This reflects considerable support from surveyed teachers for the function of item design. However, controversies may arise due to different perspectives.

Regarding multiple-choice questions, in-depth data have brought multi-directional viewpoints. T4 and T5 are in favor of requiring ChatGPT to compose such items as T4 shared.

“As I am teaching a test preparation course, I often use the chatbot to design multiple-choice questions based on a reliable text. I am quite satisfied with the result as distractors meet the requirement of being broad or narrow, being incorrect in detail, etc. Normally, I have to revise the questions at least twice to edit the wording or reduce the word number to follow the description in the test specification. However, I am happy with the questions it creates.”

On the other hand, T1, T2, and T3 do not highly value the role of ChatGPT in this situation. T1 thought that distractors were not strong enough to discriminate test takers at different levels. Some distractors seem to be easily eliminated because they are obviously wrong. This is not the art of writing multiple-choice questions (T1). T3 saw this type of question as more suitable for specific details than other sub-skills in a reading comprehension task. The draft needs refining a lot before it is ready to be used. As an educational technology leader, T2 shared a concerning idea:

“What ChatGPT creates is not very consistent as the chatbot cannot make decisions, and the results change over time. It designs better individual multiple-choice questions in a grammar and vocabulary task than in a reading comprehension exercise, which requires a link between questions and a high cognitive load. Also,

I think it should be applied to classroom tests, not high-stakes ones requiring reliability and consistency."

Some noticeable findings have been drawn from the interviews for other types of questions. Sharing a similar point of view of more than half of the surveyed teachers, interviewees appreciated the quality of gap-fill and open-ended questions. Having been provided enough information from the test specification, ChatGPT can generate pretty good gaps in sentence completion or cloze text (T2). It is also easy to create open-ended questions with the appropriate request for the application (T1). Again, they emphasized the significance of giving the right request. The interviewees also mentioned other types of questions that cannot be well-designed by the chatbot. According to T1, a short-answer question is an instance in which the chatbot has difficulty in limiting the number of words to produce in the answer. She also tried to design a matching task, but the result was not good because ChatGPT was unable to generate pictures. T2 added error recognition as a question type that challenges the language model. The discussion, once again, is about the limitation of ChatGPT in designing a variety of task types. This fact is understandable, as artificial intelligence has its own pros and cons and cannot replace humans in certain aspects.

## Conclusion

The study investigated the use of ChatGPT among language teachers at different institutions, mostly in the north of Vietnam. The data analysis from the questionnaire and semi-structured interviews has brought noteworthy findings for the field.

Firstly, the majority of participants claimed they used the chatbot in their teaching and assessment activities. Many of them use it daily and try to make the best use of it. The small percentage of teachers who have never used or stopped using the chatbot after several trials also raises concerns for future resolutions.

More importantly, there is no doubt to infer from the findings that ChatGPT has become increasingly popular in language test design. Its notable application can be clearly seen in two major aspects: input text generation/adaptation and item writing. Such application usage is based on its nature as a text-generation tool. Therefore, it can create something new or revise what is provided with appropriate instructions and requests. The evaluation of its effectiveness shows that text adaptation is preferable to text generation as it is more reliable and consistent. With respect to question design, ChatGPT is reported to be effective in certain types, such as gap-filling, open-ended, and multiple-choice for individual questions. Its effectiveness in designing multiple-choice items in reading comprehension tasks raises some controversies from in-depth interviews. Its limitation in creating matching or error recognition exercises should also be taken into consideration.

It can be concluded from the analysis that ChatGPT has its own pros and cons, like other AI tools, and it is not a one-for-all application. The findings of this study also strengthen theoretical and empirical evidence from existing studies like Hong (2023), Rudolph et al. (2023), and Tate et al. (2023). It is recommended that users edit their instructions many times to navigate the chatbot to follow their requests and meet their requirements. If users are patient enough and sharpen their queries, they will achieve the desired results from the chatbot. Also, another



implication drawn from the study is that teachers should not rely on ChatGPT. It will support teachers in the way they want; however, it cannot replace them. In test design, teachers still control the process of requesting, selecting, revising, and refining. ChatGPT is expected to play the role of a facilitator to reduce their workload.

As the number of participants is not high, this study has its own limitation in generalizing its findings for a bigger group of the population. The research also limits the aspects of language test design that it approached in the questionnaire. Further studies with a greater number of participants and more investigated areas are recommended. Also, a comparison between the perspectives of English teachers and teachers of other languages should be conducted to see if any gap exists. A future study on the application of ChatGPT into language testing and assessment is highly recommended as well.

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### References

- Cotton, D.R., Cotton, P.A., & Shipway, J.R. (2023). Chatting and cheating. Ensuring academic integrity in the era of ChatGPT. <https://doi.org/10.1080/14703297.2023.2190148>
- Choi, J.H., Hickman, K.E., & Monahan, A.B. (2023). ChatGPT goes to law school. <https://dx.doi.org/10.2139/ssrn.4335905>
- Dao, X.Q., Le, N.B., Phan, X.D., & Ngo, B.B. (2023). Can ChatGPT pass the Vietnamese National High School Graduation Examination? <http://dx.doi.org/10.48550/arXiv.2306.09170>
- Hong, W.S.H, (2023). The impact of ChatGPT on foreign language teaching and learning: opportunities in education and research. *Journal of Education and Technology and Innovation*, 5(1), 37-45.
- E.Kasneci *et al.* (2023) ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*. 103. <https://doi.org/10.1016/j.lindif.2023.102274>.
- Le, A.V., Bui, T.D., Le, Q.Q., & Vu, V.L. (2023). Khả năng thực hiện bài kiểm tra định kì môn Toán và môn Ngữ văn cấp Trung học của công cụ ChatGPT: Kết quả nghiên cứu và một số khuyến nghị ban đầu. *Tạp chí Khoa học và Giáo dục Việt Nam*, 19(2), 1-10.
- Moore, N.S., & MacArthur, C.A. (2016). Student use of automated essay evaluation technology during revision. *Journal of Writing Research*, 8(1), 149-175.
- Nguyen, Q. H. (2023). AI and Plagiarism: Opinion from Teachers, Administrators and Policymakers. *Proceedings of the AsiaCALL International Conference*, 4, 75–85. <https://doi.org/10.54855/paic.2346>.

- Nisar, S., & Aslam, M.S. (2023). Is ChatGPT a good tool for T&CM students in studying pharmacology? Available at <http://dx.doi.org/10.2139/ssrn.4324310>
- Raford, A., Narasimhan, K., Salimans, T., & Sutskever, I. (2018). Improving language understanding by generative pre-training. Retrieved from <http://www.cs.ubc.ca/amuham01/LING530/papers/radford2018improving.pdf>
- Rudolph, J., Tan, S., & Tan, S. (2023). ChatGPT: Bullshit spewer or the end of the traditional assessment in higher education. *Journal of Applied Learning & Teaching*, 6(1), 242-263. Available at <https://journals.sfu.ca/jalt/index.php/jalt/index>
- Tate, T., Doroudi, S., Ritchie, D., & Xu, Y. (2023). Educational research and AI-generated writing: Confronting the coming tsunami. Available at <https://doi.org/10.35542/osf.io/4mec3>.
- TESOL International association. (2023). AI for Language Learning: ChatGPT and the Future of ELT. Available at <http://blog.tesol.org/ai-for-language-learning-chatgpt-and-the-future-of-elt/>
- Thai, T.C.T. (2023). Thái độ và kì vọng của sinh viên sư phạm tiếng Anh đối với ChatGPT: Nghiên cứu tại trường Đại học Sư phạm Hà Nội. *Tạp chí Giáo dục*, 23(10), 51-61.
- Tran, T.N., & Tran, H.P. (2023). Exploring the role of ChatGPT in developing critical digital literacies in language learning: a qualitative study. *Proceedings of the AsiaCALL International Conference*, 4, 45-62. <https://doi.org/10.54855/paic.2344>.
- Yeadon, W., Inyang, O.O., Mizouri, A., Peach, A., & Testrow, C. (2022). The death of the short-form physics essay in the coming AI revolution. *Physics Education*, 58(3). <https://iopscience.iop.org/article/10.1088/1361-6552/acc5cf/pdf>
- Zhai, X. (2022). ChatGPT user experience: Implications for education. Available at <http://dx.doi.org/10.2139/ssrn.4312418>.

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## University Teachers' Perceptions of Using ChatGPT in Language Teaching and Assessment

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### ABSTRACT

**Keywords:** ChatGPT, teacher perceptions, university teachers

ChatGPT, known as an artificial intelligence (AI) chatbot, has gained popularity in various fields, including language education, since its launch in 2022. Accordingly, stakeholders have voiced a growing concern about its potential and challenges in different areas. In such a context, the present study investigates teachers' perceptions about using ChatGPT in language teaching and assessment. The data were collected via a questionnaire survey from the teachers working in Vietnam's universities, where language teaching is an important field. They were asked about their knowledge and concerns relating to using this conversational AI tool in their teaching and assessment activities and the challenges they might face. The outcomes of this research are likely to play a part in understanding how university teachers access and apply the new technological development to their current work, how they perceive its appropriateness, as well as how they handle its impacts. The investigation has practical implications for providing teachers with professional assistance in managing AI models.

### Introduction

Technology-based teaching and assessment seem to have been prevalent, along with the constant development of information technology and artificial intelligence (AI) tools, including the launch of ChatGPT in the past year. While a number of teachers perceive technology-based educational practices to be useful, others are concerned about the difficulties they may encounter as well as the negative impacts these practices may bring about (Chien et al., 2014). Alam et al. (2022) even emphasize that using AI is an undeniable phenomenon in any sphere of social and personal life, as well as in educational contexts; therefore, awareness of AI-related issues must be raised among the stakeholders. A similar concern about ChatGPT, an emergent AI chatbot, has been aroused (e.g., Limma et al., 2023; Shoufan, 2023). There has been wide-ranging discussion about the potential and challenges of using ChatGPT but mostly based on students' perceptions in various contexts (e.g., Aktay et al., 2023; Bonsu & Baffour-Koduah,

2023; Chan & Hu, 2023; Firat, 2023).

Meanwhile, many university teachers have claimed their surprise at the rapid popularity of this AI tool and its capacities. They have also been worried about whether the information provided is accurate or whether ChatGPT would replace the educators' roles. These claims are reflected in the research by Göçen and Aydemir (2020), in which both feasible possibilities and downsides of AI's entrance into education were discussed. Such a theoretical and practical background leads to a desire to understand the perceptions of teachers, who may directly get benefits and suffer from this conversational AI tool, about using ChatGPT in education. The ultimate purpose of the study is to investigate what English teachers from universities in Vietnam know about ChatGPT and perceive about using it in language teaching and assessment, thereby indicating recommendations for proper use as well as adequate guidance to take advantage of such a powerful technological tool.

## Literature review

### *ChatGPT*

ChatGPT defines itself as:

“I am an artificial intelligence language model created by OpenAI. My primary function is to assist users by generating human-like text based on the input I receive. I have been trained on a diverse range of internet text up until my knowledge cutoff date in September 2021, which means I can provide information, answer questions, generate text in various styles, and engage in natural language conversations to the best of my abilities within the scope of the knowledge and training data available to me.”

In response to which statements are correct, ChatGPT further clarifies its features (Table 1).

**Table 1**

*Responses from ChatGPT about its features*

No.	Statements	Responses from ChatGPT
1	ChatGPT is a search engine similar to Google.	This statement is incorrect. ChatGPT is not a search engine like Google. It generates text-based responses and does not perform web searches.
2	ChatGPT is a language model capable of generating texts based on basic keywords.	This statement is partially correct. ChatGPT is a language model capable of generating text based on input, including keywords. However, it can generate text beyond basic keywords and can understand context to some extent.
3	ChatGPT is created from a vast and continuously updated dataset.	This statement is partially correct. ChatGPT was trained on a large dataset, but my knowledge has not been continuously updated since my last training data in September 2021. Therefore, I may not have the most up-to-date information.
4	ChatGPT can understand human requests and execute them accurately.	This statement is partially correct. ChatGPT can understand and respond to human requests to the best of its training data and capabilities, but it may not always provide perfectly accurate responses and may require

No.	Statements	Responses from ChatGPT
5	ChatGPT is a translation support tool.	context clarification for complex requests. This statement is correct. ChatGPT can assist with translation tasks by generating text in different languages, but it is not a dedicated translation tool like some other software.
6	ChatGPT is an online platform for learning foreign languages.	This statement is incorrect. ChatGPT is not an online language learning platform. It is a text-based AI model designed for generating text and assisting with various natural language understanding tasks.

To put it briefly, ChatGPT sees itself as a language assistant for various human activities and emphasizes that its outstanding feature is the capability to analyze and generate texts from the given input. The origin and capacities of ChatGPT are confirmed on its mother company's website (i.e., OpenAI - an AI research and deployment company that aims to align generative models with human values in various fields). Scholars and researchers also agree that the chatbot can perform a variety of tasks based on proper prompts, such as generating advanced text and engaging in conversations with users, writing essays, brainstorming research ideas, conducting literature reviews, enhancing papers (Owens, 2023), translating languages, summarizing texts, answering questions, writing creatively (Adiguzel et al., 2023), planning lessons and assessing students (Adiguzel et al., 2023; Kasneci et al., 2023). Although the previous authors do not mention that ChatGPT has limited knowledge of the world and events after 2021, they acknowledged its bias and possibilities of unfairness. The other authors hold a belief that ChatGPT was trained on extensive data (Cousins, 2023) and could develop its abilities rapidly as it continues to receive new data through user interactions (Shoufan, 2023). However, ChatGPT is operated differently from Google's search engine. While Google provides responses based on search results from different websites, ChatGPT generates responses based on the pre-programmed set of information (Chinonso et al., 2023; Shoufan, 2023).

It is indicated from its acknowledgment and the literature that ChatGPT itself is not a specialized teaching and assessment tool. The effectiveness of using ChatGPT for language teaching and assessment depends on how it is integrated into educational processes and how educators and individuals utilize it for their purposes. With an endeavor to create a comprehensive framework for integrating ChatGPT in teaching and learning, Reyna (2023) proposes a variety of educational activities in which ChatGPT serves as a support tool for student learning and classroom assessment. For example, teachers can engage students in interacting with ChatGPT and evaluating its responses, whereby students develop their information literacy and critical thinking skills (p. 4). This activity can also be used as an alternative assessment, the criteria of which involve the application of critical thinking skills in evaluating responses and effective utilization of digital literacy skills. Teachers can even create multiple-choice questions to check their students' understanding of the target concepts. For language learning, the assessment criteria can involve clear and coherent communication in the reflective report (p. 8). Castro (2023) agrees with Reyna (2023) that ChatGPT is a useful tool to engage students in learning as well as enhance their soft skills. The author adds that ChatGPT assists students in experimenting with different phrases, grammatical structures, and expressions without fearing judgment and that it supports teachers in giving timely and

personalized feedback to their students (p. 30).

### *Perceptions of ChatGPT Utilization*

A considerable number of studies published in 2023 demonstrate scholars' and researchers' concerns about students' perceptions of using ChatGPT for learning and teaching (e.g., Aktay et al., 2023; Bonsu & Baffour-Koduah, 2023; Chan et al., 2023; Firat, 2023; Limma et al., 2023; Shoufan, 2023; Tran & Tran, 2023). Generally, students have positive attitudes towards the use of this generative AI tool. They acknowledge the advantages of personalized and immediate learning support, proofreading and brainstorming assistance, and research and analysis capabilities. This is the irresistible reaction from students who can benefit from various features of the tool although they also voice their concerns about the accuracy and appropriateness of the provided contents (Aktay et al., 2023; Chan et al., 2023; Shoufan, 2023), privacy and ethical issues (Bonsu & Baffour-Koduah, 2023; Chan et al., 2023; Firat, 2023; Tran & Tran, 2023), loss of personal interaction (Limma et al., 2023), and possibility of laziness (Bonsu & Baffour-Koduah, 2023). However, students are just one of the stakeholders impacted by the prevalent use of this powerful chatbot. Therefore, it is necessary to look into the perceptions of teachers on whom ChatGPT has an effect both directly and indirectly.

The review of the studies conducted from 2015 to 2023 by Adiguzel et al. (2023) reveals that teachers normally have positive attitudes towards the use of AI, particularly AI-powered chatbots, in teaching and assessment. They explain that the full-package chatbot can help teachers keep track of their student's progress and give immediate feedback besides offering them teaching evaluation models or suggestions for teaching practices (pp. 5-6). However, the chatbot also poses a challenge to teachers who use essays as a form of assessment (p. 7) because managing academic integrity issues among students seems to become more complicated. Several similar reviews have been undertaken about this phenomenon. For example, Castro (2023) reviews the articles published from 2019 to 2023 on the impact of ChatGPT in education, pointing out the same advantages and disadvantages of this chatbot. It is postulated from the findings that despite its valuable assistance in education, greater care and additional safety guidelines should be provided to ensure the proper use of ChatGPT (p. 31). Chinonso et al. (2023) also review the prospects and challenges of ChatGPT for teaching, learning, and research. After reviewing the articles about the use of AI in general, the authors introduce the key features of ChatGPT and analyze its benefits and drawbacks.

One common attribute of these academic reviews is they mostly focus on ChatGPT in learning and teaching. Even though perceptions about the use of ChatGPT for assessment are mentioned, they are just related to teacher feedback rather than various aspects of assessment. Adiguzel et al. (2023) maintain that an AI-powered chatbot can assist teachers in tracking their students' learning, but the chatbot mentioned in the review is not exactly ChatGPT. In a more recent investigation, Nguyen (2023) has explored the utilization of this chatbot in language test design. The research findings indicate that the majority of the participating teachers use ChatGPT for generating/adapting input texts and creating different types of test tasks; however, the degree of its effectiveness varies according to individual users' experiences and evaluations. It is evident from the literature that despite wide-ranging reviews on this issue, there persists a notable gap regarding the field to be explored, which indicates room for further investigation

in the present study.

Another noticeable discovery from the literature is that the teachers involved in an amount of research on this issue are from various fields, that is, education strategies, open distance learning, or medical education (e.g., Firat, 2023) and are those who have experienced AI in their work (e.g., Iqbal et al., 2022; Limma et al., 2023). Nonetheless, language teachers do not seem to be frequently involved as participants in research on AI in general and ChatGPT in particular. That is the reason why the present study collecting data from university language teachers is significant to be conducted. It is also noted that whether the phenomenon is perceived to be positive or negative is probably due to whether it is properly known by the perceivers (Aru et al., 2016; Chen et al., 2018; Samaha et al., 2016). Accordingly, how much university English teachers know about ChatGPT would affect their thoughts or beliefs about this tool. The first research question – teachers' perceptions about what ChatGPT is, is driven by this idea. In short, the present study aims to answer the following research questions:

1. What is ChatGPT as perceived by university English language teachers?
2. What is the usefulness of ChatGPT in language teaching and assessment as perceived by the teachers?
3. What are the challenges of using ChatGPT in language teaching and assessment as perceived by the teachers?

## Methods

### *Setting & Participants*

The present study aimed to investigate university English teachers' perceptions of using ChatGPT in language teaching and assessment. Since the launch of ChatGPT, teachers in Vietnam have had heated discussions about whether this tool is useful for language teaching and assessment, as well as how to benefit from the tool. English teachers from various universities expressed their concerns in professional or personal meetings. They even posted their experiences and thoughts about this tool on some online platforms, such as Facebook, inviting discussion from the teacher community on multiple facets of the issue. This context drove the present study to investigate the perceptions of teachers in a wide range of universities where English is considered to be important, either it is for majors (i.e., who study English for their career) or non-majors (i.e., those whose disciplines are of different fields like Economics, Technology, Medical Studies, Law, and Physical Science).

Accordingly, the study employed a simple random sampling method. The total sample involved 43 English teachers, with 90.7% females and 9.3% males from many urban universities in Vietnam. These are valid respondents selected from nearly 100 teachers completing the survey questionnaire. The excluded are those from institutions other than universities and those who have not heard about ChatGPT. Among the selected participants, 41.9% are teachers of English-majored students, 39.4% are those of non-English-majored students, and 23.3% work with both English majors and non-majors. The number of years of experience is at least 5 years, and 34.9% of the participants have worked in this field for over 15 years. The majority of the participants (72.1%) claimed that they had experienced ChatGPT, while the rest knew about

ChatGPT but had not used it yet.

### *Data collection & analysis*

An online survey questionnaire was created on Google Forms to investigate what English teachers know about ChatGPT and what they perceive about its usefulness and challenges. The questionnaire has three parts. The first part is a short consent form that evidences the participants' willingness to provide information for the research. The second part collects the participants' background information, including their years of teaching experience, whether they taught English majors or non-majors, and whether they had experienced ChatGPT by the time they took part in the research. The third part includes questions to explore the participants' perceptions about ChatGPT and about using it in their teaching and assessment practices. The survey questions were informed by a number of previous studies, namely Firat (2023), Gill and Kaur (2023), Iqbal et al. (2022), Shoufan (2023), Tran & Duong (2021). Besides close-ended questions, open-ended questions were also included in the questionnaire to collect further ideas from the participants. The data collected from close-ended questions were presented in descriptive statistics, and those collected from open-ended questions (if any) were categorized in themes.

## **Findings and discussion**

### *ChatGPT*

University teachers' knowledge of ChatGPT was investigated through a close-ended question, which involved six statements as those chatted with ChatGPT (i.e., Table 1). The teachers were required to select more than one statement indicating their understanding of this AI tool. Table 2 illustrates what the teacher participants perceived about ChatGPT. No participants shared further ideas about what ChatGPT was or could perform in the open-ended question section.

It can be seen from the data that the vast majority of the participants (93.0%) agreed, "ChatGPT is a language model capable of generating texts based on basic keywords." This definition closely aligns with how ChatGPT characterizes itself and with what the previous authors highlight (e.g., Adiguzel et al., 2023; Owens, 2023). Another definition that is in line with ChatGPT's self-definition is "ChatGPT is a translation support tool"; however, just a bit more than half of the participants acknowledged it. Plus, 55.8% held the same belief on the accuracy of ChatGPT in comprehending and responding to human requests; in the meantime, ChatGPT acknowledges this capacity to some extent, clarifying that it may not fully grasp the requests with precision. Several authors, such as Aktay et al. (2023), Chan et al. (2023), and Shoufan (2023), also acknowledged this feature.

As for the data source of ChatGPT, more than four-fifths of the respondents (81.4%) believed it remains up-to-date; meanwhile, in reality, ChatGPT's training data was last updated in September 2021. Similarly, although ChatGPT itself claims not to be a search engine or a language learning platform, which is in line with the views of several previous authors (Chinonso et al., 2023; Shoufan, 2023), nearly half of the participants believed otherwise (41.9% and 37.2% respectively).



**Table 2***Participating teachers' knowledge about ChatGPT*

No.	Statements	Responses from participants	
		Total	Percentage
1	ChatGPT is a search engine similar to Google.	18	41.9%
2	ChatGPT is a language model capable of generating texts based on basic keywords.	40	93.0%
3	ChatGPT is created from a vast and continuously updated dataset.	35	81.4%
4	ChatGPT can understand human requests and execute them accurately.	23	53.5%
5	ChatGPT is a translation support tool.	24	55.8%
6	ChatGPT is an online platform for learning foreign languages.	16	37.2%

It can be indicated from the findings that not all participants comprehensively understand ChatGPT. This phenomenon seems to be compatible with not all of them having experienced ChatGPT in their teaching and assessment. Plus, approximately one-fifth of the participants claimed that they often had difficulty updating their knowledge about technology-based teaching in general and ChatGPT in particular. Likewise, only nearly half of the participants showed their interest in self-studying and applying AI or ChatGPT in their teaching and assessment practices. This implies that when new technology is introduced or expected to be utilized, teachers may require additional support and guidance instead of independently conducting research and implementing it.

*Usefulness of ChatGPT*

As revealed from the data of the present study, the vast majority of the participating teachers (81.4%) held a belief that ChatGPT could be a valuable support tool for teachers if provided with specific guidance. Regarding the beliefs of different teacher experience groups (i.e., those with 5-10 years of experience, 10-15 years of experience, and over 15 years of experience), a significant proportion within each group shared the same belief. Notably, over 90% of teachers with 10-15 years of experience and over 80% of those using ChatGPT proficiently maintained this view. Also, there was no significant difference in the perceptions of ChatGPT's value between those who taught English majors and those who taught non-majors (77.8% and 86.7%, respectively). Several teachers emphasized, by responding to the open-ended question in the survey, that "ChatGPT has multiple features and capacities that have not yet been explored" and that "ChatGPT has developed so fast that it has not been fully explored". These statements were all from the teachers with more than 15 years of experience. One of them even explicitly pointed out that "user training is critically necessary for proper utilization". This finding aligns with previous research in the field (Castro, 2023), underscoring the idea that the use of ChatGPT should be under greater care.

Table 3 shows several specific benefits of ChatGPT as perceived by the participating teachers. Noticeably, these benefits were acknowledged by fewer than 50% of the participants. The most outstanding advantage of ChatGPT is its support for teachers' feedback and grading, selected

by 48.8% of the respondents. It can be seen that the number of participants realizing this advantage seems to be limited, although it has been widely acknowledged by numerous previous research studies (e.g., Adiguzel et al., 2023; Castro, 2023). The state of uncertainty is evident through the data gathered from different cohorts of ChatGPT users. While 83% of proficient ChatGPT users acknowledged this merit, fewer than 50% of non-proficient ChatGPT users and a mere 16.7% of individuals acquainted with ChatGPT but yet to utilize it confirmed this benefit. This poses the question of whether the participating teachers really know how to utilize ChatGPT for such a purpose and/or what kind of guidance should be provided to maximize ChatGPT's assistance to the teachers. The second most outstanding advantage is its function as a powerful self-learning aid for students with 39.5% of choices. This finding is in line with those about students' perceptions (e.g., Aktay et al., 2023; Bonsu & Baffour-Koduah, 2023; Chan et al., 2023; Firat, 2023; Limma et al., 2023; Shoufan, 2023) that ChatGPT supports their learning.

**Table 3**

*Participating teachers' perceptions of ChatGPT usefulness*

No.	Statements	Responses from participants	
		Total	Percentage
1	I find ChatGPT as a valuable tool in the classroom, motivating students to learn.	8	18.6%
2	I think ChatGPT helps me save time in providing feedback and grading for students.	21	48.8%
3	I feel more confident in my work when I have support from ChatGPT.	10	23.3%
4	I find ChatGPT to be a powerful self-learning aid for students.	17	39.5%

Regarding specific aspects of assessment activities that ChatGPT can support (i.e., making an assessment plan, writing multiple choice questions, writing a cloze text, writing open-ended questions, checking students' mistakes, and suggesting better structures in students' writing), roughly a quarter of the participating teachers did not make use of ChatGPT. Moreover, among the respondents, just around half considered these functions effective, while the others regarded them as ineffective or were unsure of their usage. As implied from this finding, how much as well as how well the teachers experienced with ChatGPT may contribute to their perceptions of this AI tool. This aligns with Nguyen's (2023) findings about the effectiveness of using ChatGPT for text generation/adaptation and item writing. This also indicates that expert guidance seems to be critically necessary to ensure the proper use of ChatGPT in teaching and assessment. Regarding what should be trained for university language teachers about using ChatGPT, the majority of the participants (74.4%) claimed their need for proper query formulas. Some statements from the teachers were that "the right orders are important as they result in the right answers" and that "in order for teachers to use ChatGPT effectively, they need to master the way to write commands for it". They even recognized that a general query and a specific query can yield quite different responses from this chatbot and that a general query may sometimes lead to misunderstanding. One teacher even illustrated her point by telling one of her real situations:

“I provided ChatGPT with a complex structured text and asked it to make an outline based on the given text. It generated a response quite quickly, but then I recognized that the ideas presented in the outline were not in the same order in the given text, which was unexpected to me. Then I asked ChatGPT to regenerate the outline with more specific commands, especially related to the order of the provided information, and I received quite a different response.”

### *Challenges with ChatGPT*

On the whole, roughly four-fifths of the participants were concerned about the possible misuse of ChatGPT, and over three-fifths feared that teachers and students may become overly dependent on ChatGPT in their learning and teaching activities. Regarding the beliefs of different teacher groups (i.e., those teaching English majors and those teaching non-majors), there was no significant difference in these perceptions (both over 80% and over 65%, respectively). On the contrary, there was a certain difference in the perceptions of those who could use ChatGPT proficiently and those who could not or have little experience with ChatGPT. Specifically, the participating teachers who had little experience with ChatGPT seemed to be more worried about the misuse than the others, with 100% of choices. Regarding teachers' and students' over-dependence on ChatGPT, those who were not proficient in using ChatGPT were less worried than the other groups, with a bit more than half of the choices. Meanwhile, more than three-fourths of each rest group showed their concerns about this phenomenon.

Table 4 shows several specific drawbacks of ChatGPT as perceived by the participating teachers. Except for the perception of its unhelpfulness in the classroom (4.7% of choices), the other drawbacks were acknowledged by more than 60% of the participants. This figure indicates that the teachers apparently thought more about ChatGPT's negatives than its positives. Specifically, the teachers were very concerned about students cheating, students becoming lazier, and ChatGPT's reliability. In responding to the open-ended question, one teacher said that “much of the information given by ChatGPT seems so real that users may easily get confused or become less cautious”. The other teacher shared a story about her student using ChatGPT:

“One of my students used ChatGPT to complete the research assignment. I told him to be honest as I knew it was not his work exactly. He strongly affirmed he had done it on his own until I pointed out that the references of the previous research were unreal... ChatGPT itself generated the references and could be found nowhere; even the names of the researchers were created.”

The teachers' worries about students' laziness and cheating are evident. More critically, whether both students and teachers can trust ChatGPT in different situations is also in question; in other words, there are certain doubts about the accuracy of the information given by ChatGPT. This finding aligns with those from research on students' perceptions (e.g., Aktay et al., 2023; Bonsu & Baffour-Koduah, 2023; Chan et al., 2023; Firat, 2023; Limma et al., 2023; Shoufan, 2023; Tran & Tran, 2023), indicating that these issues have been drawing much attention from different

stakeholders and that addressing them promptly would become a complex challenge.

**Table 4**

*Participating teachers' perceptions of challenges with ChatGPT*

No.	Statements	Responses from participants	
		Total	Percentage
1	I find ChatGPT to be unhelpful in the classroom and a time-waster.	2	4.7%
2	I believe ChatGPT makes it easy for students to cheat on assignments and/or exams.	26	65.1%
3	I am skeptical about the reliability of the information provided by ChatGPT.	28	61.5%
4	I think students may become lazier thinking when using ChatGPT excessively.	27	62.8%

Additionally, 67.4% of the participants believed that the role of teachers would change significantly when students were familiar with ChatGPT. However, not all of these respondents thought teachers would have to work harder to limit the negatives of ChatGPT (just 44.2%). Regarding the possibility of students cheating on assignments and/or exams, 67.4% of the respondents maintained that assessment formats and content would need to be changed, that is, focusing more on critical thinking skills as ChatGPT has become increasingly popular. These assumed changes may pose challenges for teachers in their work as they would need to develop themselves professionally, especially for digital literacy and capacity. Only by professional development could teachers recognize the problems that technology-based teaching and assessment may offer and the possible resolutions to those problems. The teachers also emphasized that ChatGPT was quite new, and it would take time to understand and utilize its features fully.

## Conclusion

In summary, the participating teachers had certain knowledge about ChatGPT, but their knowledge seemed to be incomplete. Specifically, they mistook the other applications' functions for ChatGPT's functions. Such a limited understanding of ChatGPT could more or less influence their perceptions and practices. Moreover, the participants had a contradicting view about the usefulness and challenges of ChatGPT in teaching and assessment; however, more negatives could be seen than positives about this AI-powered chatbot. Notably, the differences in their perceptions did not result from the distinction of their student groups (i.e., majors or non-majors) but were associated with how proficiently the teacher could use ChatGPT in their work. The findings indicate a need of proper training and/or guidance on ChatGPT utilization, especially the concern about how to write appropriate commands to get the wanted support.

Although the present study could raise awareness of ChatGPT use in teaching and assessment, contributing to the literature on perceptions of ChatGPT, it was limited in terms of the number of respondents and specific insights into the teachers' specific thoughts and beliefs. Further research employing a mixed method should be conducted in this field better to understand the phenomenon in the context of Vietnamese teachers.

## References

- Adiguzel, T., Kaya, M. H., & Cansu, F. K. (2023). Revolutionizing education with AI: Exploring the transformative potential of ChatGPT. *Contemporary Educational Technology*, 15(3), 1-13. <https://doi.org/10.30935/cedtech/13152>
- Aktay, S., Gök, S., & Uzunoğlu, D. (2023). ChatGPT in education. *Türk Akademik Yayınlar Dergisi (TAY Journal)*, 7(2), 378-406. <https://dergipark.org.tr/en/pub/tayjournal/issue/76658/1259832>
- Alam, A., Hasan, M., & Raza, M. M. (2022). Impact of artificial intelligence (AI) on education: Changing paradigms and approaches. *Towards Excellence: An Indexed Refereed & Peer-reviewed Journal of Higher Education*, 14(1), 281-289.
- Aru, J., Rutiku, R., Wibrall, M., Singer, W., & Melloni, L. (2016). Early effects of previous experience on conscious perception. *Neuroscience of Consciousness*, 1, 1-10. <https://doi.org/10.1093/nc/niw004>
- Bonsu, E. M., & Baffour-Koduah, D. (2023). From the consumers' side: Determining students' perception and intention to use ChatGPT in Ghanaian higher education. *Journal of Education Society & Multiculturalism*, 4(1), 1-29. <https://doi.org/10.2478/jesm-2023-0001>
- Castro, C. A. (2023). Discussion about the impact of ChatGPT in education: Benefits and concerns. *Journal of Business Theory and Practice*, 11(2), 28-34. <http://dx.doi.org/10.22158/jbtp.v11n2p28>
- Chen, H., Ning, X., Wang, L., & Yang, Jiongjiong. (2018). Acquiring new factual information: Effect of Prior Knowledge. *Frontiers in Psychology*, 9, 1-14. <https://doi.org/10.3389/fpsyg.2018.01734>
- Chien, S. P, Wu, H. K., & Hsu, Y. S. (2014). An investigation of teachers' beliefs and their use of technology-based assessments. *Computer in Human Behavior*, 31, 198-210. <https://doi.org/10.1016/j.chb.2013.10.037>
- Chinosa, O. E., Theresa, A. M., & Aduke, T. C. (2023). ChatGPT for teaching, learning, and research: Prospects and challenges. *Global Academic Journal of Humanities and Social Sciences*, 5(2), 33-40. <https://doi.org/10.36348/gajhss.2023.v05i02.001>
- Cousins, J. (2023). *What is Chat GPT? Why is it here to stay?* Tech Funding News. <https://techfundingnews.com/what-is-chat-gpt-why-is-it-here-to-stay/>
- Firat, M. (2023). What ChatGPT means for universities: Perceptions of scholars and students. *Journal of Applied Learning & Teaching*, 6(1), 57-63. <https://doi.org/10.37074/jalt.2023.6.1.22>
- Gill, S. S., & Kaur, R. (2023). ChatGPT: Vision and challenges. *Internet of Things and Cyber-Physical Systems*, 3, 262-271. <https://doi.org/10.1016/j.iotcps.2023.05.004>
- Göçen, A., & Aydemir, F. (2020). Artificial intelligence in education and schools. *Research on Education and Media*, 12(1), 13-21.
- Iqbal, N., Ahmed, H., & Azhar, K. A. (2022). Exploring teachers' attitudes towards using ChatGPT. *Global Journal for Management and Administrative Science*, 3(4), 97-111.

<https://doi.org/10.46568/gjmas.v3i4.163>

- Kasneci, E., Sessler, K., Kuchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Gunnemann, S., Hullermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., Stadler, M., Weller, J., Kuhn, J., Kasneci, G. (2023). 'ChatGPT for good? On opportunities and challenges of large language models for education. *Learn. Individual Differences*, 103, 102274-102287. [https://www.researchgate.net/publication/367541637\\_ChatGPT\\_for\\_Good\\_On\\_Opportunities\\_and\\_Challenges\\_of\\_Large\\_Language\\_Models\\_for\\_Education#fullTextFileContent](https://www.researchgate.net/publication/367541637_ChatGPT_for_Good_On_Opportunities_and_Challenges_of_Large_Language_Models_for_Education#fullTextFileContent)
- ChatGPT for good? On opportunities and challenges of large language models for education,
- Limma, P., Kraiwanit, T., Jangjarat, K., Klayklung, P., & Chocksathaporn, P. (2023). The use of ChatGPT in the digital era: Perspectives on chatbot implementation. *Journal of Applied Learning & Teaching*, 6(1), 64-74. <https://doi.org/10.37074/jalt.2023.6.1.32>
- Nguyen, T. P. T. (2023). The application of ChatGPT in language test design – The what and how. *Proceedings of the AsiaCALL International Conference*, 4, 104-115. <https://doi.org/10/54855/paic.2348>
- OpenAI (n.d.). *What is ChatGPT: Commonly asked questions about ChatGPT*. <https://help.openai.com/en/articles/6783457-what-is-chatgpt>
- Owens, B. (2023). How nature readers are using ChatGPT. *Nature*, 615(7950), 20. <https://doi.org/10.1038/d41586-023-00500-8>
- Reyna, J. (2023). AI in the classroom: A comprehensive framework for ChatGPT integration in teaching and learning in higher education. 1-14. [https://www.academia.edu/103207218/2023\\_AI\\_in\\_the\\_Classroom\\_A\\_Comprehensive\\_Framework\\_for\\_ChatGPT\\_Integration\\_in\\_Teaching\\_and\\_Learning\\_in\\_Higher\\_Education](https://www.academia.edu/103207218/2023_AI_in_the_Classroom_A_Comprehensive_Framework_for_ChatGPT_Integration_in_Teaching_and_Learning_in_Higher_Education)
- Samaha, J., Boutonnet, B., Postle, B. R., Lupyan, G. (2016). How prior knowledge prepares perception: Alpha-band oscillations carry perceptual expectations and influence early visual responses. *bioRxiv*. <https://doi.org/10.1101/076687>
- Shoufan, A. (2023). Exploring students' perceptions of ChatGPT: Thematic analysis and follow-up survey. *IEEE Access*, 11, 38805-38818. <https://doi.org/10.1109/ACCESS.2023.3268224>
- Tran, Q. T., & Duong, H. (2021, January 22-23). *Tertiary non-English majors' attitudes towards autonomous technology-based language learning* [Conference session]. AsiaCALL2021 – the 17<sup>th</sup> International Conference & VLTESOL, Ho Chi Minh City, Vietnam. <https://asiacall.info/proceedings/index.php/articles/article/view/20/20>
- Tran, T. N., & Tran, H. P. (2023). Exploring the role of ChatGPT in developing critical digital literacies in language learning: A qualitative study. *Proceedings of the AsiaCALL International Conference*, 4, 1-17. <https://doi.org/10.54855/paic.2341>

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## Exploring Tertiary Vietnamese EFL Students' Engagement in Vocabulary Learning through the Use of an AI Tool

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### ABSTRACT

**Keywords:** AI tools, POE, repeated-measure ANOVA, digital vocabulary learning

The utilization of AI tools in language teaching is increasingly popular worldwide. Existing literature suggests that educators have integrated AI tools into their teaching methodologies to enhance student learning. Among the tools, POE is currently being used by several Vietnamese ESL teachers. Nonetheless, students' engagement in and their perception of the effectiveness of the tool still needs to be explored. Hence, this research was carried out to assess student engagement in utilizing this AI chatbot for students' vocabulary learning and their perceived usefulness and benefits. With a mixed-method approach, the study was conducted at a public university in Vietnam with a sample of 31 English-majored students. Data were collected through questionnaires and interviews. The quantitative data were analyzed with the use of repeated-measures ANOVA (RMA), while the qualitative data were analyzed following thematic analysis guidelines. The findings revealed that most of the participants found the tool useful, and they were actively engaged in learning vocabulary using this tool. The research outcomes propose valuable insights for university EFL teachers regarding the integration of AI tools like POE into curricula to optimize students' learning experiences with innovative language instruction.

### Introduction

As technology continues to shape our society, students must be prepared for the digital world. Language teachers, therefore, need to get updated with technologies to equip their students with the digital skills and competence necessary to thrive in a technology-driven society. Several studies have been conducted to explore various approaches to language learning innovations and to investigate how participation in digital space transforms student learning experiences. Numerous studies have explored how involvement in digital spaces can reshape personalized language instruction and enhance students' learning journey. Additionally, these studies have sought sustainable approaches for language learning innovations as well as promoting the integration of technology and AI tools into language teaching.



With the advancement of Artificial Intelligence (AI) technology, several AI tools and chatbots have been launched and employed by language teachers, including Chat GPT and POE. Each stakeholder has their own perspectives about the advancement of these AI tools. Some are so excited about its existence, while some hold concerns about the usefulness and applications of the tool as well as the academic integrity practice among student users.

In recent years, there has been a growing concern about how AI chatbots are utilized in language education. The use of AI chatbots in language teaching offers several benefits, as supported by various studies. One of the advantages is that they provide tailored feedback and targeted language practice based on the learner's proficiency level and learning goals (Taylor et al., 2019). They can also improve learners' writing performance since AI chatbots can stimulate conversations and provide writing prompts, allowing learners to practice their writing skills in a non-intimidating environment (Liu et al., 2019). Liu also stated that providing instant feedback, correcting errors, and offering suggestions can help learners improve their language production skills. Similarly, AI chatbots can identify grammatical errors and vocabulary misuse, enabling learners to self-correct and enhance their vocabulary, comprehension, and conversation skills (Divekar et al., 2021).

Other benefits include providing various types of information and knowledge through interactive methods and easy-to-operate interfaces (Muniasamy & Alasiry, 2020) and enabling learning to take place anytime and anywhere (Zhou et al., 2020), providing interactional, technological, and social affordances, which enhance L2 students' motivation to learn a target language (Jeon, 2022). More importantly, AI chatbots could create a positive experience to sustain students' engagement and interest in learning (Liu et al., 2022). In the Vietnamese ESL context, due to the possible benefits of AI tools, including chatbots, in improving English teaching and learning at the university level, teachers have begun to consider their broader applications in language education, particularly focusing on their use of personalized language instruction (Nguyen, 2023).

## Literature review

### *What is engagement?*

Engagement is a construct that has been widely used and intuitively understood among educational practitioners. Regardless of that, there is still a general agreement among researchers that “engagement is dynamic, malleable, and comprises at least three components of behavioral, cognitive, and affective engagement” (Christenson et al., 2012; Mercer & Dörnyei, 2020; Hiver et al., 2021). In a recent study, Hiver et al. (2021) define engagement as “the amount (quantity) and type (quality) of learners' active participation and involvement in a language learning task or activity”. Generally, learner engagement refers to “active participation” in a variety of activities, both academic and non-academic, as well as a commitment to achieve the learning outcomes (Ginting, 2021). In L2 education, an increasing number of researchers have recognized engagement as a significant variable in the process of language learning (Dörnyei & Kormos, 2000; Hiver et al., 2021b; Mercer & Dörnyei, 2020; Philp & Duchesne, 2016). Thus, engagement, as reinforced by Hiver et al. (2021, p. 1), is “a dynamic, multidimensional construct comprising situated notions of cognition, affect and behaviors”.

### *Dimensions of language engagement*

Conceptually, there is some consensus that engagement is a "multidimensional construct" that consists of three dimensions: behavioral, cognitive, and emotional. All of the three dimensions overlap and interrelate with one another (Christenson et al., 2012; Philp & Duchesne, 2016). While the definitions of engagement might show some differences among the perspectives, scholars have relatively widespread agreement on the key characteristics of learner engagement.

Due to the nature of being a multidimensional construct, engagement encompasses various aspects of learner involvement and participation. Global scholars have identified different dimensions of engagement and propose at least three or more fundamental dimensions. A significant body of research indicates that learner engagement is obvious in observable behaviors and also evident in cognitive and social magnitude. Additionally, learners' emotions towards their learning tasks and their interactions with their classmates or group mates do contribute to their engagement, as revealed through the studies by Lambert et al. (2017). Some scholars mention agentic engagement, which refers to learners' sense of ownership, autonomy, and self-regulation. This refers to the student's capability to establish learning objectives, evaluate, and be accountable for their own learning paths (Oga-Baldwin, 2019).

**Behavioral engagement** relates to the quantity and quality of how actively learners take part in learning. In the early stages of L2 research, researchers gauged behavioral engagement by counting words and turns, as seen in the work of Dörnyei and Kormos (2000). Behavioral engagement, within the realm of L2 learning, includes learners' willingness to be involved in interactional activities, time on task, speaking, or generating meaningful content during the performance of task assignments. In addition, behavioral engagement relates to the persistence of tasks, which is the ability to persevere on tasks without the required assistance or guidance (Philp & Duchesne, 2016). Having the same viewpoint, Hiver et al. (2021) and Fredricks et al. (2019) reinforce that this dimension of engagement refers to the involvement that the learners put in their own learning process and classroom activities. It can be measured based on learners' participation, persistence, effort, attention, and absence of disruptive behaviors.

When it comes to **emotional engagement**, the dimension is often reflected in students' personal affective reactions while they take part in meaningful language learning tasks or activities. Emotional engagement occurs when learners experience a strong interest, connection, and excitement toward a task. An emotionally engaged student finds pleasure in the learning experience and feels that the topic is valuable, meaningful, and inherently interesting. Teaching materials that allow learners to discover, explore, and make choices based on their own interests provide the autonomy necessary to establish emotional engagement (Lambert et al., 2016). Emotional engagement can refer to learners' positive and negative reactions to the topic, to their teammates and teachers, as well as their valuing of and interest in the subject (Fredricks et al., 2016). According to Svalberg (2009, p. 247), emotionally engaged learners are described as having a positive attitude, purposeful learning, and willingness to learn towards their language process. Positive feelings include enjoyment and enthusiasm. Negative emotions, on the contrary, consist of such things as frustration, anger, anxiety, or boredom. This might be referred to as "emotional disconnection" or "lack of interest" (Mercer, 2019). Emotional involvement significantly affects other aspects of engagement (Dao, 2019; Henry & Thorsen, 2020). It is worth noting that emotional engagement is tied to learners' feelings about learning environments, the people involved, the tasks, and their own involvement in those situations (Skinner et al., 2009; Reeve, 2012).

**Cognitive engagement** is defined as psychological investment by trying to understand complex ideas, self-regulating, exerting efforts to solve challenging tasks, and using deep learning strategies (Fredricks et al., 2016; Sinatra et al., 2015). This type of engagement occurs when students make connections, justify arguments, reason, exchange ideas, answer questions, and solve problems. Indicators of cognitive engagement are the use of questions, connectors, or phrases that express personal opinions (Philp & Duchesne, 2016) or when they have thoughtful reflection (Svalberg, 2009). In other words, students are engaged cognitively when they think about what they want to say, commit target words to memory, and connect language patterns to previous learning.

#### *Engagement in contemporary teaching methods*

Recent years have witnessed a shift from teacher-centered approaches using traditional teaching methods to student-centered skills-focused learning activities (Camilleri & Camilleri, 2019). Christenson et al. (2012) defined engagement in classroom activities as a degree to which students are involved in the learning process. Active participation from learners during classroom activities could stem from students' attention, excitement, and relevance to the given topics (Coleman & Money, 2020; Brewster & Fager, 2000).

Several elements might lead to increased levels of motivation and engagement of students, according to an array of studies. Firstly, Reeve (2012) concluded that positive learning outcomes could be linked to students' involvement in instructional activities. He also maintained that collaboration tasks in class would greatly help stimulate students' mental processes and engage learners to great extents in a limited amount of participation time with the view to improving their academic scores, which was deduced from a lot of meta-analysis studies.

#### *Technological aids employed to boost learning engagement levels*

Learning experiences have reportedly been enhanced thanks to the advent of digital advances via smartphones and technological platforms during recent eras (Carroll et al., 2019). A study by Camilleri & Camilleri (2009) suggests that mobile phones could be utilized in class to obtain students' immediate feedback and interactive activities, which has a pivotal role to play in the adoption of gamification in formal settings. Fishman et al. (2004) also demonstrate that digitized activities, which were recognized for their enhancement of reasoning abilities and thought-provoking mental processes for learners, ought to be utilized as a factor contributing to the relationship between teaching and learning tasks as they helped teachers in scaffolding knowledge that could be rendered as challenging for students. While "Clickers" is an application that was claimed to foster mutual interactions and provide direct feedback for peers, it could, by the same token, encourage spoken response during collaboration on digital devices (Mazur, 1997).

#### *Some common technological applications used to support engagement*

A thesis done by Gutiérrez Salvatierra (2014) depicted students' levels of perception towards the use of technology in improving their English. With the use of the tools and websites regarding YouTube, Google, Facebook, SMART speaking, Story corps, Tongue Twisters, Duolingo, Hello-Hello, Word Power, and the like, most students assumed that most areas of English, such as grammar, pronunciation and language skills could be greatly improved in the process of acquisition. Moreover, tutorial YouTube videos could generate hands-on learning sources for students in terms of contexts, language use, cultural knowledge, and self-study (South et al., 2008). Awuah (2015) acclaimed the effectiveness of Google apps by pointing out that these aids could promote online collaboration learning via delivering presentations,

establishing projects, and processing materials. According to a study by Chiablaem (2021), WhatsApp was the most chosen and effective application among Thai students, considering its consistent and user-friendly functions. Several studies have also advocated the benefits of learning apps combining visual and audio aids via videos and text chat for students' interactions. Authentic conversations and language skills through classroom activities might be reinforced by video conferencing with the effects of sounds and real-time (Lee, 2007). A study by Tran & Tran (2023) indicated that Chat GPT played a crucial role in enhancing learners' critical thinking ability and critical literacies. Likewise, Phan (2023) pointed to the positive emotions of students when being engaged in writing classes with the use of AI in grammar and vocabulary exercises as well as feedback during the tasks. Chatbot CLT was also recognized as a friendly user tool which might increase students' motivation in learning vocabulary (Dinh et al., 2022)

#### *The application of AI tools in promoting learner engagement in classroom practices*

Sumakul (2019) introduced AI as a revolutionary invention amidst the rise of computer-assisted language learning (CALL) during the 1960s. Technological advances have made learning more accessible for students with more specialized needs (Yildiz, 2021); therefore, chatbots or digitalized learning aids would offset the lack of student-teacher contact and provide regular feedback for students (Demirci & Yavuz, 2009). The introduction of chatbots has promoted learner engagement, increased their linguistic competence, and maintained their interests (Kohnke, 2023; Smutny & Schreiberova, 2020). Chatbots have also brought the benefit of reducing language learners' social anxiety (Fryer & Carpenter, 2006) and enhancing the acquisition of incidental vocabulary, according to Laufer and Hill's research in 2000. Besides serving as a resource for dialogue learning, chatbot agents have been shown to have beneficial effects on vocabulary learning (Legault et al., 2019), cultural learning (Cheng et al., 2017), and boosting students' readiness for interactions (Ayedoun et al., 2015). Moreover, these tools have been known to promote self-studying vocabulary and exposure to new linguistic features (Gallacher et al., 2018). According to Hassani et al. (2016), they were able to enhance students' motivation by giving them insights into real-world resources for learning and opportunities for experiential learning. A speech-activated multimedia system (Conversim) was developed by Harless et al. (1999) to allow students to engage in lengthy conversations with virtual native Arabic speakers. The results suggested that students would be motivated to learn more based on the utility: native-like conversations with immediate feedback from the machines.

Developed by Jia in 2004, the Computer Simulator in Educational Communication (CSIEC) system was directed at serving as a conversational partner for people learning foreign languages. Grammar and syntax intelligence are both presented in the system as they create learning instances for students to approach a wide range of phrases and sentences. Furthermore, Jia also studied the CSIEC system in 2008 after adding new features like assessment and fill-in-the-blank grammar exercises, which were then integrated into an English course in a middle school in China. Students' pre-test and post-test scores and engagement levels during the surveyed period illustrated a gradual rise. Fryer and Carpenter (2006) polled 211 students who were instructed to utilize well-known chatterbots like Alice and Jabberwocky in class. According to the survey results, pupils felt more at ease speaking with bots than with their teachers or partners, but these tools might benefit advanced learners more than lower-level learners. In a study by Coniam in 2008, the efficacy of a chatterbot for ESL learners was investigated based on algorithms and their function as a learning aid in the classrooms, which could be rendered successful for language learning. In 2017, Huang et al. measured the impact of a voice-based chatbot on EFLs' meaning negotiation and speech acts regarding the account of confirmation checks, clarification requests, and re-organization of ideas on 123 Korean English students. As a result, a substantial improvement was recorded between the first and

final talk, demonstrating that the chatbot facilitated the learners over the course of the 16-week research period. The effect of utilizing a mobile-based AI agent on the writing performance and attitude of EFL learners was recently researched by Kim et al. (2020), reporting noticeable increases in their writing abilities, particularly in terms of syntax and vocabulary, as well as confidence levels and positive perception for the role of AI during study. Meanwhile, their anxiety was seen to decrease. According to the study by Alm and Nkomo in 2022, it is witnessed that students were more eager to engage in friendly discussions with AI bots (such as Reddit, the Memrise community, and Duolingo apps) to practice using English outside classrooms.

In summary, Kim et al. (2020) proved that students' engagement in learning vocabulary for writing skills before and after using chatbots could be improved significantly. Another experimental study carried out by Mahmoud (2022) and De Vivo (2022) showed that POE brought certain effects in enhancing students' engagement in learning activities, especially in an educational context. Meanwhile, studies conducted by Cheng et al. (2017), Gallacher, Thompson, and Howarth (2018), Coniam (2008), and Huang et al. (2017) have investigated the impact of chatbots on cognitive engagement in language learning, which enhanced student participation and self-directed learning. In addition, research by Kohnke (2023), Smutny & Schreiberova (2020), Ayedoun et al. (2015), and Demirci & Yavuz (2009) highlighted the benefits of using technology-based tools in language learning that facilitated teacher-student feedback, prolonged participation, and learner interaction outside of class time. Besides, several investigations, including those by Fryer and Carpenter (2006), Hassani et al. (2016), Kim et al. (2020), and Alm and Nkomo (2022), have explored the influence of chatbots on emotional engagement in language learning. Their findings suggest that chatbots can effectively reduce anxiety, increase enjoyment and motivation, and foster a stronger sense of accomplishment among learners.

#### *The introduction of POE into language learning*

POE (Platform for Open Exploration) is a technological tool developed by Open AI and Anthropic (Gülen, 2023). This is a well-known chatbot web application with AI technology that could provide prompt responses to users' questions. Poe AI has deep-learning algorithms that were programmed to analyze immense amounts of data to support learning. This is an AI bot with cutting-edge language models as it introduces learners to Natural Language Processing (NLP) models such as ChatGPT-4. There are a variety of functions that POE can offer to learners, ranging from multilingual support (Sage, ChatGPT), excellent writing samples (Claude or Claude+), instant answering feedback (Dragonfly), and creative and problem-solving actions (GPT-4).

Determining student engagement and perceptions of this available AI tool could provide useful insights for developing more targeted approaches. Researchers should conduct a study exploring the levels and nature of student engagement when using various AI vocabulary applications as part of their regular language acquisition process. This research would help address current gaps in understanding how AI can best complement independent vocabulary study at the university level. It would guide how to design AI tools that maximize learner engagement for optimal language growth. The results have the potential to not only improve individual learning but also help educators integrate new technologies effectively into their curriculum.

According to the lack of studies into the use of POE in vocabulary learning, there is a growing interest in using artificial intelligence tools to support language learning, but more research is needed to understand how students engage with and perceive these tools behaviorally, cognitively, and emotionally. As universities aim to support independent vocabulary study

better, it is important to investigate new technologies and their effectiveness. However, more is needed to know about how university students use and experience AI-assisted vocabulary tools integrated into their curriculum.

### *Research questions*

This study aims to answer the two following research questions:

- (1) How do students' levels of behavioral, cognitive, and emotional engagement change throughout a four-week vocabulary learning project involving the use of one AI chatbot named POE?
- (2) What are the students' perceptions of the utility and challenges associated with the use of the chatbot POE for vocabulary learning?

## **Methods**

### *Pedagogical Setting & Participants*

The study was conducted at a public university in Ho Chi Minh City - Vietnam. The participants consisted of 31 English-majored students who were mainly in their third and final years in university. The students' IT level ranges from beginner to advanced, with almost two-thirds of them claiming to be intermediate or advanced. The majority of them (88%) also find applying technological tools in learning English easy or neutral. Only about one in ten stated that they find it challenging.

At the time the research was conducted, the students were taking the Interpretation Course, in which they were expected to achieve several learning outcomes. One of which is that students can demonstrate their continuous learning outside the class. Besides, the students are expected to demonstrate their understanding of vocabulary related to different topics in the course.

Considering all the characteristics mentioned above, the participants were chosen for the research and were asked to participate in a project that can help students learn vocabulary related to the lessons by themselves with the use of POE. The following table describes the participants' demographic features and their perception of the integration of technology into their learning process.

Table 1. The participants' background.

<b>Years in university</b>	<b>Percentage</b>
Junior	71%
Sophomore	4%
Senior	25%
<b>Students' IT level</b>	<b>Percentage</b>
Beginner	39%
Intermediate	56%
Advanced	5%
<b>Students' perception of the integration of technology into the learning process</b>	<b>Percentage</b>
Easy	31%
Neutral	57%
Difficult	10%
Extremely difficult	2%

### *Design of the Study*

A mixed method was employed for this study, with data being collected through questionnaires and interviews. The approach allows both quantitative as well as qualitative data collection and analysis and it provides a better understanding of the research problem (Creswell et al., 2006).

Firstly, a four-week vocabulary project was designed to incorporate the use of POE in learning vocabulary. To complete the project, students were required to use POE at least twice a week. During four weeks, the students had to complete a weekly vocabulary portfolio. Each week, the students asked POE any questions related to the topics they learned in the course and recorded the usage, form, and meaning of the new words they learned from their conversations with POE. In the final week, students submitted a final video recording in which they gave a presentation about the most useful words that they learned during the month.

In order to collect data about the changes in student engagement in utilizing POE, the questionnaire was sent to all students by the end of each week. The weekly questionnaires have the same questions exploring the three dimensions of student engagement. Only the questionnaire for the first week contains an extra part, which collects the participants' biographical information to help the researchers have a better understanding of the participants.

Interviews were also conducted by the end of the course with 12 students to gather further information about their perception of the usefulness and limitations of the tools as well as their future intention in using the chatbot.

Since the students' participation and engagement were measured repeatedly in four weeks, the quantitative data collected from the questionnaire was analyzed using RMA, and qualitative data was analyzed following thematic analysis guidelines.

### *Data collection & analysis*

#### *Questionnaires*

The questionnaire, which was in the form of a weekly reflection form, was sent to the participants by the end of every week. The student participants answered multiple-choice and short-answered questions on Google Forms. The questionnaire was divided into two main parts:

Part 1 aimed to collect the participants' biographical information, including their names, native language years, years in university, and IT levels. This part would help the researchers better understand the students' background and ensure the participants were suitable for the research.

Part 2 aimed to explore different aspects of students' emotions, participation, and cognition. Questions 1 and 2 were used to find out the frequency and the amount of time the students spent on using the app for learning vocabulary, which was one of the indicators of behavioral engagement. Question 3 consists of 15 items, which were used to explore students' behavioral, emotional, and cognitive engagement in vocabulary learning using POE.

#### *Interviews*

After the collection of quantitative data, the researchers conducted semi-structured interviews with 12 students. These students were chosen randomly among those participating in the four-week vocabulary learning project. There are six interview questions, with questions 1 and 2 aiming to further explore students' behavioral and emotional engagement in the AI tool and questions 3 and 4 exploring students' perceptions of the advantages and limitations of using the app. The last two questions are to find out their future intention of using the app.

## Data analysis

The data about students' participation collected in the first part of the questionnaire was analyzed descriptively using Excel, and charts were employed to present the results about students' frequency and amount of time spent on using the app, while the students' engagement in part 2 of the questionnaire was analyzed using one way RMA.

The answers collected from the interview were first summarized and then coded following the thematic analysis guidelines. The results from the qualitative data were compared with the quantitative data to elaborate and validate the result (Cress-well & Plano Clark, 2011)

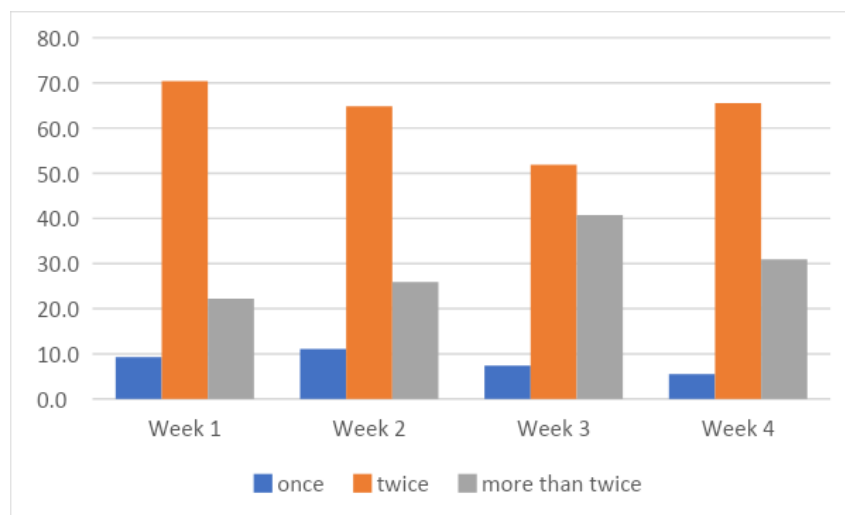
## Results/Findings and discussion

### Behavioral engagement

#### Student's participation

Students' participation in one learning activity is one of the indicators of students' behavioral engagement. The study asked the participants to record the time they devoted to the vocabulary-learning activity. The following figures indicate the amount of time that the student participants invested in vocabulary learning using POE.

Figure 1. The weekly frequency that the students spent on POE to learn vocabulary over a four-week period:



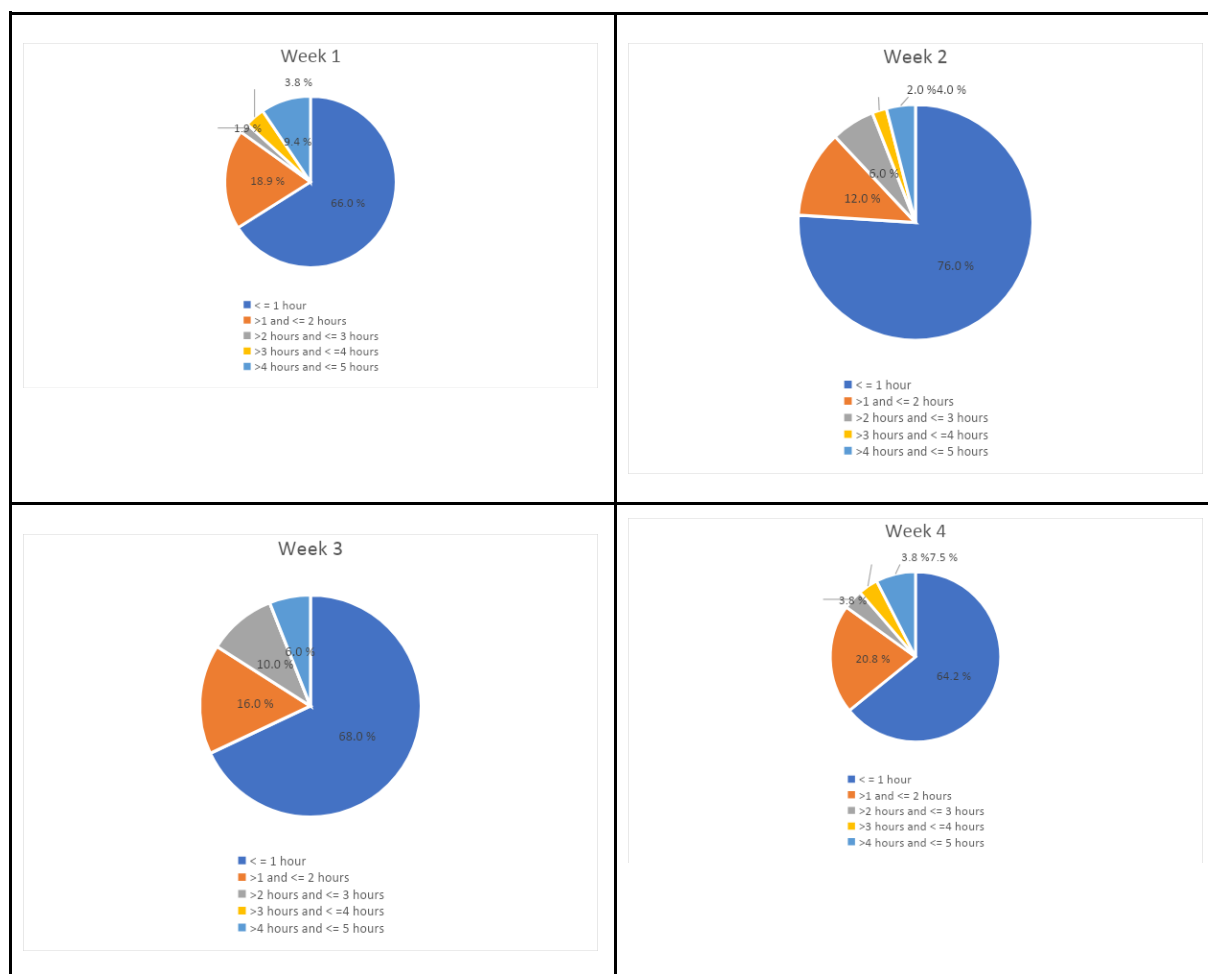
Generally, students' frequency of using POE to learn vocabulary increased over the four weeks under the survey.

More specifically, almost two-thirds of the students reported using POE twice a week to learn vocabulary, except for week 3, when the figure fell to above 50 %. However, in the same week, the percentage of those using the app more than twice peaked at 40 %. The biggest percentage of students using the app twice a week was in week 1 (70%).

Similarly, the percentage of students using the app more than twice also grew from 20% in week 1 to 30% in week 4. On the other hand, the percentage of those using the app only once a week was the lowest (less than 10%).



Figure 2. The amount of time the students spent on learning vocabulary using POE in 4 weeks.



Generally, the students spent more time learning vocabulary using POE in weeks 1 and 4 than in weeks 2 and 3, with more than two-thirds of them spending less than an hour using the app per week. More specifically, 66 % of the students spent less than an hour using the app in week 1. Then there was a slight increase of 10 % to peak at 76% in week 2, followed by slight decreases to 68% and 64 % in the last two weeks.

The second highest percentage was that of those spending from 1 to 2 hours per week. In week 1, around 19% of the students spent 1 to 2 hours. Despite a mild drop to 12% in week 2, the figure recovered and continued to increase to 20,8% by the end of the period.

Starting from 9,4% in week 1, the percentage of those spending more than 4 hours halved in week 2, then increased gradually to 7.5 % in week 4.

The percentage of those spending around 2 to 3 hours grew significantly from under 2% in week 1 to 10% in week 3, then dropped sharply to under 4 % by the end of week 4.

Besides the amount of time and frequency of software usage, data on efforts and persistence levels are two other indicators of behavioral engagement. The data on the efforts and persistence levels of students were analyzed using one-way RMA. The results are presented below:

Table 2. Mean and SD values of the three variables indicating levels of the three dimensions of engagement over the course of four weeks.

Variables	Week 1		Week 2		Week 3		Week 4	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<b>Behavioral engagement</b>	3.848	.3949	4.026	.6011	4.142	.5130	4.348	.4226
<b>Emotional engagement</b>	3.074	.7151	3.216	.7367	3.987	.4185	4.361	.3353
<b>Cognitive engagement</b>	2.848	.5501	3.729	.4584	4.029	.3339	4.426	.3235

Table 3. Descriptive analysis of behavioral engagement during the four-week period

Week 1	31	3.848	.3949
Week 2	31	4.026	.6011
Week 3	31	4.142	.5130
Week 4	31	4.348	.4226

Post hoc test analyses indicated that the average level of how students changed their attitudes in week 4 (M = 4.348, SD = .4226) was significantly higher than that of week 1 (M = 3.848, SD = .3949).

Table 4. The significance level of changes in students' behaviors:

Behavioral Engagement	.038	.000
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The main effect of using POE in improving vocabulary learning engagement yielded a significant score of  $p=.038$  in Mauchly's test of sphericity and  $p = .000$  for Greenhouse-Geisser, indicating a great improvement in the behavioral perception level of learners.

### *Emotional engagement*

The table below details the levels of emotional engagement (regarding the presence of enjoyment and absence of frustration and boredom)

Table 5. Descriptive analysis of emotional engagement during the period.

Week 1	31	3.074	.7151
Week 2	31	3.216	.7367
Week 3	31	3.987	.4185
Week 4	31	4.361	.3353

Post hoc analyses indicated that the average level of how students changed their attitudes in week 4 (M = 4.361, SD = .3353) was significantly higher than that of week 1 (M = 3.074, SD = .7151)

Table 6. The significance level of changes in students' behaviors:

Emotional Engagement	.000	.000
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The main effect of using POE in improving vocabulary learning engagement saw a significant score of  $p=.000$  in Mauchly's test of sphericity and  $p = .000$  for Greenhouse-Geisser, indicating an immense improvement.

*Cognitive engagement*

In terms of the cognitive development of learners, factors with regard to cautiousness, connection with previous knowledge, challenges using AI, and sufficient efforts to get by are measured in the following table:

Table 7. Descriptive analysis of cognitive engagement during the four-week period

Week 1	31	2.848	.5501
Week 2	31	3.729	.4584
Week 3	31	4.029	.3339
Week 4	31	4.426	.3235

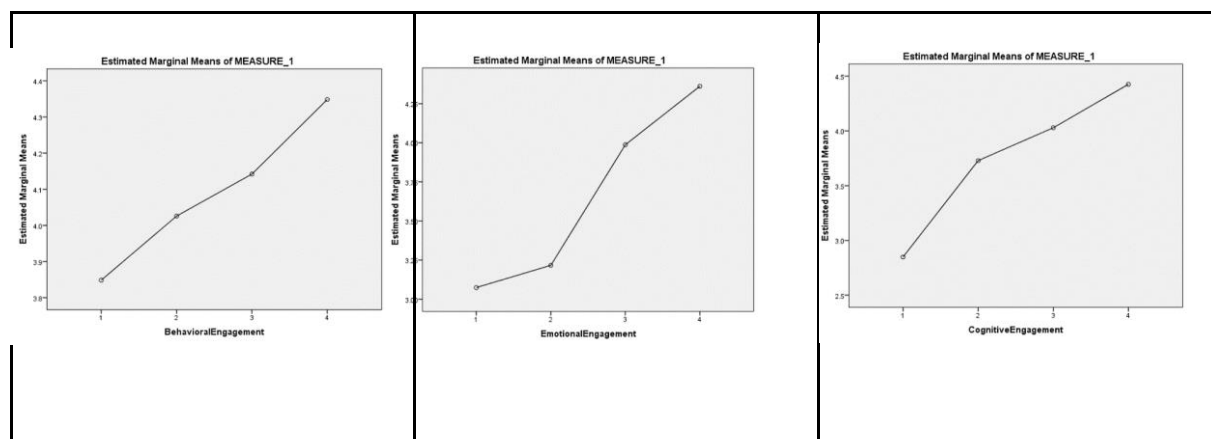
Post hoc analyses indicated that the average level of how students changed their attitudes in week 4 ( $M = 4.426, SD = .3235$ ) was significantly higher than that of week 1 ( $M = 2.848, SD = .5501$ )

Table 8. The significance level of changes in students' behaviors

Cognitive Engagement	.001	.000
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The main effect of using POE in improving vocabulary learning engagement yielded a significant score of  $p=.001$  in Mauchly's test of sphericity and  $p = .000$  for Greenhouse-Geisser, indicating a sharp development in the cognitive perception level of learners.

Figure 3. The profile plots of 3 dimensions of engagement.



In summary, all three kinds of engagement witnessed gradual improvements, with the most noticeable rise observed in cognitive engagement levels, whilst the first week might undergo a slight hesitation in emotional engagement in which learners did not recognize the entertainment elements of using POE in studying their vocabulary range ( $M < 3.25$ ).

### *Students' perception of the utility and challenges associated with the use of the chatbot POE for vocabulary learning*

To enrich the data, interviews were carried out with twelve participants. Those twelve participants who filled out the questionnaire were in the same group. First and foremost, the participants were asked to confirm their experience with the use of POE for vocabulary learning in the four-week project.

Most of the interviewees used POE at a certain level. They all emphasized that they used POE regularly to support their vocabulary learning process. Some students even used POE every day or six times a week. Most of the students used POE 3 times a week, but two interviewed students said they used the app less frequently than their peers. However, they tried to continue using it at least twice a week. All of the interviewees found it useful to learn vocabulary using POE.

Specifically, most students expressed interest in using this AI tool. They thought that POE made the process of learning vocabulary more interesting and engaging. Just as participants 3, 4, and 5 mentioned, POE was "*quite interesting*." One of them explained that they just sat down and searched for any vocabulary needed, and POE's answers were very specific, clear, and relevant. Another reason why they found POE interesting was that POE could be used for brainstorming ideas. The participants specifically liked this feature. For example, one participant revealed, "*When I have a question, I ask POE, and it provides me with many useful ideas and suggestions*". Some students thought that interacting with the AI tool was like having a conversation with a friend. The AI tool also helped students memorize vocabulary more easily, as asserted by most of the participants interviewed.

The benefits of using POE were the reason why the participants kept using POE. Among them, the flexibility of POE was the thing students appreciated the most. They could access the tool anytime and anywhere they wanted. Furthermore, the students were surprised at the response speed of POE, which was quick and quite accurate. This helped students save a lot of time and effort when learning vocabulary. When being asked, participants 6 and 8 both agreed that "*POE was convenient, had quick answers, and gave accurate information*." In addition, the AI tool also provided exercises that helped students remember vocabulary longer. Besides, the responses from POE were very useful and relevant to reality, helping students memorize vocabulary more easily. Additionally, answers from POE provided students with different contexts, illustrations, and sounds to help students understand the vocabulary needed more clearly. Interviewee number 12 thought that the AI tool helped them expand their vocabulary, ideas, and grammar, thereby improving their communication skills. In addition to learning vocabulary, many students who participated in the interview answered that they used POE to learn about issues in life, find the content of literary works, etc. It can be said that POE's functions were very diverse and could meet most of the student's needs, especially in terms of vocabulary learning.

However, some students still encountered some problems related to POE's responses. Firstly, POE's answers were "*too general, not in-depth enough, and not as diverse as Google*", according to participant number 1. Sometimes, in the answers that POE provided, there were

too many new words, which made them have to look up more words than their initial needs. Some students could not even find the answer because POE did not understand the command they gave. However, in general, most of them did not encounter many difficulties, and the things they experienced were just minor problems and could be easily solved when they asked a similar question but more clearly to POE.

Surprisingly, all of the interviewees stated that they would continue to use POE in the future and would highly recommend other people to use POE. This is fully in line with their frequent use schedule, as presented in the question above about students' frequent use of POE. The biggest reason for students to keep using POE was that POE helped them solve the difficulties related to their major in the present and the future. POE could serve their learning needs, such as "*answering the teacher's questions, doing homework, and searching for data,*" just as participants 2, 4, and 5 mentioned. Therefore, they find POE convenient and necessary and want to stay with it for a long time. They believed this tool could help people "*learn vocabulary faster*" and effectively improve their communication skills. Another participant explained that they were willing to recommend POE to their friends because "*POE could be used for a variety of purposes, could serve the learning of students whether the same or different majors*". In short, convenience, ease of use, and time-saving are the biggest reasons why they are willing to recommend it to friends.

### Discussion of results

Overall, students' perception of using POE as a learning aid in the classroom saw general increases based on the findings of regular surveys on a weekly basis. Firstly, results indicated growth in students' participation in learning vocabulary using POE. Surprisingly, there was an increase in the number of students who spent more than 4 hours learning vocabulary using POE, though the majority of the participants spent less than an hour using it. The increases in both the frequency and the amount of time the participants spent proved students' increased behavioral engagement through their active participation and involvement in the learning task, as defined by Philp & Duchesne (2016), Fredricks et al. (2019), Dörnyei & Kormos (2000), Hiver et al. (2021). Though over a shorter period of 4 weeks, POE also brought similar effects in enhancing students' engagement in learning activities. This means that POE can be used like other chatbots to boost students' engagement in an educational context. However, the slight drop in the amount of time they spent on learning vocabulary in weeks 2 and 4 was probably due to the fact that they had to prepare for their midterm test and their group presentation during these two weeks.

Results also showed improved intrinsic motivation and interest in learning new words through natural dialogues. These findings align with research by Kim et al. (2020), who surveyed a number of Korean ESL students' engagement before and after practicing vocabulary for writing skills with a chatbot. Using a 5-point Likert scale, this project found that participants reported higher levels of enjoyment and motivation interacting with the chatbot compared to traditional flashcards.

Other studies have explored chatbots' impact on cognitive engagement. Cheng et al. (2017), Gallacher, Thompson, and Howarth (2018), Coniam (2008), Huang et al. (2017) researched the enhancement of learners' participation in using artificial intelligence applications in studying English vocabulary and concluded that factors of students' learning showed positive improvements regarding their autonomy for self-study outside the classrooms and individual recognition for the usefulness of the apps. The results indicating the cognitive development of the participants of this study also reflected a similar tendency when a doubling of interest levels

was reported from nearly 2.8 to around 4.5 during 4 weeks, claiming the effectiveness and usefulness of learning vocabulary with the support of POE.

Research also indicates chatbots may foster behavioral engagement through extended practice. Kohnke (2023), Smutny & Schreiberova (2020), Ayedoun et al. (2015), and Demirci & Yavuz (2009) emphasized the importance of using technology-based approaches in language learning environments as they could promote teacher-student feedback, sustaining participation periods, and out-class interactions of learners after the research time. These results underwent gradual increases and changes in students' behaviors, with 0.5 higher than that of the beginning phase of the project, and this was suitable to Hiver et al. (2021) and Fredricks et al. (2019) perceptions of behavioral engagement.

Investigations further uncover chatbots' ability to boost emotional engagement factors. Fryer and Carpenter (2006), Hassani et al. (2016), Kim et al. (2020), and Alm and Nkomo (2022) detected reduced anxiety rates, increased levels of enjoyment and motivation, and greater feelings of accomplishment dialoguing with bots across engagement surveys administered to English learners pre- and post- chatbot usage. Similarly, positive attitudes, interest, and language learning values after using POE were recorded in this study (from 3.0 to nearly 4.5), finding higher post-scores.

De Vivo (2022) stated the importance of POE. By working on real-world projects, students could apply what they had learned in the classroom and see how it is relevant to the world around them. The results from interviewees showed that students used POE to learn about issues in life, find the content of literary works, and answer questions related to their major. This suggests that POE has the potential to be a versatile tool for learning and development.

Brewster and Fager (2000) found that real-life activities lead to high engagement and motivation, which could lead to higher achievement. The interview with students suggested that the chatbot POE was a useful tool for vocabulary learning, and they appreciated the flexibility, speed, and accuracy of POE's responses. They also found POE's answers to be relevant and helpful, and the AI tool's ability to provide exercises and context to support vocabulary learning was particularly valuable. One of the most interesting findings of this study is that students report using POE for a variety of purposes beyond simply learning vocabulary. Therefore, they gradually used POE to learn vocabulary more than their needs, which affected and raised their motivation toward vocabulary learning.

## Conclusion

Over the past few years, education has witnessed so many changes in technology that both teachers and students can benefit from. The findings of this study gave valuable insights into students' engagement, attitudes, and perception of vocabulary learning via an AI tool known as POE. In terms of engagement, the RMA analysis revealed that the students did engage in the use of the AI tool for their vocabulary learning. All of the three dimensions varied positively from the first week of trying the tool until the last week of the four-week project. Specifically, the figures showed that the participants had a tendency to spend more time exploring the app as time went by. The interview data indicated that the participants used this tool for vocabulary learning, brainstorming ideas, and finding information. After using the tool for one month, most of the participants expressed a positive perception of its usefulness, with all of them intending to use it in the future and recommend it to others. The findings provided positive feedback for all teachers who have the intention to integrate technology and such AI tools as POE into teaching in general, and in teaching vocabulary in particular.

Nevertheless, teachers should take some considerations when considering employing this tool into language teaching. Some students found issues with POE's responses, including the problem that the answers provided by this tool needed to be more specific and more diverse than Google's. Some participants said they had difficulties with unfamiliar words, or too uncommon words, and thus they faced occasional misunderstandings. How to write a good prompt in either Vietnamese or English was another issue faced by the participants. Addressing these minor issues greatly enhances the tool's long-term effectiveness as a student support service, resulting in more significant benefits for learners.

The results of the study brought back several insights for practitioners, teachers, curriculum developers and even the program developers. In this study, however, there were some limitations that the authors did acknowledge. Firstly, the research relied on a small sample size for the quantitative data, which limits its generalizability. Conducting a larger-scale investigation in future research would be necessary to address this constraint. Secondly, the research only spanned a four-week period, potentially resulting in an incomplete representation of the various dimensions of engagement related to the construct. To gain a more comprehensive understanding of student engagement in vocabulary learning using this AI tool, it is recommended that a longitudinal study be conducted. This approach would provide a holistic picture of the topic over an extended period of time. Furthermore, in relation to the dimensions of the engagement construct, there is another dimension known as agency engagement which should be further examined in the future studies.

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### References

- Alsadoon, R. (2021). Chatting with AI Bot: Vocabulary Learning Assistant for Saudi EFL Learners. *English Language Teaching*, 14(6), 135-157.
- Alm, A., & Nkomo, L. M. (2022). Chatbot experiences of informal language learners: A sentiment analysis. In *Research Anthology on Implementing Sentiment Analysis Across Multiple Disciplines* (pp. 933-948). IGI Global.
- Alsadoon, R. (2021). Chatting with AI Bot: Vocabulary Learning Assistant for Saudi EFL Learners. *English Language Teaching*, 14(6), 135-157.
- Ayedoun, E., Hayashi, Y., & Seta, K. (2015). A conversational agent to encourage willingness to communicate in the context of English as a foreign language. *Procedia Computer Science*, 60, 1433-1442.
- Awuah, L. J. (2015). Supporting 21st-Century Teaching and Learning: The Role of Google Apps for Education (GAFE). *Journal of Instructional Research*, 4, 12-22.

- Bell, S. (2010). Project-Based Learning for the 21st Century: Skills for the future. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 83(2), 39–43. <https://doi.org/10.1080/00098650903505415>
- Brewster, C., & Fager, J. (2000). *Increasing student engagement and motivation: From time on task to homework*. Portland, OR: Northwest Regional Educational Laboratory. Retrieved June 25, 2002, from <http://www.nwrel.org/request/oct00/index.html>
- Camilleri, M. A., & Camilleri, A. C. (2019). Student-centred learning through serious games. *INTED2019 Proceedings*. <https://doi.org/10.21125/inted.2019.0578>
- Carroll, M., Lindsey, S., Chaparro, M., & Winslow, B. (2019). An applied model of learner engagement and strategies for increasing learner engagement in the modern educational environment. *Interactive Learning Environments*, 29(5), 757–771. <https://doi.org/10.1080/10494820.2019.1636083>
- Challenge 2000 Multimedia Project. (1999). Why do project-based learning? San Mateo, CA: San Mateo County Office of Education. Retrieved June 25, 2002, from <http://pblmm.k12.ca.us/PBLGuide/WhyPBL.html>
- Cheng, W., & Warren, M. (1997). Having second thoughts: Student perceptions before and after a peer assessment exercise. *Studies in Higher Education*, 22(2), 233–239. <https://doi.org/10.1080/03075079712331381064>
- Chiablaem, P. (2021). Enhancing English Communication Skills of Thai University Students through Google Apps for Education (GAFE) in a Digital Era during COVID-19 Pandemic. *Shanlax International Journal of Education*, 9(3), 91-98.
- Cheng, A., Yang, L., & Andersen, E. (2017). Teaching language and culture with a virtual reality game. *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. <https://doi.org/10.1145/3025453.3025857>
- Coleman, T. E., & Money, A. G. (2019). Student-centred digital game-based learning: A conceptual framework and survey of the state of the art. *Higher Education*, 79(3), 415–457. <https://doi.org/10.1007/s10734-019-00417-0>
- Coniam, D. (2008). Evaluating the language resources of chatbots for their potential in English as a second language. *ReCALL*, 20(1), 98-116.
- Cresswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. Sage.
- Christenson, S.L., Reschly, A.L. and Wylie, C. (eds) (2012) *Handbook of Research on Student Engagement*. New York: Springer.
- David, J., & Liss, R. (2006). *Effective academic writing 3* (1st ed.). USA: Oxford University Press.
- Dao, P. (2019). Effects of task goal orientation on learner engagement in Task Performance. *International Review of Applied Linguistics in Language Teaching*, 59(3), 315–334. <https://doi.org/10.1515/iral-2018-0188>
- Demirci, N., & Yavuz, G. (2009). The effect of constructivist teaching approach on pupils' science achievement in buoyancy force. *e-Journal of New World Sciences Academy*, 4(2), 508–519.



- De Vivo, K. (2022). A new research base for rigorous project-based learning. *Phi Delta Kappan*, 103(5), 36–41. <https://doi.org/10.1177/00317217221079977>
- Divekar, R. R., Drozdal, J., Chabot, S., Zhou, Y., Su, H., Chen, Y., Zhu, H., Hendler, J. A., & Braasch, J. (2021). Foreign Language Acquisition via Artificial Intelligence and extended reality: Design and evaluation. *Computer Assisted Language Learning*, 35(9), 2332–2360. <https://doi.org/10.1080/09588221.2021.1879162>
- Dinh, B. T., Ung, T. L., Nguyen, N. H., & Nguyen, T. H. T. (2023). Study on students' satisfaction with using Chatbot on Facebook's messenger platform to learn Chinese vocabulary. *Proceedings of the AsiaCALL International Conference*, 1, 115–130. <https://doi.org/10.54855/paic.2318>
- Dörnyei, Z., & Kormos, J. (2000). The role of individual and social variables in oral task performance. *Language Teaching Research*, 4(3), 275–300. <https://doi.org/10.1191/136216800125096>
- Fishman, B., Marx, R. W., Blumenfeld, P., Krajcik, J., & Soloway, E. (2004). Creating a framework for research on systemic technology innovations. *The Journal of the Learning Sciences*, 13(1), 43–76.
- Fredricks, J. A., Reschly, A. L., & Christenson, S. L. (2019). Interventions for student engagement: Overview and state of the field. *Handbook of Student Engagement Interventions*, 1–11. <https://doi.org/10.1016/b978-0-12-813413-9.00001-2>
- Fryer, L., & Carpenter, R. (2006). Bots as language learning tools. *Language Learning & Technology*, 10(3), 8–14.
- Gallacher, A., Thompson, A., Howarth, M., Taalas, P., Jalkanen, J., Bradley, L., & Thouësny, S. (2018). “My robot is an idiot!”—Students' perceptions of AI in the L2 classroom. *Future-proof CALL: language learning as exploration and encounters—short papers from EUROCALL*, 70-76.
- Ginting, D. (2021). Student engagement and factors affecting active learning in English language teaching. *VELES Voices of English Language Education Society*, 5(2), 215–228. <https://doi.org/10.29408/veles.v5i2.3968>
- Hanney, R., & Savin-Baden, M. (2013). The problem of projects: Understanding the theoretical underpinnings of Project-led PBL. *London Review of Education*, 11(1). <https://doi.org/10.1080/14748460.2012.761816>
- Harless, W. G., Zier, M. A., & Duncan, R. C. (2013). Virtual dialogues with native speakers. *CALICO Journal*, 16(3), 313–337. <https://doi.org/10.1558/cj.v16i3.313-337>
- Gülen, K. (2023, July 25). “Poe AI offers multiple LLMs in the same interface”. IEPA. <https://dataconomy.com/2023/07/25/what-is-poe-ai-and-how-to-use-it/>
- Hassani, K., Nahvi, A., & Ahmadi, A. (2016). Design and implementation of an intelligent virtual environment for improving speaking and listening skills. *Interactive Learning Environments*, 24(1), 252-271.
- Henry, A., & Thorsen, C. (2018). Disaffection and agentic engagement: ‘redesigning’ activities to enable authentic self-expression. *Language Teaching Research*, 24(4), 456–475. <https://doi.org/10.1177/1362168818795976>

- Hiver, P., Al-Hoorie, A. H., Vitta, J. P., & Wu, J. (2021). Engagement in language learning: A systematic review of 20 years of research methods and definitions. *Language Teaching Research*, 136216882110012. <https://doi.org/10.1177/13621688211001289>
- Huang, J. X., Lee, K. S., Kwon, O. W., & Kim, Y. K. (2017). A chatbot for a dialogue-based second language learning system. *CALL in a climate of change: adapting to turbulent global conditions—short papers from EUROCALL*, 151-156.
- Jeon, J. (2022). Exploring ai chatbot affordances in The efl classroom: Young learners' experiences and Perspectives. *Computer Assisted Language Learning*, 1–26. <https://doi.org/10.1080/09588221.2021.2021241>
- Jia, J. (2004). CSIEC (Computer simulator in educational communication): an intelligent web-based teaching system for foreign language learning. In *Edmedia+ innovate learning* (pp. 4147-4152). Association for the Advancement of Computing in Education (AACE).
- Jia, J., & Ruan, M. (2008, June). Use chatbot to facilitate individual learning in English instruction: A case study. In *International conference on intelligent tutoring systems* (pp. 706-708). Berlin, Heidelberg: Springer Berlin Heidelberg.
- Kim, H. S., Cha, Y., & Kim, N. Y. (2020). Impact of mobile interactions with AI on writing performance. *현대영어교육*, 21(2), 1-13.
- Kohnke, L. (2023). L2 learners' perceptions of a chatbot as a potential independent language learning tool. *International Journal of Mobile Learning and Organisation*, 17(1-2), 214-226.
- Lambert, C., Kormos, J. and Minn, D. (2016) Task repetition and second language speech processing. *Studies in Second Language Acquisition* 39, 167–196.
- Lambert C, Philp, J., & Nakamura, S. (2017). Learner-generated content and engagement in second language task performance. *Language Teaching Research* 21(6): 665-680.
- Laufer, B., & Hill, M. (2000). What Lexical Information Do L2 Learners Select in a CALL Dictionary and How Does It Affect Word Retention?.
- Lee, L. (2007). Fostering Second Language Oral Communication through Constructivist interaction in desktop videoconferencing. *Foreign Language Annals*, 40(4), 635–649. <https://doi.org/10.1111/j.1944-9720.2007.tb02885.x>
- Legault, J., Zhao, J., Chi, Y. A., Chen, W., Klippel, A., & Li, P. (2019). Immersive virtual reality as an effective tool for second language vocabulary learning. *Languages*, 4(1), 13.
- Liu, C.-C., Liao, M.-G., Chang, C.-H., & Lin, H.-M. (2022). An analysis of children's interaction with an AI chatbot and its impact on their interest in reading. *Computers & Education*, 189, 104576. <https://doi.org/10.1016/j.compedu.2022.104576>
- Mahmoud, R. H. (2022). Implementing AI-based conversational chatbots in EFL speaking classes: an evolutionary perspective. Res. Square. <https://doi.org/10.21203/rs.3.rs-1911791/v1>
- Mazur, E. (1997). *Peer instruction* (pp. 9-18). Upper Saddle River, NJ: Prentice Hall.
- Muniasamy, A., & Alasiry, A. (2020). Deep learning: The impact on future eLearning. *International Journal of Emerging Technologies in Learning*, 15(1), 188–199. <https://doi.org/10.3991/ijet.v15i01.11435>

- Gutiérrez Salvatierra, S. M. (2014). *What Kinds of Digital Tools Do ESL Students Use to Improve Their English Language?*
- Gutiérrez, S., (2014). *What kinds of digital tools do ESL students use in order to improve their English language?* [Andrews University]. <https://renati.sunedu.gob.pe/handle/sunedu/3032860>
- Mercer, S. (2019). Language learner engagement: Setting the scene. *Second Handbook of English Language Teaching*, 643–660. [https://doi.org/10.1007/978-3-030-02899-2\\_40](https://doi.org/10.1007/978-3-030-02899-2_40)
- Mercer, S., Dornyei Z. (2020). *Engaging Language Learners in Contemporary Classrooms*. Cambridge: Cambridge University Press
- Newmann, F.M. Student Engagement and Achievement in American Secondary Schools; ERIC: New York, NY, USA, 1992.
- Nguyễn, T. (2023, September 22). The Influence of ChatGPT and AI Tools on Vietnamese Education. <https://doi.org/10.35542/osf.io/bx9ft>
- Oga-Baldwin, W. L. Q. (2019). Acting, thinking, feeling, making, collaborating: The engagement process in foreign language learning. *System*. <https://doi.org/10.1016/j.system.2019.102128>
- Otake, M., Fukano, R., Sako, S., Sugi, M., Kotani, K., Hayashi, J., Noguchi, H., Yoneda, R., Taura, K., Otsu, N., & Sato, T. (2009). Autonomous Collaborative Environment for Project-Based Learning. *Robotics and Autonomous Systems*, 57(2), 134–138. <https://doi.org/10.1016/j.robot.2007.06.003>
- Ho, P. V., Phung, L. T., Oanh, T. T., & Giao, N. Q. (2020). Should peer e-comments replace traditional peer comments? *International Journal of Instruction*, 13(1), 295–314. <https://doi.org/10.29333/iji.2020.13120a>
- Phan, T. N. L. (2023). Students' Perceptions of the AI Technology Application in English Writing Classes. *Proceedings of the AsiaCALL International Conference*, 4, 45–62. <https://doi.org/10.54855/paic.2344>
- Philp, J., & Duchesne, S. (2016). Exploring engagement in tasks in the language classroom. *Annual Review of Applied Linguistics*, 36, 50–72. <https://doi.org/10.1017/s0267190515000094>
- Reeve, J. (2012). A self-determination theory perspective on student engagement. In Christenson, S.L., Reschly, A.L., & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 149–172). New York: Springer.
- Salvatierra, S. M. (2014). What kinds of digital tools do ESL students use in order to improve their English language? Andrews University. <https://purl.org/pe-repo/ocde/ford#6.02.02>
- Sinatra, G.M., Heddy, B.C., & Lombardi, D. (2015). The challenges of defining and measuring student engagement in science. *Educational Psychology*, 50, 1–13.
- Skinner, E.A., Kindermann, T.A., Connell, J.P. and Wellborn, J.G. (2009) Engagement and disaffection as organizational constructs in the dynamics of motivational development. In Wentzel, K. R., & Wigfield, A. (2009). *Handbook of motivation at school*. Routledge.
- Smutny, P., & Schreiberova, P. (2020). Chatbots for Learning: A Review of Educational Chatbots for the facebook messenger. *Computers & Education*, 151, 103862. <https://doi.org/10.1016/j.compedu.2020.103862>

- South, J. B., Gabbitas, B., & Merrill, P. F. (2008). Designing video narratives to contextualize content for ESL learners: A design process case study. *Interactive Learning Environments*, 16(3), 231–243. <https://doi.org/10.1080/10494820802114044>
- Stauffacher, M., A. Walter, et al. (2006). "Learning to research environmental problems from a functional socio-cultural constructivism perspective: the transdisciplinary case study approach." *International Journal of Sustainability in Higher Education* 7(3): Pp. 252- 275.
- Sumakul, D. T. (2019). When robots enter the classrooms: Implications for teachers. In *E-proceeding of the international conference on embedding artificial intelligence (AI) in education policy and practice for Southeast Asia* (pp. 42-48). SEAMEO SEAMOLEC.
- Svalberg, A.M.L. (2009) Engagement with language: Interrogating a construct. *Language Awareness* 18, 242–258
- Taylor, S. (2019) Chatbots in language learning: A review of the research.
- Tran, T. N., & Tran, H. P. (2023). Exploring the Role of ChatGPT in Developing Critical Digital Literacies in Language Learning: A Qualitative Study. *Proceedings of the AsiaCALL International Conference*, 4, 1–17. <https://doi.org/10.54855/paic.2341>
- Zhou, L., Gao, J., Li, D., & Shum, H. Y. (2020). The design and implementation of xiaoice, an empathetic social chatbot. *Computational Linguistics*, 46(1), 53–93. [https://doi.org/10.1162/coli\\_a\\_00368](https://doi.org/10.1162/coli_a_00368)
- Yildiz, Y. (2021). Teaching English as a foreign language to 4th grade students by using technology. *Canadian Journal of Language and Literature Studies*, 1(2), 38-54.

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## An Investigation into the Impact of ICT Applications on Improving Human's Cognitive Skills – Implication for Language Teaching

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### ABSTRACT

**Keywords:** ICT application, cognitive skills, language learning, online learning

The purpose of this study is to investigate the impact of ICT application on the acquisition of cognitive skills of language learners. A questionnaire designed by Barnard et al. (2009) has been adopted to collect responses from participants in a teacher training program conducted by the University of Foreign Languages Studies, The UD. The research results demonstrate a positive tendency in language learners to acquire cognitive skills such as academic self-efficacy, time planning and management, study regulation, task strategies, and metacognitive activities when exposed to the online learning environment. This also suggests implications for language instructors to take into consideration to improve learning outcomes.

### Introduction

In the era of information technology explosion, digital educational technology has the potential to significantly impact student development, the educational system, and teaching methods (Cao, 2022), (Hoang, Duong & Le, 2023). The use of digital educational technology includes collaboration between humans and machines, integration across borders, and collective creation. With the recent increase in the use of online technology in classrooms, there have been a variety of choices in the mode of delivery, from online to a blended mix of face-to-face and Learning Management Systems (Rasheed et al., 2020). In addition, the outbreak of the Covid-19 pandemic has created a new era of remote learning and teaching. With the aid of online technology, students are believed to be familiar with this type of interaction (Hodges et al., 2020). As a consequence, it is recognized that the opportunities for interaction have decreased due to the flexibility of online learning in terms of anywhere and anytime learning, which leads to the fact that students have to learn to decide the time and way of engaging with learning activities (Broadbent et al., 2022).

Recently, numerous studies have suggested the significance of technology in education and its benefits in fostering the improvement in students' learning outcomes, including promoting cognitive insights and enhancing advanced thinking abilities. Nevertheless, we can perceive different opinions on the impact of online technology on students' cognitive abilities. It is

believed by some authors that some researchers blamed the continuous multitasking in online learning for the impairment in students' cognitive abilities, while others recorded the outweighing benefits over the challenges in online learning. From that perspective, it is noted that there should be more research on this topic so as to provide comprehensive insights into the correlation between learning effectiveness and technology application.

From that context, this study aims to explore the impact of digital applications on language learners' cognitive skills development. Specifically, the study will investigate the use of digital applications in a training course for English language teachers in the central region of Vietnam. It will examine how these applications influence the learners' academic self-efficacy, time planning and management, study regulation, task strategies, and metacognitive activities.

### **Literature review**

So far, there has been a variety of research on the use of technology in education in general and in language education in specific. Klimova (2023) has conducted a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology to identify and analyze relevant research articles and found that cognitive gains are believed to be more effective when working with printed texts as learners are frequently exposed to more senses through digital language education. This was confirmed by another study by Klimova and Kacetl (2017), who announced the high ability of vocabulary acquisition, more engagement opportunities, and students' inclusion in communication in computer games. Similarly, Peterson et al. (2020) recognized the enhancement in collaboration and language output, especially vocabulary, under the use of digital games in language learning.

What's more, with the outbreak of the Covid-19 pandemic, multiple studies have been conducted on the situation of education delivery in the pandemic context. As a consequence, the positive effects of online learning were recorded by many researchers, including El Mustapha Hayat et al. (2023), who noted the remarkable improvement in teachers' perceptions of continuous learning and learning readiness. With the awareness of the increasing popularity of ICT in education, Thomas & Ambrose (2020) have explored the impact of ICT use patterns on postgraduate students' academic achievement in developing countries and suggested that there is a remarkable correlation between the learners' performance and the blending of ICT use in teaching and learning. Firdaus & Rahayu (2019) described the effect of STEM-based learning on cognitive skills improvement. The research proposed feasible differences in learning outcomes between experimental groups and put forward a conclusion that learners' cognitive skills could be improved under exposure to STEM-based learning. Drigas and Karyotaki (2014) has conducted a study to make a revision on the use of internet supported learning tools and its influence on learners' cognitive skills including critical thinking, problem-solving, independent inquiry, creativity, communication, collaboration, and digital literacy.

## *Theoretical Framework*

### *ICT Application*

According to Sayaf et al. (2022), digital education technology is depicted by the utilization of suitable ICT applications and teaching pedagogy to aid the learners' development of cognitive skills and other abilities. The main components of digital education technology include digital learning skills, usability and usefulness of digital tools, and Internet-based skills. Tondeur et al. (2008) emphasized three essential pedagogical applications of computer-based learning: operational technology, information tools, and learning tools.

### *Cognitive skills*

There are various perceptions about cognitive skills among researchers from cognitive theories and earlier. While recent studies look at cognitive skills as a holistic capability with developmental change, earlier theories alternatively linked acquired piecemeal information packets with cognitive skills. From the lens of cognitive theories, Firdaus & Rahayu (2019) first defined cognitive skills as an "integrated mixture of specific facts and procedures for utilizing those facts." In other words, cognitive skills are made up of both declarative and procedural knowledge, secondly as acquired abilities through training and/or experience, in contrast to intellectual abilities such as intelligence, which is supposedly resistant to change via training, and thirdly as applicable skills in the domain of activity, but their use is generally confined to that domain. Finally, cognitive skills go through several ordered stages while being acquired. To be more specific, Hunter (1986) stated that cognitive ability is the "ability of the human brain to extract, process, store, convey, and reproduce information from the objective world". Cognitive ability usually consists of verbal ability, numerical ability, technological ability, logical reasoning skills, and so on. With a more specific view, Hunter (2013) viewed cognitive skills as "how a student thinks, solves problems and learns, gives a larger impact on his ability to play a role in a society that is rich with technology, compared to his knowledge about hardware or certain software".

When discussing the relation between cognitive skills and self-regulated learning, Zimmerman (2002) stated that self-regulated learning refers to the autonomous process by which individuals convert their cognitive and physical capabilities into skills specific to a task. This learning approach includes metacognitive, motivational, and behavioral aspects, all self-initiated for skill and knowledge acquisition. It involves practices like setting objectives, strategizing, employing self-reinforcement, maintaining self-records, and guiding oneself through self-instruction. Learners manage their educational progress through hidden cognitive methods and explicit behavioral actions, such as choosing, adapting, or creating beneficial personal surroundings or pursuing social assistance. In this research, the author approached the study of cognitive skills in language learning by examining how learners organize and allocate their study time, select strategies for accomplishing learning tasks, manage their studies, optimize their academic outcomes, and engage in metacognitive activities. These activities are identified as elements of self-regulated learning within the context of this research.

### Research Questions

To fulfill the purpose of the study, the survey was seeking to answer the following research questions:

1. Does ICT application in teachers' training courses conducted by UFLS, The UD contribute to the improvement in learners' academic self-efficacy, time planning and management, study regulation, task strategies, and metacognitive activities?
2. What are the implications for language teaching in an online learning environment?

### Methods

The study employed a mixed-method approach, including questionnaires, interviews, and classroom observations. Survey data will be collected from 127 English teachers currently participating in a training course organized by the University of Foreign Language Studies, the University of Danang (UFLS, The UD), and the National Project of Foreign Languages in central Vietnam. In addition, the researcher conducted individual and focus group interviews with a randomly selected group of 10 teachers to gather diverse opinions on the use of digital applications in their courses. Classroom observations also played a significant role in understanding how these digital applications are utilized and how learners perform in a digital learning environment.

Regarding questionnaires, the study used the online SRL measure, the Online Self-regulated Learning Questionnaire, which was developed by Barnard et al. (2009). The Self-Regulation for Learning Online (SRL-O) questionnaire was designed to measure learners' learning motivations and strategies in an online environment. Its structure covers 10 factors, including (1) online self-efficacy, (2) online intrinsic motivation, (3) online extrinsic motivation, (4) online negative achievement emotion, (5) planning and time management, (6) metacognition, (7) study environment, (8) online effort regulation, (9) online social support, and (10) online task strategies. However, for the sake of the study, we only made use of items that belong to categories of learners' academic self-efficacy, time planning and management, study regulation, task strategies, and metacognitive activities. The questionnaires used a Likert scale from 1 to 7, ranging from not true at all to very true of me.

The study implemented a summer training program designed for 127 English teachers residing in the provinces of Dak Lak, Phu Yen, and Dak Nong from July to September 2023. This training initiative was organized as a network-oriented endeavor with the primary objective of enhancing the professional development of educators in the field. The course includes topics of English for Teaching, Testing and Assessment, Building Learning Environments, and Information and Communication Technology (ICT) integration. Under the guidance of the National Foreign Languages Project, the program adopted a blended mode of instruction, combining face-to-face interactions with online delivery methods. Throughout a two-month training course, participants were invited to complete questionnaires based on the framework presented by Barnard et al. (2009). These instruments aimed to investigate the impact of technology on various aspects of their cognitive skills, including academic self-efficacy, planning and time management, study regulation, task strategies, and metacognitive activities.



## Findings and discussion

Table 1.

Description of parameters

	(A) Online Academic Self-efficacy	(E) Planning and time management	(G ) Online Effort Regulation	(I) Task Strategies	(J) Metacognition
COUNT	127	127	127	127	127
MEAN	5.154	5.013	5.035	5.132	5.173
STD	1.030	1.153	1.042	1.107	0.992
MIN	1.250	1.000	1.000	1.000	1.000
MAX	7.000	7.000	7.000	7.000	7.000

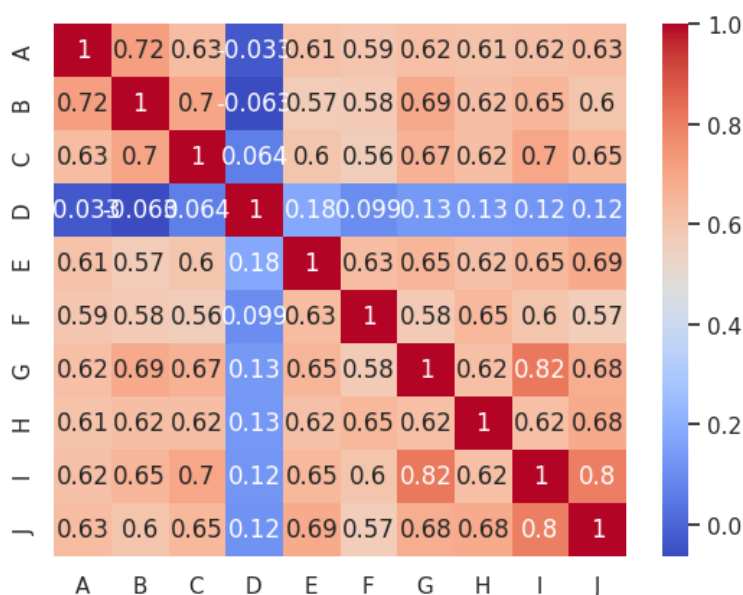
From the results, it is remarkable that learners tend to have high cognitive skills, manifested by values exceeding 5 across all categories. Upon closer examination, it is evident that metacognitive activities have the highest mean score at 5.173. This implies that participants demonstrated a heightened capacity for self-reflection on their learning strategies when faced with similar academic tasks. Additionally, they exhibited an ability to allocate adequate time to ensure proper academic undertakings. The high level of cognition is also depicted through their awareness of self-assessment in their learning, which means that they normally look over past feedback they received in the past and see how they have improved in current learning based on the criteria regulated by the trainer.

Likewise, participants are apt to manage their academic self-efficacy, as evidenced by a mean score of 5.154. This suggests that they are confident in achieving high academic achievement within the online learning environment and through the utilization of digital tools. They are acquainted with online platforms when interacting, obtaining content, and completing tasks, in alignment with the instructions of their instructors. Accordingly, it is predictable that the mean value of task strategies is also in the high range of 5.132, proving that learners can apply their cognitive skills to accomplish the tasks in the course. They are comfortable generating summaries, drawing connections between course content, and formulating their ideas within the context of their learning.

What's more, the quantitative data also affirm that participants are efficient in planning their study, managing time, and regulating online learning. They reported that they often establish realistic deadlines to achieve their learning objectives, break larger goals into smaller measurable goals, and make a list of things to do for their learning plan. Also, as participants are adults who have the motivation for any activities in their lives, they are consistent with their learning goals and try their best to overcome obstacles to pull themselves back to the learning goals.

Figure 1.

Correlations between categories



Besides, the data also reveals interesting stories about the correlations between the categories. In terms of positive correlation, the data said that online effort regulation has a strong positive correlation with task strategies with a correlation indicator of 0.82 (Table 2). Similarly, 0.8 is the value that states a positive correlation between task strategies and metacognition. This means that if learners have a strong ability to regulate their online effort, they are found to be advantageous in identifying and taking task strategies in their learning and vice versa. This shares the same tendency when looking at the correlation between task strategies and the metacognition of learners. Interestingly, the figures in Table 2 show that all categories (A, E, G, I, and J) have a strong positive correlation with any of the rest in the lists. The correlation value between categories can be summarized as follows: A – E (0.61), A – G (0.62), A – I (0.62), A – J (0.63), G – E (0.65), E – I (0.65), E – J (0.69).

The findings of the research discussed above have indicated that technology has a positive impact on the development of learners' cognitive skills. From this perspective, this study put forward some suggestions for language teaching:

First, instructors should take advantage of digital technology to create an effective learning environment that supports the accessibility of learners from far locations. Also, there should be awareness among instructors that a digital technology-based learning environment would benefit learners from the perspectives of learning outcomes, learning conditions, and cognitive skills development. Second, it is suggested that instructors should have a profound understanding of their learners to adopt suitable specific training strategies. Factors like learners' needs and proficiency are advisable for instructors to look at when deciding on a methodology in a digital context. Thirdly, various techniques should be applied when teaching to expose learners to the engagement of several senses while learning and then effectively contribute to the development of potential cognitive skills related to the use of technologies.

Finally, instructors should provide frequent feedback to learners to help them maintain their motivation. In order to do so, instructors should take time to equip themselves with digital pedagogy such as attending workshops, seeking consulting from experts, peer learning...

The observations and interviews were conducted as part of this study to elicit rich, detailed information about participants' cognitive strategies and learning behaviors. Moreover, these two techniques are said to provide deep insights into learner's approaches, particularly in an online context where direct observation of learning behaviors might be more challenging. It is proved that there is a consensus between the quantitative results acquired through questionnaires and the results obtained by observation and interview. Many teachers who were invited to share their perceptions about self-reflection and metacognition expressed their awareness in conducting activities (keeping online diaries and online reflective journals...) as proofs of their self-assessment process and adjustments in their learning approaches (such as actively sharing opinions in the discussion, posting online queries on the forum to get peer support...). There were a variety of ways that teachers adopted self-evaluation during the course. Some summarized what they learned in diaries and e-portfolios, and some kept discussing their doings with colleagues in the course. Moreover, observing how the teacher managed their time during the course, the author recognized that teachers tended to complete online assignments and similar times of the day, which meant they scheduled the same time for an activity in the course. As for task strategies, teachers illustrated various techniques to acquire the best learning outcome. Many shared that they spent much of their time reading advanced materials about the topics before class. Some read all the online posts and searched for extra materials to gain in-depth knowledge. Some others had the inclination to ask questions for clarification.

## Conclusion

In the context of the Covid-19 pandemic, there has been a shift from face-to-face learning to online learning or blended learning with the aid of digital technology. This has brought about an emerging landscape in teaching and learning in the world. The impact of technology on education has been explored recently by a variety of studies. Some have profiled the positive role of technology in improving learning outcomes and 21st-century skills of learners. In the scope of this study, we have adopted questionnaires by Barnard et al. (2009) to investigate the gain of cognitive skills in language learners, namely Online Academic Self-efficacy, Planning and Time Management, Online Effort Regulation, Task Strategies, and Metacognition. Consequently, the results have shown the positive impact of online technology on learners' acquisition of cognitive skills, which are manifested through 5 categories specifically. Implications for instructors have been put forward with an aim to build up better learning outcomes for learners in online learning environments.

## References

- Broadbent, J., Panadero, E., Lodge, J. M. & Tyszkiewicz, M. F. (2022). *The self-regulation for online learning questionnaire*. *Metacognition and Learning*, 18, 135-163.
- Cao, T. X. L. (2022). *Language Teachers' Perception and Practice of Adopting Blended Learning to Adapt to the New Normal*. *AsiaCALL Online Journal*, 13(5), 29-45. <https://doi.org/10.54855/acoj.221353>
- Drigas, A., & Karyotaki, M. (2014). Learning Tools and Applications for Cognitive Improvement. *International Journal of Engineering Pedagogy (iJEP)*, 4(3), pp. 71–77. <https://doi.org/10.3991/ijep.v4i3.3665>
- El Mustapha, B\*, Hayat, E, Nadia, S, & Lynda, O. (2023). Teachers' sense of competence in terms of ICT use: the case of secondary school teachers. *Research in Learning Technology*, 31.
- Firdaus, A. R., & Rahayu, G. D. (2019). Effect of STEM-based Learning on the Cognitive Skills Improvement. *Mimbar Sekolah Dasar*, 6(2), 198-207. doi:10.17509/mimbar-sd.v6i2.17562
- Hunter, J.E. (1986). Cognitive ability, cognitive aptitudes, job knowledge, and job performance. *J. Vocat. Behav.* 29, 340–362.
- Hoang, N. T., Duong, N. H., & Le, D. H. (2023). Exploring Chatbot AI in improving vocational students' English pronunciation. *AsiaCALL Online Journal*, 14(2), 140-155. DOI: <https://doi.org/10.54855/acoj.231429>
- Hodges, C., Moore, M., Lockee, B., Trust, T. & Bond, A., (2020). *The Difference Between Emergency Remote Teaching and Online Learning*. Educause. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Klimova, B.; Pikhart, (2023). M. Cognitive Gain in Digital Foreign Language Learning. *Brain Sci.* 13, 1074. <https://doi.org/10.3390/brainsci13071074>
- Klimova, B.; Kacatl, J. (2017). Efficacy of computer games on language learning. *TOJET*, 16, 19–26.
- Mazalah, A., Aidah Abdul, K., Rosseni, D. & Intan Safinas, (2013). Assessing ICT Competencies among Postgraduate Students Based on the 21st Century ICT Competency Model. *Asian Social Science*. 9 (16).
- Peterson, M.; White, J.; Mirzaei, M.S.; Wang, Q., (2020). *A review of research on the application of digital games in foreign language education*. In *New Technological Applications for Foreign and Second Language Learning and Teaching*; Kruk, M., Peterson, M., Eds.; IGI. Global: Hershey, PA, USA. 69–92.
- Pozo, J.I.; Pérez Echeverria, M.P.; Cabellos, B.; Sanchez, D.L. (2021). Teaching and Learning in Times of COVID-19: Uses of Digital Technologies during School Lockdowns. *Front. Psychol.* 12, 1–13.

- Rasheed, A.; Amirrudin, K. & Nor Aniza, A. (2020). *Challenges in the online component of blended learning: A systematic review*. Computers & Education. 144. <https://doi.org/10.1016/j.compedu.2019.103701>
- Sayaf, A.M.; Alamri, M.M.; Alqahtani, M.A.; Alrahmi, W.M. (2022). Factors Influencing University Students' Adoption of Digital Learning Technology in Teaching and Learning. *Sustainability*. 14, 493.
- Thomas M. van der Merwe & Ambrose A. Azeta. (2020). *Exploring the Impact of ICT Use Patterns on Postgraduate Student Academic Achievement in a Developing Country*, Conference Paper at: <https://www.researchgate.net/publication/371168580>
- Tondeur, J., Hermans, R.; van Braak, J., Valcke, M. (2008). Exploring the link between teachers' educational belief profiles and different types of computer use in the classroom. *Comput. Hum. Behav.* 24, 2541–2553.
- Zimmerman, B.J. (2001). *Self-regulated Learning*. International Encyclopedia of the Social & Behavioral Sciences. 13855-13859. <https://doi.org/10.1016/B0-08-043076-7/02465-7>

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## Unraveling the Potential of ChatGPT: Investigating the Efficacy of Reading Text Adaptation

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### ABSTRACT

The purpose of this study is to investigate the effectiveness of ChatGPT in reading text adaptation. Its primary focus is on examining ChatGPT's ability to adapt texts with particular attention to its contextual understanding and limitations. Employing a mixed-methods approach, the research combines quantitative analysis and qualitative evaluation. Quantitative measures assess the consistency of ChatGPT's responses across various text adaptation scenarios, whereas qualitative evaluations involve the assessment of language teachers' attitudes and perceptions towards the use of ChatGPT for text adaptation in their teaching practices. Ethical considerations pertaining to potential biases and misinformation in the model's output are also discussed. The outcomes of this investigation contribute to understanding ChatGPT's strengths and limitations in reading text adaptation. The research has practical implications for domains such as language education, content creation, and information retrieval, where accurate and adaptable text comprehension is crucial.

**Keywords:** ChatGPT, reading, text adaptation

### Introduction

In an era marked by the rapid advancement of artificial intelligence (AI) and natural language processing, the integration of AI models into various aspects of our lives has become increasingly prevalent. One such AI marvel is ChatGPT, a remarkable model that has been meticulously trained on a vast corpus of internet texts, boasting the ability to generate human-like responses. Its applications span a multitude of domains, including conversational interfaces, content generation, and text adaptation.

In light of this, this study focuses on exploring the effectiveness of ChatGPT in reading text adaptation, which is a vital area within natural language processing, including modifying, transforming, or adjusting text to suit particular contexts, audiences, or linguistic requirements. With the employment of a comprehensive mixed-methods approach, this study provides a

holistic assessment of ChatGPT's performance. The quantitative measures take on the task of gauging the consistency of ChatGPT's responses when faced with diverse text adaptation scenarios. Concurrently, qualitative evaluations introduce an intriguing facet to the study as they encompass the insights and perceptions of language teachers regarding the use of ChatGPT in text adaptation within their teaching practice.

By the culmination of this investigation, the study aims to unlock a deeper understanding of ChatGPT's strengths and limitations, offering language teachers novel possibilities for integrating AI in their lesson preparations.

## Literature review

### *Text adaptation*

Text adaptation plays a crucial role in language teaching by tailoring learning materials to the needs and abilities of learners. When working with students with significant reading challenges, teachers need to evaluate the essential concepts within the text that should remain and will often adapt the text to meet their students' needs (Lauren, 2021). Text adaptation addresses students' diverse linguistic and cognitive levels, making educational content more accessible, engaging, and effective. Teachers must skillfully align instructional materials with their students' capabilities to facilitate effective teaching and learning. This task can be particularly demanding when students' reading proficiency falls below grade-level expectations, yet the available texts are designed for either their current level or more advanced readers. Conversely, when students exhibit reading abilities that surpass grade-level norms, but instruction materials are tailored for those below their competence, learners may struggle to engage with the content, potentially leading to a lack of interest in the lessons. Balancing this dynamic is essential for cultivating an environment conducive to meaningful education. Therefore, teachers are increasingly expected to adapt their teaching to students' needs and grade-level standards (Van Geel et al., 2023).

Text adaptation can enhance comprehension and engagement, ultimately aiding students in mastering the language. There are studies involving the simplification of learning materials in English by reducing the complexity level of the original, authentic texts to increase their linguistic accessibility and make them a better match to the learners' English proficiency level (Crossley et al., 2012; Rets & Rogaten, 2021; Rets et al., 2022). These studies have indicated that simplified texts lead to better text comprehension in comparison with authentic texts. However, current teacher training programs lack courses designed to provide teachers with effective linguistic accessibility strategies. Additionally, there is limited support for the text adaptation process, and research on reading comprehension instruction for English academic texts remains insufficient (Crossley et al., 2012; Atai & Fatahi-Majd, 2014; Jin & Lu, 2018; Irina et al., 2022). As a result, without adequate support, teachers primarily rely on intuition, drawing from their teaching experience, writing proficiency, and personal beliefs about enhancing text comprehension for their target learners (Crossley et al., 2012; Young, 1999) or resort to a structural simplification approach, utilizing word lists and conventional readability formulas to evaluate the complexity of simplified texts afterward (Jin & Lu, 2018). This highlights the need for comprehensive training and innovative solutions like ChatGPT to address text adaptation challenges.

### *ChatGPT and Text Adaptation*

ChatGPT, standing for Chat Generative Pre-trained Transformer, is a large language model-based chatbot developed by OpenAI and launched on November 30, 2022, and is considered a "state-of-the-art chatbot" (Hong, 2023). According to Reuters, the world's largest multimedia news provider, ChatGPT reached an incredible 100 million monthly active users in January 2023, making it the fastest-growing application ever seen, and by June 2023, the number had increased to 1.6 billion visits. ChatGPT has become increasingly popular in teaching and learning practices, and participants are quite open to this trend (Nguyen, 2023). ChatGPT's popularity is grounded in its exceptional conversational ability, remarkable adaptability, and wide-reaching accessibility. These qualities collectively render it an invaluable asset across diverse domains, with language education as a prime example, offering benefits to educators and students alike.

One of ChatGPT's most prominent applications is its role as a virtual tutor and knowledge resource. ChatGPT can provide instant responses to student's questions, explain complex topics, and offer assistance with homework and assignments, which helps alleviate the pressure on educators to be available at all times. Among many aspects, adapting reading materials for teaching is one of the truly shining capacities of ChatGPT. It addresses a deep-rooted challenge in education: how to accommodate students with varying reading abilities within a single class. ChatGPT can dynamically adjust the complexity of a text, making it more accessible to struggling readers while offering more advanced content to those who are more proficient. This personalization of reading materials is invaluable, demonstrating ChatGPT's potential to revolutionize teaching and learning. Its adaptability, accessibility, and efficiency make it a powerful tool for teachers striving to provide suitable materials for all students, regardless of their reading abilities.

Despite its strengths, concerns regarding the use of ChatGPT have been raised. Nguyen (2023) suggests that more research should be conducted, especially regarding the adverse effects of AI applications and stakeholders' perceptions. Teachers and policymakers should be aware of the negative impacts of AI tools. Nguyen's study also delves into the application of ChatGPT in language test design, exploring the potential and challenges faced by language teachers in various schools and institutions.

Identifying research gaps, it becomes apparent that despite ChatGPT's widespread application in language education, there is a scarcity of comprehensive studies evaluating the efficiency of ChatGPT in general, the attitude of teachers towards the usefulness of ChatGPT in text adaptation, and the reliability of the texts adapted by ChatGPT in particular. By addressing these research gaps, educators, policymakers, and researchers can gain valuable insights into the potential of ChatGPT in enhancing educational materials, ultimately advancing the quality of education in an increasingly digital era.



## Research Questions

The study aims to seek answers to the following research questions:

1. To what extent do reading texts adapted by ChatGPT meet the level requirements set for learners in educational contexts?
2. What are teachers' attitudes and perceptions regarding the use of ChatGPT for text adaptation in their teaching practices?

## Methods

This study employs a dual-pronged approach, combining quantitative and qualitative methods. In addressing the first research question, the Flesch Reading Ease index is used to evaluate the readability levels of the texts adapted by ChatGPT. Two distinct texts were selected from a practice test book tailored for VSTEP.3-5, a Vietnamese Standardized Test of English Proficiency. These texts cover diverse themes, encompassing Christmas and children's education, thereby catering to learners of varying ages. The Flesch Reading Ease is a readability formula that measures the difficulty of English text. It analyzes both sentence length and word complexity to determine the readability of a text. It considers longer sentences and words with more syllables to indicate a higher difficulty level. The Flesch Reading Ease gives a text a score between 1 and 100, with 100 being the highest readability score. The higher the reading score is, the easier a piece of text is to read. The formula is as follows:

Figure 1.

Flesch Reading Ease Formula

$$206.835 - (1.015 \times ASL) - (84.6 \times \frac{n_{sy}}{n_w})$$

where ASL = Average Sentence Length | NSY = Number of Syllables | NW = Number of Words

According to Wikipedia, an open-access encyclopedia and Flesch (1948), the Flesch reading-ease scores can be interpreted as shown in the table below.

Table 1.

The interpretation of Fresh Reading Ease scores

Score	Grade level (US)	Difficulty level
100.00–90.00	5th Grade	Very easy
80.0–89.0	6th Grade	Easy
70.0–79.0	7th Grade	Fairly easy
60.0–69.0	8th & 9th grade	Standard
50.0–59.0	10th to 12th grade	Fairly difficult
30.0–49.0	College	Difficult
20.0–29.0	College Graduate	Very difficult
00.0–19.0	Professional	Extremely difficult

Within this research endeavor, the readability scores of two distinct original texts are compared with those of the adapted texts crafted by ChatGPT. Then, the percentage of texts that meet, exceed, or fall below the level requirements set for specific students are calculated. For the evaluation of readability scores, an online software tool – Readability Scoring System, accessible at <https://readabilityformulas.com/readability-scoring-system.php#formulaResults>, is employed. This invaluable resource empowers the researcher to comprehensively examine the texts, facilitating a precise assessment of their suitability for the intended readership.

To answer the second research question, interviews were conducted with 10 English teachers working for a university in Hanoi, Vietnam and known to have employed ChatGPT for text adaptation in the classroom. This tool aims to inquire about teachers' attitudes and perceptions regarding the use of ChatGPT for text adaptation in their teaching practices, including its benefits and challenges in teaching and learning. The interview's content analysis of open-ended responses is transcribed to identify common themes, challenges, and benefits associated with ChatGPT-adapted texts.

This mixed methods approach allows for a holistic assessment, offering both quantitative data-driven insights and qualitative perspectives on the effectiveness of the text adaptations.

## Findings and discussion

*To what extent do reading texts adapted by ChatGPT meet the level requirements set for learners in educational contexts?*

In the context of this study's findings and discussion for the first research inquiry, the investigation aims to assess the alignment between reading texts adapted by ChatGPT and the prescribed proficiency levels for learners in educational settings.

With the utilization of ChatGPT, each of these selected texts underwent eight adaptations, corresponding to the 8 Flesch Reading ease score levels (as illustrated in Table 1). Additionally, each adaptation was regenerated twice to ascertain the consistency of the outcomes. These are the data analysis findings pertaining to Text 1.

Table 2.

Flesch reading ease score of the original text 1

<b>Original Text</b>	<b>Adapted at the same level (1)</b>	<b>Adapted at the same level (1)</b>
Score: 73 [= reading scale ] Reading Difficulty: Fairly Easy Grade Level: 7th Grade Age Range: 12-13 years old	Score: 69 [= reading scale ] Reading Difficulty: Standard Grade Level: 8th & 9th Grade Age Range: 13-15 years old	Score: 70 [= reading scale ] Reading Difficulty: Fairly Easy Grade Level: 7th Grade Age Range: 12-13 years old

Table 2 shows the analysis of Text 1 when adapted at the same level. The original text exhibits a readability score of 73 on the reading scale, signifying a fairly easy reading difficulty level and suitable for a 7<sup>th</sup>-grade learner within the age range of 12-13 years old. However, after adaptations by ChatGPT at this level, the resulting text obtains a readability score of 69, indicating a standard reading difficulty level akin to an 8<sup>th</sup> or 9<sup>th</sup>-grade audience aged between 12-15 years old, whereas the score of the second adapted text at this level stays nearly the same.

While the adapted texts' readability scores remain in the vicinity of the original, there is a slight shift towards a higher grade level audience, suggesting a minor adjustment in reading complexity while retaining overall accessibility.

Table 3.

Flesch reading ease score of the adapted original text 1

(adapted texts for 5<sup>th</sup> grade; 6<sup>th</sup> grade, 8&9<sup>th</sup> grade; 10-12<sup>th</sup> grade)

Text 1	Adapted 1		Adapted 2		Adapted 3		Adapted 4	
	Version 1	Version 2	Version 1	Version 2	Version 1	Version 2	Version 1	Version 2
Aimed grade level	5 <sup>th</sup> Grade		6 <sup>th</sup> Grade		8 <sup>th</sup> & 9 <sup>th</sup> grade		10-12 <sup>th</sup> Grade	
Score	77	71	71	74	59	57	39	51
Reading Difficulty	Fairly easy	Fairly easy	Fairly easy	Fairly easy	Fairly difficult	Fairly difficult	Difficult	Fairly difficult
Grade Level	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	10-12 <sup>th</sup>	10-12 <sup>th</sup>	College	10-12 <sup>th</sup>
Age Range	12-13	12-13	12-13	12-13	15-18	15-18	18 & above	15-18

Table 3 presents the Flesch Reading Ease scores for the adapted versions of Text 1 across various grade levels, providing insights into the readability and intended audience for each adaptation. For adapted texts (Adapted 1 & Adapted 2), aimed at 5<sup>th</sup> and 6<sup>th</sup> levels, respectively, the readability scores are between 71 and 77. Both versions are classified as "fairly easy" to read, aligning well with a 7<sup>th</sup>-grade reading level and age 12-13 years. Similarly, the readability scores for Adapted 4, intended for eighth and ninth- are 59 and 57, which are considered "fairly difficult", more complex than the intended learners, and suitable for 10-12<sup>th</sup> grade learners, whereas those for 10-12<sup>th</sup> Grade are not consistent with each other between two adaptations with version 1 exhibits a slight increase in complexity compared to the intended level.

Table 4.

Flesch reading ease score of the adapted original text 1

(adapted texts college; college graduate; professional)

Text 1	Adapted 5		Adapted 6		Adapted 7	
	Version 1	Version 2	Version 1	Version 2	Version 1	Version 2
Aimed grade level	College		College Graduate		Professional	
Score	37	49	36	39	27	39
Reading Difficulty	Difficult	Difficult	Difficult	Difficult	Very difficult	Difficult
Grade Level	College	College	College	College	College Graduate	College
Age Range	18 & above	18 & above	18 & above	18 & above	18 & above	18 & above

Moving to more advanced levels, Adapted 5, Adapted 6, and Adapted 7 are tailored for college students, college graduates, and ad professional audiences, respectively. These adaptations yield relatively good matches with the intended levels, though there is a slight mismatch in the readability levels of some texts. They correspond very well to a college-grade reading level and still need a minor change in order to fit totally with the more advanced levels.

A similar analysis is made for Text 2, and the findings pertaining to Text 1 are presented in Tables 5-7.

Table 5.

Flesch reading ease score of the original text 2

<b>Original Text</b>	<b>Adapted at the same level (1)</b>	<b>Adapted at the same level (1)</b>
Score: 40 [= reading scale] Reading Difficulty: Difficult Grade Level: College Age Range: 18 years old and above	Score: 43 [= reading scale] Reading Difficulty: Difficult Grade Level: College Age Range: 18 years old and above	Score: 49 [= reading scale] Reading Difficulty: Difficult Grade Level: College Age Range: 18 years old and above

As can be seen from Table 5, the data for the original text 2 is suitable for college students with a readability score of 40. The adapted versions of the text were assessed for their reading difficulty scores to evaluate the effectiveness of the adaptations in maintaining the text's level of complexity. The results of the adaptations indicate that the overall reading difficulty level is either maintained or slightly increased within the difficult range.

Table 6.

Flesch reading ease score of the adapted original text 2

*(adapted texts for 5<sup>th</sup> grade; 6<sup>th</sup> grade, 7<sup>th</sup> grade, 8&9<sup>th</sup> grade)*

<b>Text 1</b>	<b>Adapted 1</b>		<b>Adapted 2</b>		<b>Adapted 3</b>		<b>Adapted 4</b>	
	Version 1	Version 2	Version 1	Version 2	Version 1	Version 2	Version 1	Version 2
Aimed grade level	5 <sup>th</sup> Grade		6 <sup>th</sup> Grade		7 <sup>th</sup> Grade		8 <sup>th</sup> & 9 <sup>th</sup> grade	
Score	78	78	76	67	37	57	22	46
Reading Difficulty	Fairly easy	Fairly easy	Fairly easy	Standard	Difficult	Fairly difficult	Very difficult	Difficult
Grade Level	7 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	8-9 <sup>th</sup>	College	10-12 <sup>th</sup>	College Graduate	College
Age Range	12-13	12-13	12-13	12-13	18 & above	15-18	18 & above	18 & above

Table 7.

Flesch reading ease score of the adapted original text 2

*(adapted texts for 10-12<sup>th</sup> grade; college graduate; professional)*

<b>Text 1</b>	<b>Adapted 5</b>		<b>Adapted 6</b>		<b>Adapted 7</b>	
	Version 1	Version 2	Version 1	Version 2	Version 1	Version 2
Aimed grade level	10-12 <sup>th</sup> Grade		College Graduate		Professional	
Score	23	24	24	26	19	17
Reading Difficulty	Very difficult	Very difficult	Very difficult	Very difficult	Extremely difficult	Extremely difficult
Grade Level	College Graduate	College Graduate	College Graduate	College Graduate	Professional	Professional
Age Range	18 & above	18 & above	18 & above	18 & above	18 & above	18 & above

Tables 6 and 7 show the evidence for text adaptations for a wide range of audiences. The texts adapted from the original one by ChatGPT tend to be more difficult than the targeted levels. For middle school and early high school audiences, reading texts targeting 5<sup>th</sup> and 6<sup>th</sup> graders score a readability range of 68-78, indicating that they are fairly easy or standard to read despite two levels more difficult, whereas those for Grade 8<sup>th</sup> and 9<sup>th</sup> seem to be much harder for the targeted audience and the readability scores are not consistent with two adaptation times. Similarly, the texts adapted for high school students score consistently 23 and 24, indicating very difficult readability. When progressing to college and professional levels, the adaptations totally fit with the intended audience.

*What are teachers' attitudes and perceptions regarding the use of ChatGPT for text adaptation in their teaching practices?*

To gain insights into teachers' attitudes and perceptions regarding using ChatGPT for text adaptation, interviews were conducted with 10 teachers known to have employed ChatGPT for text adaptation in the classroom. The key areas to explore in this study are the teachers' attitudes toward the benefits of ChatGPT and their perceptions of challenges in their teaching practices.

Regarding the benefits of ChatGPT in terms of text adaptation, all of the teachers agreed that this tool has a "powerful ability to generate human-like texts and adapt contents to various reading levels and styles." This versatility allows them to adapt existing materials or "create new ones tailored to students' specific needs and reading levels, reducing the times and effort required to adapt materials manually". The materials adapted by ChatGPT are engaging and relatable for students, thus enhancing students' experience.

Understanding teacher's concerns is equally important in this study. When asked about potential challenges related to ChatGPT, most of the teachers said that while there are several advantages of using AI for text adaptation, there are also valid concerns and challenges associated with this technology. One of the primary concerns is the accuracy of AI-generated adaptations. ChatGPT may sometimes "produce content that contains factual errors or inaccuracies, which can mislead readers or learners."

Another concern is related to ethical issues. AI models like ChatGPT can inherently perpetuate biases present in the data they were trained on. This can lead to biased or discriminatory content. Besides, the use of AI for text adaptation often involves "processing large amounts of data, which can raise concerns about data privacy, especially in educational settings".

5 out of 10 teachers raised fear about a loss of human touch resulting from too heavily relying on AI-driven adaptations, which leads to the fact that AI may replace human roles, although they all agreed that "AI-generated content may lack the creativity and innovation that humans bring to content creation." 3 interviewed teachers mentioned the problems of plagiarism because ChatGPT can produce texts resembling the original work. They stated that "because ChatGPT has the capability to produce texts that closely resemble original works, it is important to be vigilant".

In short, interviews with teachers regarding the use of ChatGPT for text adaptation show that they unanimously recognized its powerful ability to generate human-like texts, adapting content to varied reading levels. They praised its versatility for efficiently adapting or creating materials tailored to students' needs, reducing manual effort. Adapted materials were deemed engaging, enhancing students' experiences. However, concerns surfaced – teachers worried about inaccuracies in AI-generated content, ethical issues related to biases, and data privacy concerns. Fear of a loss of human touch and plagiarism risks were also acknowledged. Despite benefits, a consensus emerged: ChatGPT should complement, not replace, human oversight for optimal use in education.

## Conclusion

The analysis of text adaptations performed by ChatGPT reveals interesting insights into its capabilities and limitations. The data presented in the study showcases ChatGPT's potential in the field of text adaptation. It is undeniable that ChatGPT is a valuable tool for teachers, publishers, and content creators looking to tailor materials to specific reading levels. ChatGPT's ability to adjust text complexity while retaining overall accessibility is promising. However, the analysis reveals some inconsistencies in ChatGPT's adaptations. While ChatGPT provides valuable adaptations, further fine-tuning may be needed to precisely match intended grade levels. This is particularly important for educational materials where accuracy is crucial.

The use of ChatGPT for text adaptation in teaching practice holds immense promise. However, understanding teachers' attitudes and perceptions regarding the use of this tool is vital for successful implementation. By exploring the perceived benefits, challenges, and opportunities, teachers can harness the potential of ChatGPT to create a more inclusive and personalized learning environment. With careful consideration and collaboration, AI-powerful text adaptation can be a valuable asset in the ever-evolving landscape of education. Educators may require training and professional development opportunities to use AI tools in their teaching practice effectively. Besides, addressing ethical concerns related to ChatGPT in education, such as data privacy and bias, should be a priority. Developing clear guidelines and ethical standards can build trust in ChatGPT's adaptations. In addition, promoting collaboration between ChatGPT and human educators can lead to more effective teaching practices.

These studies have indicated that simplified texts lead to better text comprehension in comparison with authentic texts. However, current teacher training programs lack courses designed to provide teachers with effective linguistic accessibility strategies. Additionally, there is limited support for the text adaptation process, and research on reading comprehension instruction for English academic texts remains insufficient (Crossley et al., 2012; Atai & Fatahi-Majd, 2014; Jin & Lu, 2018; Irina et al., 2022). As a result, without adequate support, teachers primarily rely on intuition, drawing from their teaching experience, writing proficiency, and personal beliefs about enhancing text comprehension for their target learners (Crossley et al., 2012; Young, 1999) or resort to a structural simplification approach, utilizing word lists and conventional readability formulas to evaluate the complexity of simplified texts afterward (Jin & Lu, 2018). These studies have indicated that simplified texts lead to better text comprehension in comparison with authentic texts. However, current teacher training programs lack courses designed to provide teachers with effective linguistic accessibility strategies. Additionally, there is limited support for the text adaptation process, and research on reading comprehension instruction for English academic texts remains insufficient (Crossley et al., 2012; Atai & Fatahi-Majd, 2014; Jin & Lu, 2018; Irina et al., 2022). As a result, without adequate support, teachers primarily rely on intuition, drawing from their teaching experience, writing proficiency, and personal beliefs about enhancing text comprehension for their target learners (Crossley et al., 2012; Young, 1999) or resort to a structural simplification approach, utilizing word lists and conventional readability formulas to evaluate the complexity of simplified texts afterward (Jin & Lu, 2018).

## References

- Atai, M. R., & Fatahi-Majd, M. (2014). Exploring the practices and cognitions of Iranian ELT instructors and subject teachers in teaching EAP reading comprehension. *English for Specific Purposes*, 33, 27-38.
- Crossley, S. A., Allen, D. B., & McNamara, D. S. (2012). Text readability and intuitive simplification: A comparison of readability formulas. *Reading in a foreign language*, 23(1), 84-101.
- Flesch, R. (1948). A new readability yardstick. *Journal of Applied Psychology*, 32(3), 221.
- Hong, W.S.H, (2023). The impact of ChatGPT on foreign language teaching and learning: opportunities in education and research. *Journal of Education and Technology and Innovation*, 5(1),37-45.
- Irina, R., Lluisa, A., Coughlan & Ursula, S. (2022). Approaches to simplifying academic texts in English: English teachers' views and practices. *English for Specific Purposes, Volume 68*, 31-46, ISSN 0889-4906. <https://doi.org/10.1016/j.esp.2022.06.001>
- Jin, T., & Lu, X. (2018). A data-driven approach to text adaptation in teaching material preparation: Design, implementation, and teacher professional development. *Tesol Quarterly*, 52(2), 457-467.
- Lauren, T. (2021). Adapted text benefits for teachers and students: A retroactive case study. *Journal of Learning and Teaching in Digital Age*, 2021, 6(1), 15-26. ISSN: 2458-8350. <https://dergipark.org.tr/en/pub/joltida>
- Nation, I.S.P. (2001). *Learning vocabulary in another language*. Cambridge University Press
- Nguyen, Q. H. (2023). AI and Plagiarism: Opinion from Teachers, Administrators and Policymakers. *Proceedings of the AsiaCALL International Conference*, 4, 75–85. <https://doi.org/10.54855/paic.2346>.
- Nguyen, P. T. T (2023). The Application of ChatGPT in Language Test Design –The What and How. *Proceedings of the AsiaCALL International Conference*, 4,104-115. ISSN: 2833-6836; ISBN: 979-8-9870112-4-9. <https://doi.org/10.54855/paic.2348>
- Rets, I., & Rogaten, J. (2021). To simplify or not? Facilitating English L2 users' comprehension and processing of open educational resources in English using text simplification. *Journal of Computer Assisted Learning*, 37(3), 705-717.
- Rets, I., Stickler, U., Coughlan, T., & Astruc, L. (2022). Simplification of open educational resources in English. *Open World Learning*, 89.
- Van Geel, M. *et al.* (2023). Adapting Teaching to Students' Needs: What Does It Require from Teachers?. In: Maulana, R., Helms-Lorenz, M., Klassen, R.M. (eds) *Effective Teaching Around the World* . Springer, Cham. [https://doi.org/10.1007/978-3-031-31678-4\\_33](https://doi.org/10.1007/978-3-031-31678-4_33)
- Young, D. N. (1999). Linguistic simplification of SL reading material: Effective instructional practice?. *The Modern Language Journal*, 83(3), 350-366.
- Yen, N.T.Q., Hien, T.T.T., Thao, N.T.P., Chi, N.T., Hoa, N.Q., Christopher, S., Lan, D.H., & Phuong, D.T. (2023). *Tài liệu ôn thi VSTEP.3-5*. VNU Press. [https://en.wikipedia.org/wiki/Flesch%E2%80%93Kincaid\\_readability\\_tests#Flesch\\_rea](https://en.wikipedia.org/wiki/Flesch%E2%80%93Kincaid_readability_tests#Flesch_rea)

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## AI Tools in Teaching and Learning English Academic Writing Skills

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### ABSTRACT

Recently, the application of innovative technological solutions has revolutionized various aspects of our lives, and education is no exception. This study investigated the use of AI-powered tools and their effects on teaching and learning English academic writing skills. The research was conducted with the participation of 5 teachers and 60 students from five academic writing classes in two language centers in Hanoi. Data from the research were mainly collected through tests and questionnaires. Interviews were used as a supporting tool. The research findings indicate that teachers and students have positive attitudes toward artificial intelligence (AI), and AI tools are beneficial to the participants at discourse, sentence, and word/phase levels. The application of AI-powered writing tools has a considerable contribution to the students in terms of cohesion and coherence, lexical resources, grammatical range, and accuracy. The study can be considered an informative source of reference for teachers and students who are teaching and learning academic writing, especially prospective candidates for standardized English tests.

#### Keywords:

Technology; AI tools, academic writing skills

### Introduction

English has been receiving more focus in Vietnam than any other foreign language. It plays a significant part in the curriculums of public and private schools and in students' extra classes. In learning English as a second or foreign language, writing is considered a skill or competence that is hard to accomplish (Yagiz et al., 2009). Hence, writing is more than solely a tool for people to communicate; it is a complex process in which teaching effectiveness can only be achieved if teachers thoroughly understand this complexity (Cheung, 2016).

Many researchers and teachers in the field of language teaching share a common view that writing, in its nature, is the most difficult language skill to teach and learn compared to other language skills (Hyland, 2003). To most language learners, mastering a language skill is a painstaking journey, but the process is even bitter when it comes to writing (Byrne, 1993). Therefore, the language teachers' job is definitely more difficult and challenging and requires

teachers' ability to control lessons, gradually update knowledge, and apply proper writing pedagogical approaches and/or techniques and real-life experiences (Kroll, 1990; Swales & Feak, 1994).

Thanks to the evolution of technology in recent times, teachers all over the world have applied advanced technological solutions to their teaching (Nguyen, 2024). The integration of artificial intelligence (AI) into educational settings has resulted in significant improvements in teaching and learning processes (Chen et al., 2020; Hwang et al., 2020; Phan, 2023), and writing is a particular area that has benefited impressively from the use of AI-powered tools (Chen & Wei, 2021; Moore et al., 2016; Thet & Htay, 2021). In contrast, some other studies have shown that AI writing tools did not help students improve their writing skills but brought big considerations related to students' plagiarism and laziness (Krajcik & Kim, 2020; Kornfeld & Roy, 2021).

In Vietnam, education has benefited greatly from the application of technology, especially during the Covid pandemic. Vietnamese educators and learners are willing to employ updated technology in their language teaching and learning. However, teachers and students are still hesitant to use AI as this technology is too new, "too intelligent," and seems uncontrollable. It is necessary to conduct studies on the application of AI in education, especially in language teaching and learning, in order to specify the influence of AI on education, define if there are both positive or negative effects of AI, and discover whether the positive aspects outweigh the negative ones, etc. This study, therefore, looks at the cases of teaching academic writing skills with the help of AI-powered tools in Vietnam. By introducing AI tools to teaching and learning academic writing, the researcher wishes to investigate if AI could help improve the student's academic writing skills to make proper judgments of AI's future in the field of language teaching and learning.

## Literature review

### Writing

Writing, one of the four language skills, has long been used by humans to express opinions, thoughts, attitudes, and feelings in written form. In the field of language teaching and learning, there are a number of definitions of writing or writing skills mentioned by different linguists all over the world.

According to Elbow (1981), writing is the representation of the language in textual mode through the utilization of a set of signs or symbols. In other words, writing is the process of using "*graphic symbols*," which involves "*encoding messages of some kind*" to translate an individual's thoughts into the language (Byrne, 1993, p. 1).

In contrast to receptive skills, Scholes & Nancy (1985) view writing and speaking skills as productive skills that are both ways of thinking and a means of communication. In addition, Nunan (2003) asserts that writing is a mental process of inventing ideas, thinking about how to articulate them, and organizing them into statements, sentences, or paragraphs that are clear for the readers to comprehend.

In this paper, the author supports the viewpoint that writing is a productive skill used to

communicate people's thoughts, opinions, feelings, etc., in written forms.

### *Academic writing*

Academic writing refers to the type of writing used for academic purposes in colleges or universities. It is considered the principal means of communication between scholars, lecturers, and students in academic subjects and disciplines in higher education (Greene & Lidinsky, 2015; Johnson, 2016).

As standard written English, academic writing possesses some distinctive features that make it different from other types of writing. Academic writing is objective, concise, logical, clear, focused, and formal (Giltrow et al., 2014; Osmond, 2016; Starkey, 2015). In addition, academic writing is produced in particular contexts and serves certain tasks for identifiable purposes with specific audiences (Grabe & Kaplan, 1996; Starkey, 2015). These distinguishing features make academic writing typical in terms of formality, organization, word choices, sentence construction, and discourse patterns (Gottlieb & Ernst-Slavit, 2013). Ferris (2018) seems to agree with Gottlieb and Ernst-Slavit (2013) when he affirms that effective academic writing in professional settings involves an intricate range of skills and knowledge bases. The writer needs to have sufficient knowledge of the content, the context of writing, the purpose of the writing, and the audience, as well as an advanced grasp of both linguistic and extra-linguistic features, including Vocabulary, spelling, grammar, cohesive devices, and punctuation, capitalization, and formatting.

In summary, the academic writing style is distinctive in terms of formality, language norms, precision, and hedging. People were not born with academic writing skills, so these skills need to be trained in order to be well-master, especially in professional contexts.

### *Elements of academic writing*

Although presented separately, elements of academic writing actually overlap and affect one another. In academic discourse, specialized and academic words are used in grammatical structures, which, in turn, form the organization of ideas and arguments supported by evidence and explanations or examples. According to Gottlieb & Ernst-Slavit (2013: p.3), elements of academic language are organized in three dimensions, including discourse, sentence, and word/phrase levels as shown in the Table 1.

In the setting of this research, with 90% of the participants studying academic writing for the TOEFL-iBT and IELTS tests, the student's current situations, the TOEFL writing rubrics, and the IELTS new writing band descriptors, the researcher decided to focus on the following components involving the three above dimensions of academic language including Coherence and cohesion, Grammar and Accuracy, and Vocabulary.

Table 1. Dimensions of academic language

<b>Academic Language</b>	<b>General Areas of Coverage</b>
<b>Discourse level</b>	<ul style="list-style-type: none"> <li>- Text types</li> <li>- Genres</li> <li>- Voice/ perspective</li> <li>- Cohesion across sentences (e.g., through connectors)</li> <li>- Coherence of ideas</li> <li>- Organization of text or speech</li> <li>- Transitions of thoughts</li> </ul>
<b>Sentence level</b>	<ul style="list-style-type: none"> <li>- Types of sentences: simple, compound, complex, compound-complex</li> <li>- Types of clauses: independent, dependent</li> <li>- Syntax (forms and grammatical structures)</li> </ul>
<b>Word/Phrase level</b>	<ul style="list-style-type: none"> <li>- Vocabulary: general, specialized, technical academic words and collocations</li> <li>- Multiple meanings of words</li> <li>- Nominalizations</li> <li>- Idiomatic expressions</li> </ul>

*Adapted from Gottlieb & Ernst-Slavit (2013)*

### *Coherence and cohesion*

Coherence and cohesion are terms used in discourse analysis to elucidate the consistency of written discourses. In academic writing, the former term refers to the meaningfulness of sentences in a logical flow of ideas, while the latter denotes the utility of sentences in the connection of ideas at both sentence and paragraph levels (Louwerse & Graesser, 2005).

Obviously, coherence reflects the nature of academic writing that the texts produced are expected to be logical, understandable, and eligible to the readers. It, therefore, indicates continuity in meaning and context. In another aspect, cohesion focuses more on grammar with the use of discourse connectors, pronouns, conjunctions, lexical substitutions, referencing, etc., to maintain continuity in words or sentence structures (Singh & Lukkarila, 2017).

In the writing papers for IELTS or TOEFL-iBT tests, organization, or the logical arrangement of ideas, arguments, and information in an appropriate format, is a crucial criterion to indicate how academic a writing piece is as an organization means presenting ideas coherently and cohesively.

### *Grammar and Accuracy*

Under the light of Canale and Swain's (1980) model of communicative competence, which considered grammatical competence a component of communicative competence, this paper argues that grammar and accuracy are parts of academic writing, without which no text can be considered a good piece of writing. Celce-Murcia (1991), in her study with non-native undergraduate students

in different universities in America, noticed that the high frequency of grammatical errors contributed much to the unacceptable level of the essays submitted to the faculties.

Baleghizadeh and Gordani (2012) acknowledge the role of grammar as indispensable in academic writing and stress that even native speakers sometimes write inaccurately in terms of grammar. Hence, learners of English should aim to gradually enhance their writing accuracy so as to make their work as decipherable and proficient as possible. This view is completely supported by Jonson (2016) when he argued that teachers should prepare their students to be familiar with grammatical rules and train them to use a wide and precise range of grammatical structures since grammar supports and maintains accuracy in writing.

This study takes grammar and accuracy as one perspective of academic writing with the belief that a good basic knowledge of English grammar would help the students avoid flaws, difficulties, and confusion while maintaining the accuracy and academic features of their writing.

### *Vocabulary*

In Gottlieb & Ernst-Slavit's (2013) dimensions of academic language, Vocabulary is in the lowest line at word and phrase level. It, however, is never of the lowest importance. This is because academic writing has a higher level of Vocabulary in comparison to other types of writing. In academia, it is essential to equip students' competence to understand and use academic words correctly.

Osmond (2016) argues that knowledge of academic Vocabulary ensures that writers produce texts that are understandable, eligible, and centered around the topics they wish to deliver to educated readers of the field. This argument is supported by Bailey when he suggests that in order to “*read and write academic texts effectively, students need to be familiar with formal vocabulary widely used in this area*” (2006, p.179). Therefore, the writers must be careful in choosing and using appropriate academic vocabulary items specific to a particular genre as they embody meaning in academic writing. Certainly, it should be noted that using “*big words*” is unnecessary, and informal words and uncommon abbreviations are inadvisable in academic writing (Chauhan, 2022). Too many high-level words can increase reading time and reduce the chances of truly comprehending the writer's opinions.

### *Technology in teaching and learning writing skills*

With the rapid development of technology, education has changed much, not only in the methods teachers use to deliver their lessons but also in the ways students carry out their studies. Screens are substituting printed books and papers, while keyboards, mice, or touchpads are replacing pens and pencils with the help of technology (Batanero et al., 2021). In our modern times, technology and digital learning solutions bring more opportunities for learners to experience a more engaging and challenging teaching and learning process (Mullammaa, 2010).

AI tools or software applications that utilize artificial intelligence technology can be considered the most developed aspect of technology. Thanks to this advancement, language teaching and learning have been dramatically transformed. We now have virtual language tutors to guide students and chatbots, enabling learners to practice speaking, listening, and reading skills in

natural and interactive modes. In writing, AI tools provide learners with automated assistance, suggestions, and corrections through advanced algorithms and natural language processing (Brown et al., 2020; Geitgey, 2018; Heaven, 2020).

### *Research Question*

The present study was designed to answer the following research question: *To what extent do AI tools help improve students' academic writing skills?*

## **Methods**

### *Pedagogical Setting & Participants*

This study was undertaken in two language centers in Hanoi. Two centers (coded as centers A and B) were selected randomly among 12 language centers that offered academic writing courses for students preparing for such proficiency tests as IELTS or TOEFL-iBT. Center A had two classes, and Center B had three classes in the first week of an IELTS preparation course. Therefore, all five classes were selected to participate in the research.

Five teachers and 60 students participated in the study. Participation in the study was voluntary and anonymous. They were guaranteed that the information collected was totally confidential, being used for just the research purpose, and would not be given to any third party.

The teachers (aged 22 to 28) all graduated from prestigious universities (one was from Hanoi University, another was from the Diplomatic Academy of Vietnam, and the others were from the University of Languages and International Studies, Vietnam National University). Those teachers were all qualified with IELTS Band 7.5 to 8.0 and possessed certificates of English language education. They had been teaching academic writing skills for at least 180 hours, especially writing classes for IELTS candidates. The teachers had no experience in using AI to support their teaching, but they eagerly agreed to apply AI as part of their student's learning process. In the pre-treatment interview, the teachers all agreed that teaching writing required time and effort. They sometimes could only show mistakes to the students instead of carefully providing them with language suggestions and formative feedback. They hoped that AI could be a virtual helpful assistant in their teaching.

The students from the five classes had the same English proficiency level (Band 4.0-4.5 IELTS) and the same studying purpose (aiming at Band 5.0-5.5 IELTS). They planned to take a 60-hour IELTS course addressing all four language skills, among which writing skills accounted for 20 hours. The writing lessons were delivered separately from the other skills and took two hours every week for ten weeks. Besides, the students had to spend at least two hours per day studying independently. The students' demographic information is shown in the table below.

Table 2. Student's age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 15	12	20.0	20.0	20.0
	16-18	15	25.0	25.0	45.0
	19-22	27	45.0	45.0	90.0
	23-30	6	10.0	10.0	100.0
	Total	60	100.0	100.0	

Table 3. Students' English learning experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4-7 years	24	40.0	40.0	40.0
	8-10 years	36	60.0	60.0	100.0
	Total	60	100.0	100.0	

### *Design of the Study*

Action research is usually applied by people who wish to improve their performance or any group or organization that has the same aim. Because of its nature, action research has been widely used by language teachers all over the world to improve their teaching.

This study is an action research project as it was started because of the problems found in the classroom and aimed to change the situations (Kemmis & Mc Taggart, 1988). Traditionally, Lewin's model of action research (cited in Burns, 2000) involves a cyclic sequence including two major phases: diagnosis and therapeutic, with seven sub-stages in two cycles. Later, Nunan (2001) argued that an action research study includes initiation, preliminary investigation, hypotheses, intervention, evaluation, dissemination, and follow-up steps. To make it simple, Gay and Airasian (2003) proposed the four basic steps in an action research study as (i) identify the topic or issue to study; (ii) collect data related to the chosen topic or issue; (iii) analyze and interpret the collected data; and (iv) carry out action planning, which represents the application of the action research results. Creswell (2005) suggested 8 steps for carrying out an action research project, including determining if action research is the best design to use, identifying a problem to study, locating resources to help address the problem, identifying information to be needed, implementing the data collection, analyzing the data, develop a plan for action and implement the plan and reflect. This research adapted Creswell's (2005) model of action research and applied it in 12 weeks, as described in Table 4 below.

### *Data collection instruments and procedure*

The research has been mainly conducted in the light of qualitative and quantitative methods. Data from the pre-test and post-test, questionnaires, and interviews have been collected and analyzed to find out answers to the research question.

In this study, a pre-test of writing an academic essay (a mock test of IELTS writing task 2) was delivered to students to find out their proficiency before the treatment. After a 10-week intervention with AI tools, a post-test, which is similar to the pre-test, was conducted to examine if there was an improvement in the students' writing competence. The test papers were marked

by two other teachers who were not in charge of teaching the tested class. IELTS writing task 2 Band descriptors version May 2023 were employed for the teachers to rate the essays. Since the research sought information to determine if there is an improvement in the student's academic writing skills, the overall writing score would not be rounded but kept in two decimal places so as to measure the students' improvement and changes exactly.

In regard to the survey, two questionnaires were designed to collect data from students. The pre-treatment questionnaire sought to find out the students' weaknesses in terms of academic writing. The post-treatment questionnaire investigated the benefits of using AI tools in teaching and learning writing skills to see if the weaknesses found in the pre-treatment questionnaire had been surmounted. The questionnaires used a Likert scale ranging from one to five, moving from strongly disagree to strongly agree respectively, and ended with open-ended questions at which the participants could add more information about their weaknesses and benefits of utilizing AI, give details or more explanations of what they have stated in the previous statements.

Interviews were conducted to get information from the teachers in charge of those classes so that details of some findings were clearly presented and explained. The results found are believed to support data collected from the tests and the questionnaires.

Although the research lasted 12 weeks, the intervention phase was 10 weeks because the first and the last weeks were left for preparing, collecting, and analyzing data.

Table 4. The procedure of the study

<b>Time</b>	<b>Tasks</b>
<b>Week 1</b>	<ul style="list-style-type: none"> <li>- Identify the problems;</li> <li>- Working with the language centers, the teacher and the students;</li> <li>- Design the tests, questionnaires, and interview questions for the students;</li> <li>- Deliver the pre-tests and the pre-treatment questionnaires;</li> <li>- Analyze the data collected from the pre-tests and the pre-treatment questionnaires;</li> </ul>
<b>Week 2 - 11</b>	<ul style="list-style-type: none"> <li>- Review AI tools for writing and choose the most suitable ones;</li> <li>- Introduce and train AI tools to the participants;</li> <li>- Apply AI tools in academic writing;</li> <li>- Observe the class and support the participants in applying AI in their teaching and learning.</li> </ul>
<b>Week 12</b>	<ul style="list-style-type: none"> <li>- Deliver the post-tests and the post-treatment questionnaires to the students;</li> <li>- Interview teachers;</li> <li>- Analyze the data collected from the post-tests, the post-treatment questionnaires, and the interviews;</li> <li>- Draw conclusions and reflect.</li> </ul>

It should be noted that the AI tools used in this study were Grammarly and Quillbot. During the ten weeks of conducting this action research project, free versions of Grammarly and Quillbot were introduced to the teachers and the students as main intervention instruments. Of the two tools, Grammarly uses machine learning algorithms to detect grammar, spelling, and punctuation errors and then provides suggestions for improving sentence structure and word



choice. The latter, Quillbot, provides grammar, spell-checking, a contextual thesaurus, and a readability analyzer. It also provides feedback on writing styles, such as sentence variation and the use of clichés. Additionally, teachers and students were encouraged to find and use other AI-powered tools that they find helpful in teaching and learning academic writing skills.

After each writing section, the students were asked to write an essay at home. They then uploaded their essays on either Grammarly or Quillbot websites, checked the suggestions, and decided how they should improve their work. The teachers would review the essays and ask students to notice systematic errors for the whole class. Teachers were also encouraged to use Grammarly or Quillbot to check their students' papers and make proper suggestions.

## Findings and Discussion

### *The students' weaknesses in academic writing skills before the application of AI tools*

As mentioned previously, the pre-treatment questionnaire has been delivered to find out the students' weaknesses in terms of academic writing. Based on the data collected, the research could find out the students' weaknesses and choose suitable AI tools to enhance the students' writing skills.

Table 5. Students' weaknesses at the discourse level

		Cohesion across sentences	Coherence of ideas	Organization of text
N	Valid	60	60	60
	Missing	0	0	0
Mean		4.05	4.05	4.25
Median		4.00	4.00	4.00
Mode		4	4	4
Std. Deviation		.746	.811	.541
Range		2	3	2
Minimum		3	2	3
Maximum		5	5	5

In the three above aspects, namely cohesion across sentences, coherence of ideas, and organization of text, the Means are from 4.05 to 4.25. It suggests that a majority of the students agree that these three traits are problematic to them and need treatment.

From the interview with the teachers, the researcher was informed that students could only use simple, cohesive devices, but some of them still made mistakes like using unparalleled linking words such as "firstly," then, "second," "third," etc. Furthermore, the organization and flow of ideas were not good as the students still struggled to generate ideas, and even when they could find ideas for writing, they still arranged them illogically.

Table 6. Students' weaknesses at the sentence level

		Types of sentences	Types of clauses	Syntax
N	Valid	60	60	60
	Missing	0	0	0
Mean		4.40	4.40	4.50
Median		4.00	4.00	4.50
Mode		4	4	4 <sup>a</sup>
Std. Deviation		.494	.494	.504
Range		1	1	1
Minimum		4	4	4
Maximum		5	5	5

a. Multiple modes exist. The smallest value is shown

Table 6 reveals that at the sentence level, the Means of 4.40 to 4.50 indicate a high level of agreement among participants that they are not good at using a variety of types of sentences, clauses, forms, and grammatical structures.

When asked about their students' problems, the teachers disclosed that their students usually used short and simple sentences with just one Subject–verb structure. Compound and complex sentences with subordinate, coordinate, and relative clauses were rarely found in the students' essays.

Table 7. Students' weaknesses at word/phrase level

		Vocab size	Nominalization	Spelling
N	Valid	60	60	60
	Missing	0	0	0
Mean		4.25	4.45	4.00
Median		4.00	4.00	4.00
Mode		4	4	4
Std. Deviation		.437	.502	.781
Range		1	1	3
Minimum		4	4	2
Maximum		5	5	5

In Table 7, the Means from 4.00 to 4.45 indicate that a great number of the students agreed that they needed more knowledge of Vocabulary. This result was supported by the teachers' complaints that most students were not able to use Vocabulary in academic wordlists. They were just familiar with words of everyday life and common topics. Teachers also added that the students were used to writing with verbs rather than nouns or noun phrases. Additionally, they explained that students might make spelling mistakes with long words, especially four- or five-syllable ones.

*The students' improvement in academic writing skills after the application of AI tools*

After the treatment with AI tools, the post-treatment questionnaire was distributed to discover how students judged their improvement in academic writing skills. Table 8 below shows the students' opinions on their improvement in academic writing skills at discourse, sentence, and word/phrase levels.

Table 8. Student's improvement at discourse, sentence, and word/phrase levels

		Discourse level			Sentence level			Word/phrase level		
		Cohesion across sentences	Coherence of ideas	Organization of text	Types of sentences	Types of clauses	Syntax	Vocabulary size	Nominalization	Spelling
N	Valid	60	60	60	60	60	60	60	60	60
	Missing	0	0	0	0	0	0	0	0	0
Mean		3.73	4.03	4.22	3.47	3.27	3.87	4.15	4.05	3.70
Median		4.00	4.00	4.00	4.00	3.00	4.00	4.00	4.00	4.00
Mode		4	4	4	4	3	4	4	4	4
SD		.482	.802	.555	.853	.821	.724	.360	.220	.462
Range		2	3	2	3	3	3	1	1	1
Minimum		3	2	3	2	2	2	4	4	3
Maximum		5	5	5	5	5	5	5	5	4

As seen from Table 8, the Means from 3.7 to 4.22 signify that many learners agreed that there was improvement in their academic writing skills at discourse, sentence, and word/phrase levels. Among the three levels, students made the most significant enhancement at the discourse level, with the top position belonging to an organization of text (Mean = 4.22) in front of coherence of ideas (Mean = 4.03) and cohesion across sentences (Mean = 3.73). The word/phrase level progress ran after the enrichment of vocabulary size (Mean = 4.15). Although advance at the sentence level has the lowest Means among the three levels (with all Means from 3.27 to 3.87, below 4), this still denotes that the improvement is statically meaningful.

The paired-sample t-test was used to determine whether the students' academic writing skills improved after the treatment with AI tools. The results show that there was a difference between the results of the pre-test and the post-test, and this difference is statically important.

Table 9. Student's improvement in academic writing skills

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Task response (Pre-test)	3.65	60	.606	.078
	Task response (Post-test)	4.62	60	.585	.076
Pair 2	Coherence & Cohesion (Pre-test)	3.47	60	.503	.065
	Coherence & Cohesion (Post-test)	5.07	60	.634	.082
Pair 3	Lexical resources (Pre-test)	3.33	60	.475	.061
	Lexical resources (Post-test)	4.88	60	.585	.076
Pair 4	Grammatical Range and accuracy (Pre-test)	3.33	60	.510	.066
	Grammatical Range and accuracy (Post-test)	4.63	60	.712	.092
Pair 5	Overall writing score (Pre-test)	3.4458	60	.32250	.04163
	Overall writing score (Post-test)	4.8000	60	.43860	.05662

Table 10. Paired-Samples T Test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Task Response	Post-test – Pre-test	.967	.317	.041	.885	1.049	23.612	59	.000
Coherence & Cohesion	Post-test – Pre-test	1.600	.588	.076	1.448	1.752	21.077	59	.000
Lexical resources	Post-test – Pre-test	1.550	.594	.077	1.396	1.704	20.197	59	.000
Grammatical range and accuracy	Post-test – Pre-test	1.300	.720	.093	1.114	1.486	13.982	59	.000
Overall Writing Score	Post-test – Pre-test	1.35417	.41500	.05358	1.24696	1.46137	25.275	59	.000

\*\*\* p < 0.001

In Table 9 and Table 10, the Mean of the overall writing score of the post-test was 1.35 higher than that of the pre-test with  $t = 25.275$ ;  $Df = 59$  and  $Sig. = .000 < 0.001$ . This result indicates that there is a good improvement in student's academic writing. The two tables also hint at the development of the students aligning to the four marking criteria in which students' writing is most increased in terms of “*coherence & cohesion*” with the Mean (post-test – pre-test) = 1.6. The next areas of improvement belong to *lexical resources* and *grammatical range and Accuracy* with Means = 1.55 and relatively 1.3. Students witnessed a lesser increase in Task response with Mean = 0.967.

The participating teachers agreed that it took longer time and effort to improve students' task response, grammatical range, and accuracy among the four marking criteria. Teacher A explained that:

*“Students still leave some ideas incompletely addressed because they spend too much time trying to use a wide and complex range of structures. They, consequently, do not have enough time to think carefully and balance their writing.”*

Teacher D added that:

*“I still see the result as good news since at least there is an improvement in just 10 weeks of intervention. My students still make mistakes in using forms and structures. Most of them did not (or “could not,” to be more exact) apply a sufficient range of sentences and clauses. They, however, make a significant attempt to use sound and complex structures even though they tend to be faulty. Definitely, I need more time to enlarge their grammatical knowledge.*

Interestingly, both teachers and students, in their in-depth interviews, agreed that the improvement in task response was not because of AI tools. The teachers deserved an acknowledgment of students’ progress in this criterion.

#### *The link between the frequency use of AI and the students’ improvement*

A one-way ANOVA test was used to determine if there was a connection between the frequency of practice with AI tools and the student's improvement in academic writing competence. In other words, a one-way ANOVA test was done to ensure that the above improvement made by the students was because of the AI tool utilization but not any other variables or factors.

Table 11. One-way ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.518	3	1.506	14.941	.000
Within Groups	5.644	56	.101		
Total	10.161	59			

Table 11 indicates a statically meaningful difference in writing test results between students with a dissimilar frequency of AI application with  $F(3, 56) = 14.941, p = 0.000 < 0.001$ . Therefore, it can be concluded that AI tools mainly contributed to the students' improvement in academic writing skills. That is to say, the more students apply AI tools, the higher the writing score they achieve.

## Discussion

The findings of this study clearly show that AI-powered tools positively impact students' academic writing. This supports Batanero et al.'s statement that technology, in general, and AI, has transformed language teaching and learning (Batanero et al., 2021).

Within just ten weeks, it is understandable that with the help of AI tools, the students progressed much in coherence, cohesion, and lexical resources, as building up knowledge of Vocabulary and connectors usually go first in the process of language acquisition (Green, 2013) and grammatical knowledge is bootstrapped from the acquirement of a small vocabulary (Pentimonti et al., 2015; Tomblin & Zhang, 2006). The study shares Chen and Wei's cases (2021) in finding out that the application of an AI-powered writing assistant

improved students' overall writing quality and helped them to organize their thoughts. However, in Chen and Wei's study, the AI writing assistant used also helped the students generate ideas. It does not contradict this study, as the explanation for this difference lies in using AI tools. In this research, the two AI tools, Grammarly and Quillbot, focused more on checking and giving suggestions in terms of language, not generating ideas like other tools like ChatGPT or Bing AI. In fact, being able to create a good piece of academic writing in terms of content reflects the writer's competence in generating ideas. Regarding writing in general and academic writing in particular, there are some ways to help learners find ideas, such as brainstorming (White & Arndt, 1991), using mind maps (Bailey, 2015), or selecting reliable resources to read carefully and jotting down all the ideas that come into our minds and can support the writer's arguments. (Johnson, 2016; Singh & Lukkarila, 2017; White & Arndt, 199). Furthermore, it is essential to note that in order to help the students write good academic texts, teachers need to equip their learners with appropriate cognitive schema, knowledge of topics, and Vocabulary related to the topics (Hyland, 2003).

Both the teachers and the students are right to hold the thought that the teachers help their students improve in the task response criterion. The teachers can train the students to address all parts of the essays completely instead of developing unbalanced paragraphs or finding insufficient time to write conclusions (Kilic, 2019). Once students master lexical resources, grammatical range, and accuracy, they will improve their task response.

Although the positive impact of AI tools in teaching and learning academic writing skills needs to be acknowledged, careful consideration of the other side of AI should be taken. Many students may see AI's advantages while ignoring its dark side. Teachers and researchers have raised a warning that AI can have some negative effects in the long term. For example, people will become technology-dependent by relying too much on AI. In addition, as AI can think and generate ideas as humans so, we, the real humans, will turn into a lazier version that may lose the ability to think creatively, logically, and thoughtfully (Kornfeld & Roy, 2021).

## Conclusion

The study was conducted to investigate the effects of AI-powered tools on teaching and learning English academic writing skills. The findings show that there is a promising result in terms of improvement in coherence, cohesion, and lexical resources. Students also progress with regard to grammatical range and accuracy, even though the changes are a bit lower than the two aforementioned criteria. This paper, however, looks at the positive side of AI. It is expected that a more elaborate study on the other side of AI should be conducted in the near future.

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## References

- Bailey, S. (2011). *The essentials of academic writing for international students*. (3rd ed.). Routledge.
- Baleghizadeh, S. & Gordani, Y. (2012). Academic Writing and Grammatical Accuracy: The Role of Corrective Feedback. *Gist: Education and Learning Research Journal*, 6, 159–176. <https://doi.org/10.26817/16925777.19>
- Batanero, J. M. F, Rueda, M. M., Cerero, R. F. & Gravan, P. R. (2021). Impact of ICT on writing and reading skills: A systematic review (2010 – 2020). *Language and Technology*. 14 (2), 1-12. <https://doi.org/10.35699/1983-3652.2021.34055>.
- Brown, T.B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., Neelakantan, A., Shyam, P., Sastry, G., Askell, A., Agarwal, S., Herbert-Voss, A., Krueger, G., Henighan, T., Child, R., Ramesh, A., Ziegler, D. M., Wu, J., Winter, C. & Amodei, D. (2005). *Language models are few-shot learners*. arXiv. Computer Science, Computation and Language.
- Byrne, D. (1993). *Teaching writing skills*. Longman
- Celce-Murcia, M. (1991). Grammar pedagogy in second and foreign language teaching. *TESOL quarterly*. 25 (3). 459-480.
- Chauhan, P. (2022). Fundamentals of Academic Writing: A Literature Review. *Journal of NELTA*, 27(1-2), 161-180.
- Chen, M. X., Lee, B. N., Bansal, G., Cao, Y., Zhang, S., Lu, J., & Wu, Y. (2019). Gmail smart compose: Real-time assisted writing. In *Proceedings of the 25th ACM SIGKDD international conference on knowledge discovery & data mining*. 2287–2295.
- Chen, W., & Wei, H. (2021). Effect of an AI-powered writing assistant on writing quality and idea generation. *Journal of Educational Technology & Society*, 24(3), 84–97.
- Cheung, Y. L. (2016). Teaching Writing. In W. A. Renandya, & H. P. Widodo (Eds.), *English language teaching today: Building a closer link between theory and practice*. Springer International.
- Elbow, P. (1981). *Writing with power techniques for mastering the writing process*. Oxford University Press.
- Feris, D. R. (2018). Writing in a second language. In Newton, J.M., Ferris, D.R., Goh, C. C. M., Grabe, W., Stoller, F. L. & Vandergriff, L. (Eds.), *Teaching English to second language learners in academic context: Reading, writing, listening, and speaking* (75-122). Routledge.
- Geitgey, A. (2020, September 24). *Natural Language Processing is Fun! How computers understand Human Language*. Medium. Retrieved from <https://medium.com/@ageitgey/natural-language-processing-is-fun-9a0bff37854e>
- Giltrow, J., Gooding, R., Burgoyne, D., & Sawatsky, M. (2014). *Academic writing: An Introduction* (3<sup>rd</sup> ed.). Broadview Press.

- Gottlieb, M. & Ernst-Slavit, G. (2013). Academic language: A centerpiece for academic success in English language arts. In Gottlieb, M. & Ernst-Slavit, G. (Eds.), *Academic language in diverse classrooms*. 1. Corwin. 1-38.
- Grabe, W., & Kaplan, R.B. (1996). *Theory and practice of writing*. Longman.
- Green, L. (2013). *Why Language Learners Should Prioritize Declarative Memory*. Retrieved from [https://blogs.transparent.com/language-news/2013/03/25/language-learning-with-the-declarative-method/?\\_ga=2.166217726.1163263781.1658082551-1868130991.1658082551](https://blogs.transparent.com/language-news/2013/03/25/language-learning-with-the-declarative-method/?_ga=2.166217726.1163263781.1658082551-1868130991.1658082551)
- Greene, S., & Lidinsky, A. (2015). *From inquiry to academic writing: A practical guide*. (3<sup>rd</sup> ed.) St. Martin's.
- Harmer, J. (2004). *How to teach writing*. Pearson Education Limited.
- Heaven, W. D. (2020). Open AI's new language generator GPT-3 is shockingly good and completely mindless. *MIT Technology Review*. <https://www.technologyreview.com/2020/07/20/1005454/openai-machine-learninglanguage-generator-gpt-3-nlp/>
- Hwang, G. J., Xie, H., Wah, B. W., & Gasevic, D. (2020). Vision, challenges, roles and research issues of Artificial Intelligence in Education. *Computers & Education: Artificial Intelligence*. 1, 100 - 110.
- Hyland, K. (2003). *Second language writing*. Cambridge University Press.
- Johnson, A. (2016). *Academic writing: Process and product*. Rowman & Littlefield Publishers
- Kemmis, S & R. Mc Taggart. (ed.) 1988. The Action Research Planner. In Nunan, D. 2001 (ed.). *Research Methods in Language Learning*. Cambridge University Press.
- Kilic, M. (2019). Vocabulary Knowledge as a Predictor of Performance in Writing and Speaking: A Case of Turkish EFL Learners. *PASAA*. 57(January – June 2019). 133-164
- Kornfeld, L., & Roy, D. (2021). Educational implications of AI writing tools for academic writing. *British Journal of Educational Technology*, 52 (1), 248–262. <https://doi.org/10.1111/bjet.12973>.
- Krajcik, Z., & Kim, K. (2020). To what extent do AI writing tools improve writing quality? A case study of master's level students. *Educational Sciences*, 10 (11), 3-21.
- Kroll, B. (ed.). (1990). *Second language writing: Research insights for the classroom*. Cambridge University Press.
- Lewin, K cited in Burns, R.B. 2000. Action Research. In Various Author (eds.), OTED 1083 & OTED 1085 *Qualitative Research Methods Readings*. Pearson Education Australia.
- Louwerse, M. & A. Graesser (2005). Coherence in discourse. In Strazny, P. (ed.). *Encyclopedia of Linguistics*. Fitzroy Dearborn. 216–218
- Moore, J. L., Rosinski, P., Peeples, T., Pigg, S., Rife, M. C., Brunk-Chavez, B., Lackey, D., Kesler Rumsey, S., Tasaka, R., Curran, P., & Grabill, J. T. (2016). Revisualizing



- composition: How first-year writers use composing technologies. *Computers and Composition*. 39. 1-13. <https://doi.org/10.1016/j.compcom.2015.11.001>.
- Mullammaa, K. (2010). ICT in Language Learning: Benefits and Methodological Implications. *International Education Studies*, 3(1), 38-44.
- Nguyen, T. C. (2024). University Teachers' Perceptions of Using ChatGPT in Language Teaching and Assessment. *Proceedings of the AsiaCALL International Conference*, 4, 116-128. ISSN: 2833-6836; ISBN: 979-8-9870112-4-9. DOI: <https://doi.org/10.54855/paic.2349>
- Nunan, D. (2001). *Research Methods in Language Learning*. (2<sup>nd</sup> ed.). Cambridge University Press.
- Nunan, D. (2003). *Practical English Language Teaching*. Mc Graw Hill.
- Osmond, A. (2016). *Academic writing and grammar for students (2<sup>nd</sup> ed.)*. Sage.
- Pentimonti, J., O'Connell, A., Justice, L. & Cain, K. (2015). The dimensionality of language ability in young children. *Child Development*. 86 (6), 1948-1965.
- Phan, T. N. L. (2023). Students' Perceptions of the AI Technology Application in English Writing Classes. *Proceedings of the AsiaCALL International Conference*, 4, 45-62. ISSN:2833-6836, ISBN: 979-8-9870112-4-9. DOI: <https://doi.org/10.54855/paic.2344>
- Punch, K. F. (2006). *Developing Effective Research Proposals (2<sup>nd</sup> ed.)*. SAGE
- Scholes, R. & Nancy, R. C. (1985). *The Practice of Writing*. ST Martin Press
- Singh, A.A. & Lukkarila, L. (2017). *Successful Academic Writing: A Complete Guide for Social and Behavioral Scientists*. The Guilford Press.
- Starkey, D. (2015). *Academic writing now: A brief guide for busy students*. Broadview Press.
- Swales, J. M., & Feak, C. B. (1994). *Academic writing for graduate students: A course for non-native speakers of English*. The University of Michigan Press.
- Thet, H., & Htay, H. (2021). The Effectiveness of AI writing tools on developing EFL university students' academic writing skills. *Journal of NELTA*, 26 (1), 53-67. <https://doi.org/10.3126/nelta.v26i1.37162>.
- Tomblin, J. B. & Zhang, X. (2006). The dimensionality of language ability in school-age children. *Journal of Speech, Language, and Hearing Research*. 49, 1193-1208.
- White, R. & Arndt, V. (1991). *Process writing*. Longman.
- Yagiz, O., Yigiter, K. & Genc, G. (2009). Academic writing in English: Approaches, processes and challenges in higher education. *IBU Repository*, accessed September 18, 2023, Retrived from <https://omeka.ibu.edu.ba/items/show/3381>.

**Biodata**

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## Application of Project-based Learning to Improve the Learning Styles of Tourism Students at Hanoi Open University

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### ABSTRACT

**Keywords:** learning styles, models, Project-based learning

Learning styles are diverse ways that people learn and process information. They can impact how their learners understand, retain, and apply new knowledge. That is why understanding learner's learning styles can help improve their learning process and lead to better performance. In the context of the Faculty of Tourism – Hanoi Open University (FOT-HOU), the researchers had an opportunity to observe students' typical learning styles and recommended an appropriate solution to maximize them for their personal development. A survey based on the questionnaire of Honey and Mumford (2000) analyzed the typical learning styles suitable for tourism students. The results have determined that the effective style for learning tourism English at FOT-HOU is the combined transformation of all four learning styles. Project-based learning is the solution to help the students approach and improve their self-study capacity for learning tourism English in the most effective way.

### Introduction

In the current era, foreign languages are increasingly mentioned as an indispensable factor in creating the premise for international integration, industrialization, and modernization of a country. They are especially essential to tourism staff who need to meet various requirements of customers from all over the world (Bilodid, 2022). Therefore, as a preparation for their future career, tourism students have to make great efforts to improve their proficiency in at least one foreign language, which should be English, an international language (Lertchalermtipakoon, 2021 & Tran, 2021). Since learning styles play a key role in study efficiency, identifying suitable learning styles for English in general and tourism English specifically, as well as an effective way to improve their learning style, is of great concern. When students acquire the English learning styles that suit them, they can shorten their learning time, and enhancing knowledge and skills will become simpler, easier, and more effective (Cuevas, 2015). At the Faculty of Tourism - Hanoi Open University (FOT-HOU),

English is a mandatory foreign language for all students. However, their learning tourism English is still not effective. One of the causes could be the lack of an effective learning style. With an effort to find out the most appropriate learning style for tourism students at FOT-HOU as well as the testimonial on whether a proposed project could be an effective tool to reinforce the transformation of learning styles amongst our students, we conducted the study titled ***“Application of Project-based learning to improve the learning styles of tourism students at Hanoi Open University”***. The study was aimed to answer the following research questions:

*1. What is the typical learning style for tourism students at the Faculty of Tourism – Hanoi Open University?*

*2. How did the project "The Feeling of Tourists on their Visits to Vietnam" help improve the learning styles of tourism students at the Faculty of Tourism – Hanoi Open University?*

## Literature review

### *Learning styles*

The term "Learning Style" only appeared in the 50s of the twentieth century, when Thelen (1954) stated that one of the conditions for organizing group discussion activities in the teaching process is the need to rely on learning styles that students practice. Since then, there have been many studies around the world on learners' learning styles, leading to many different definitions and concepts. Rose (1985) stated that learning styles are approaches to different learning measures. Some people learn effectively through observation, others through listening or a hands-on approach. According to Reid (1995), learning style refers to the way in which learners absorb, process, and store new information and master new skills. Duff and Duffy (2002) clarified learning styles as a combination of cognitive, affective, and psychological factors for how individuals interact and respond to the learning environment and that learning style is a way done by someone in carrying out activities of thinking, processing, and understanding information. Given all these details, it is noteworthy that learning styles are diverse and personal. They can be seen as separate learning methods that each learner chooses to receive information, and it is related to his or her preferences for different types of learning activities. When learners know their own learning styles, they can see their strengths and weaknesses and, thereby, choose appropriate learning methods to promote their strengths and improve their weaknesses.

Since the 1960s, the focus of language teaching has shifted from teachers to students. Accordingly, the research focus of foreign language educators and researchers has shifted from teaching methods to the learning process and the characteristics of language learners themselves. The academic community has basically reached a consensus that the learning efficiency of learners can be improved by offering them proper learning content organization methods according to their different learning styles and guiding their personalized learning styles during learning (Li, 2021). That context pushed up the demands of the learning environment and the student's own experiences regarding what learning styles work best for

them in these environments. Learning styles would be relatively stable if the choice of learning styles is influenced by relatively stable factors such as certain characteristics of the environment, students' personal attributes, and long-term exposure to particular modes of discourse. Conversely, if others influence the choice of learning styles, they would be more transient or less stable, involving environmental demands and short-term objectives (cramming for an examination is an example). Since both kinds of influence co-exist, the choice of learning styles at any given time depends on the balance between the different factors and the student's own preferences. In other words, the choice of learning styles can be transformed by teachers' appropriate methods and students' preferences.

### *The models of learning styles*

Since learning styles are diverse, personal, and susceptible to transition, it is necessary to identify the number of learning styles, which style is best for specific language learners, and how different styles are transformed.

In 1975, American psychologist David Kolb, along with Roger Fry, developed the widely-known "Experiential Learning" model. This model, also known as the four-stage learning model, clarifies that there is not just one learning style but four styles that are transferred in a cycle beginning with concrete experience, followed by reflective observation, abstract conceptualization, and active experimentation. In practice, the learning cycle is more like a spiral learning process where theory and practice are conceptualized and reconceptualized, with each spiral deepening the student's understanding. Kolb (1984) also suggested effective learning is seen when a person progresses through a cycle of four stages: (1) having a concrete experience followed by (2) observation of and reflection on that experience, which leads to (3) the formation of abstract concepts (analysis) and generalizations (conclusions) which are then (4) used to test a hypothesis in a future situation, resulting new experiences. Ideally, activities and material should be developed in ways that draw on abilities from each stage of the experiential learning cycle and take the students through the whole process in sequence.

Using Kolb's experiential learning theory (1973) and Kolb's learning style questionnaire (1984) to discover how individuals learn, Peter Honey and Alan Mumford spent four years experimenting with different approaches to assess individual differences in dominant learning styles and launched the Learning Styles Questionnaire (LSQ) in 2000. The questions probe general trends in behavior instead of direct questions. Honey and Mumford's questionnaire is designed based on understanding attitudes and behaviors to identify learning styles, thereby developing and improving learning and applying individual strengths in their comprehensive development.

Honey and Mumford's learning styles model (1992) identifies four different styles, namely ***Activist, Theorist, Pragmatist, and Reflector***:

**Activist** people like to learn through movement, participating in new experiences, and reacting immediately without thinking about possible consequences. They learn best when they engage with new experiences, problems, and opportunities, work with others on problem-solving, games, and role-playing exercises, or lead a group. On the other hand, they

learn least when they listen to lectures, read long explanations, analyze and interpret a variety of data, and follow instructions exactly. As a result, they can choose learning activities as follows:

- Participating in group discussions and debates
- Engaging in role-playing or simulations
- Taking part in interactive workshops or training sessions
- Conducting experiments or practical experiments
- Engaging in physical activities or sports that involve learning.

**Theorists** like to learn based on theory, are logical, objective people, like to list and synthesize, and do not like subjective or intuitive assessments. They learn best when an activity is supported by ideas and concepts that form a model, system, or theory; the situation is structured with a clear purpose; many questions and probes are given out; a complex situation needs to be analyzed for comprehension. They learn least in situations that emphasize feelings and emotions, with unstructured or ambiguous activities, or when they are asked to act without knowing the principles or concepts involved. Here are the best activities that maximize their learning outcomes:

- Reading and studying textbooks, research papers, or academic articles
- Analyzing theoretical frameworks and models
- Engaging in critical thinking exercises and debates
- Engaging in lectures or presentations that emphasize conceptual understanding.
- Applying logical reasoning and making connections between theories and real-world examples

**Pragmatists** like to experiment and look for new ideas that can be applied to solving problems, but they are impatient with inconclusive discussions. They learn best when there is a clear link between the topic and the current need; they can try things with expert feedback; they can copy an example or simulate a model. However, they learn least when what they learn has no immediate practical benefit; there are no clear instructions on how to do that, or what they learn seems to be all theoretical and not practical. For someone who is a Pragmatists and focuses on practical learning, these activities can benefit them the most:

- Participating in hands-on workshops or training programs
- Engaging in real-world problem-solving or case studies
- Applying knowledge in practical projects or assignments
- Undertaking internships or work experiences
- Engaging in experiential learning activities, such as field trips or site visits

**Reflectors** like to learn through observation, thinking about problems, considering all aspects before making decisions, and spending a lot of time listening and observing. Reflective

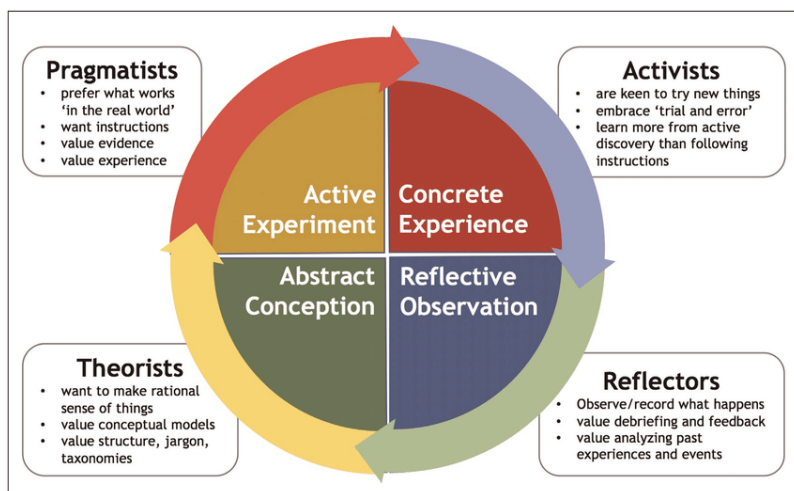
people learn best when they can stand back and observe first, take time to think and investigate before commenting or taking action, be given the opportunity to review what happened or do tasks without strict deadlines. Reflective people learn least when they are forced to take the lead in a group, do everything without preparation, or are rushed by deadlines. Reflectors can implement the following activities:

- Journaling or keeping reflective diaries.
- Engaging in introspection and self-reflection exercises
- Analyzing case studies or real-life scenarios
- Reviewing and summarizing information
- Participating in reflective discussions or peer feedback sessions

Understanding the above four different learning styles is significant for educators to successfully achieve teaching and learning objectives. Proactive teachers will strive to ensure that teaching and learning are implemented based on learning styles that fit in with the abilities of students. They can also find the best activities to maximize the strengths and minimize the weaknesses of each style. (Husin et al., 2011).

From Kolb's and Honey and Mumford's models, learning styles are linked to four stages in the learning cycle as follows:

*Chart 1. Adapted from Kolb's learning cycle (1984) and Honey and Mumford's learning styles (1992)*



According to the diagram, it can be easily seen that the learning styles of Honey and Mumford originate from and are closely related to Kolb's experiential learning cycle; the ultimate goal of Honey and Mumford is that learners will become proficient in all four learning stages in the learning cycle and apply an appropriate style when possible because learning styles are not rigid categories. The two authors emphasized that there is no single style that has an overwhelming advantage over other learning styles. Each learning style has its own strengths and weaknesses, and learning styles can be modified according to the learner's wishes to suit learning purposes. The authors also suggested that learners should

know their dominant style but should not limit themselves to just one style. They should experiment with strategies and techniques that align with other learning styles as well. The key is to leverage their strengths and preferences while remaining open to alternative approaches that enhance their learning journey. In other words, the authors mean that learners should try to become well-rounded learners.

In addition, the list of learning style questionnaires that Honey and Mumford (2000) offered helps learners recognize their own learning styles, thereby helping them choose learning methods that are suitable for their learning styles.

In summary, learning styles are diverse and personal but can be transformed if there are appropriate teaching methods and student practice. There are four types of learning styles, each with merits and demerits. To minimize the demerits of each style, students should apply the appropriate style in an appropriate learning context. Since the context itself is varied, learners need to experience all four styles to be well-rounded learners. The question lies in suitable tools that can help learners transform all four learning styles. The literature review highlighted Project-based learning as an effective way to achieve this desire.

#### *Project-based learning and students' learning styles*

Project-based learning (PBL) has been part of the educational practice since approximately the beginning of the 1980s, and the communicative approach greatly influenced it. Nowadays, as an appropriate and effective method, it is widely used in the teaching of English as a second language. Katz and Chard (2000) and Kraus (2009) confirmed that project work encourages creativity, critical thinking, collaboration, self-study, and other study skills. PBL is a very effective approach that allows the students to throw out opinions about the topics covering fields of interest, to ask questions, to estimate, to develop theories, to use different tools, to use the skills acquired in the context of real and meaningful life and allows learners to solve problems and answer questions in a creative way in the classroom and outside.

Thomas and Mergendoller (2000) adopt five criteria of PBL: 1) "Projects are central, not peripheral to the curriculum"; 2) "Projects are focused on questions or problems that 'drive' students to encounter (and struggle with) the central concepts and principals of the discipline"; 3) "Projects involve students in a constructive investigation"; 4) "Projects are student-driven to some significant degree"; and 5) "Projects are realistic, not school-like". Collaboration, as a matter of fact, should also be included as a sixth criterion of PBL. Stoller (2006) defines PBL as 1) having a process and product; 2) giving students (partial) ownership of the project; 3) extending over a period of time (several days, weeks, or months); 4) integrating skills; 5) developing students' understanding of a topic through the integration of language and content; 6) collaborating with other students and working on their own; 7) holding students responsible for their own learning through the gathering, processing, and reporting of information from target language resources; 8) assigning new roles and responsibilities to students and teacher; 9) providing a tangible final product; and 10) reflecting on both the process and the product. Thus, PBL is different from traditional English teaching; it lays great emphasis on the communicative and functional aspects of language learning and pays attention to the integrity of language and content learning.



It is obvious from the definitions that PBL exerts great positive and beneficial effects on the students' academic achievements, namely language skills, critical thinking, and knowledge acquisition. It also affirms that students are the main subjects of any project, and their academic achievements are influenced by PBL; in other words, their learning styles to achieve academic levels are also influenced by PBL.

Researchers not only confirmed that PBL can help develop students' learning styles, but they also found the links between PBL and the four learning styles mentioned by Honey and Mumford (1992). Chen (2004) believed the appropriateness and effectiveness of PBL vary for different kinds of students. He also concluded that PBL is a more effective means of adapting to students' various learning styles or "multiple intelligence" than the traditional instructional model. According to Gomez (2001), PBL is a combination of knowledge and ability to learn (Theorist), knowledge and ability to apply (Pragmatist), and problem-solving skills (Activist). Kubilinskiene (2020) also found that PBL is a model that organizes learning around projects. Projects are complex tasks based on challenging questions or problems that involve students in design, problem-solving, decision-making, or investigative activities (Activist); they give students the opportunity to work relatively autonomously over extended periods of time (Theorist), and culminate in realistic products or presentations (Pragmatist). Markham (2009) shows that a large part of PBL is reflection. Students are required to reflect on their work, offering options that meet student interests and needs, and that will help them to build confidence in a comfortable space for learning (Reflectors). All in all, by using the PBL method, learners have the chance to experience all four learning styles. Below is a detailed table of contents of the steps of PBL (Buck Institute for Education (2018) and the adapted, corresponding learning style for each step

Table 1. Project-based learning process (Buck Institute for Education, 2018)

Step	Contents	Learning styles
1	<b><i>Making direct questions on their own</i></b> Making questions on their own helps students create excitement and challenge for themselves, and at the same time helps them self-direct tasks and goals. Good directional questions stimulate their own curiosity and thinking, assume their role in society, or lead to the creativity.	<b><i>Activist</i></b>
2	<b><i>Developing a plan for the project</i></b> Plan the resources needed for the project (knowledge, skills, equipment, etc.), the sources for general knowledge related to the project before proceeding with the project (experts, speakers, researchers, engineers with in-depth knowledge, etc.) and invite experts to share their knowledge about tourist psychology, history of the country, etc.	<b><i>Reflector</i></b>
3	<b><i>Making a timetable for each step</i></b> To ensure the project's progress, a specific timetable for each step must be drawn up based on the directional questions posed in the first step and possibly give new directions for goal achievement.	<b><i>Theorist</i></b>
4	<b><i>Self-controlling the project's implementation and products</i></b> Do the tasks as scheduled. During the implementation, it is necessary to pay attention to the progress of the project via the reports of the results in each phase. In addition, it is important to develop a framework for evaluating individuals in the group and a project evaluation framework for good control.	<b><i>Pragmatist</i></b>

5	<p><b><i>Self-assessing the results of the project</i></b>  Self-assess the entire project using the criteria table provided by the teacher</p>	<b><i>Reflector</i></b>
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All the studies help the researchers have an overview of current findings about learning styles and recognized models, as well as the characteristics of PBL and its values in transforming various learning styles amongst learners. More research should be done to apply those valuable theories to specific contexts for focused participants.

## Methods

### *Setting and Participants*

The research context is the English learning environment for tourism students at the Faculty of Tourism – Hanoi Open University from June 1 to August 30, 2022. This is summer time, so students have time to reflect on their learning process and take part in extracurricular activities to enhance their English competence. The Faculty of Tourism - Hanoi Open University is one of the top 5 institutions in Vietnam for tourism human resources training (<https://hou.edu.vn/tin-tuc/951/gioi-thieu-nganh-quan-tri-dich-vu-du-lich-va-lu-hanh.html>) with its focus on English as the key language for teaching and learning of English Courses for Tourism (ESP) and most courses of academic specialization (EMI) to meet the demand of one of the Program Learning Outcomes of the Faculty (PLOs) (<http://hou.edu.vn/1110/nam-2023-van-ban-ve-cong-tac-dao-tao.html>). The Program Learning Outcome requires tourism students to: "Apply English in professional work in the field of tourism and travel, in the study, research, cooperation and integration." To achieve this, students need to achieve a high level of academic achievement. However, as a matter of fact, there are a number of English low-proficiency students who do not have appropriate learning styles to adapt to the requirements of the training program in the Faculty. Therefore, the authors think that research on the typical and suitable learning styles of tourism students is necessary, and solutions to improve that learning style are also important.

To understand the typical learning styles of students in the Faculty of Tourism, the authors call for the 205 participants, who are all third-year students from pre-intermediate to intermediate levels. They have just finished their English for Tourism Program of two majors, Hotel Management and Tourism & Travel services management. These students are divided into 3 levels of academic achievements based on their test results over the previous year; they are Excellent, Good, and Average level. The authors assume that Excellent students may possess the most typical and suitable learning style of all, as they may have their own style for absorbing, processing, and storing new information and mastering new skills (Reid, 1995). Therefore, the results of their learning styles can be useful for the findings. The questionnaire, adapted from the Honey and Mumford Questionnaire (2000), was handed out to 205 students, but only 191/205 (93,2%) students replied. Therefore, the authors analyzed 191 students (63 students of Excellent level, 69 students of Good level, and 59 students of Average level).

## Design of the Study

As mentioned in the Literature Review, the questionnaire of Honey and Mumford (2000) is used to identify the typical learning style of tourism students as it is the most common one to help identify learning styles of students, and it is developed from the widely-known "Experiential Learning" model (Kolb & Fry, 1975). This questionnaire has 80 statements, each about one of the four learning styles: Activist, Reflector, Theorist, and Pragmatist. There are 20 statements for each learning style, and all the statements are mixed but not in order of learning style. Here is the questionnaire:

Table 2. Honey and Mumford Learning Style Questionnaire (2000)

1. I have strong beliefs about what is right and wrong, good and bad.	28. I am careful not to jump to conclusions too quickly	55. If I have a report to write, I tend to produce lots of drafts before settling on the final version
2. I often act without considering the possible consequences	29. I prefer to have as many resources of information as possible - the more data to think over, the better	56. I am keen to try things out to see if they work in practice
3. I tend to solve problems using a step-by-step approach	30. Flippant people who don't take things seriously enough usually irritate me	57. I am keen to reach answers via a logical approach
4. I believe that formal procedures and policies restrict people	31. I listen to other people's points of view before putting my own forward	58. I enjoy being the one who talks a lot
5. I have a reputation for saying what I think, simply and directly	32. I tend to be open about how I'm feeling	59. In discussions, I often find I am the realist, keeping people to the point and avoiding wild speculations
6. I often find that actions based on feelings are as sound as those based on careful thought and analysis	33. In discussions I enjoy watching the manoeuvrings of the other participants	60. I like to ponder many alternatives before making up my mind
7. I like the sort of work where I have time for thorough preparation and implementation	34. I prefer to respond to events on a spontaneous, flexible basis rather than plan things out in advance	61. In discussions with people I often find I am the most dispassionate and objective
8. I regularly question people about their basic assumptions	35. I tend to be attracted to techniques such as network analysis, flow charts, branching programs, contingency planning, etc.	62. In discussions I'm more likely to adopt a "low profile" than to take the lead and do most of the talking
9. What matters most is whether something works in practice	36. It worries me if I have to rush out a piece of work to meet a tight deadline	63. I like to be able to relate current actions to a longer-term bigger picture
10. I actively seek out new experiences	37. I tend to judge people's ideas on their practical merits	64. When things go wrong I am happy to shrug it off and "put it down to experience"
11. When I hear about a new idea or approach I immediately start working out how to apply it in practice	38. Quiet, thoughtful people tend to make me feel uneasy	65. I tend to reject wild, spontaneous ideas as being impractical

12. I am keen on self discipline such as watching my diet, taking regular exercise, sticking to a fixed routine, etc.	39. I often get irritated by people who want to rush things	66. It's best to think carefully before taking action
13. I take pride in doing a thorough job	40. It is more important to enjoy the present moment than to think about the past or future	67. On balance I do the listening rather than the talking
14. I get on best with logical, analytical people and less well with spontaneous, "irrational"	41. I think that decisions based on a thorough analysis of all the information are sounder than those based on intuition	68. I tend to be tough on people who find it difficult to adopt a logical approach
15. I take care over the interpretation of data available to me and avoid jumping to conclusions	42. I tend to be a perfectionist	69. Most times I believe the end justifies the means
16. I like to reach a decision carefully after weighing up many alternatives	43. In discussions I usually produce lots of spontaneous ideas	70. I don't mind hurting people's feelings so long as the job gets done
17. I'm attracted more to novel, unusual ideas than to practical ones	44. In meetings I put forward practical realistic ideas	71. I find the formality of having specific objectives and plans stifling
18. I don't like disorganised things and prefer to fit things into a coherent pattern	45. More often than not, rules are there to be broken	72. I'm usually one of the people who puts life into a party
19. I accept and stick to laid down procedures and policies so long as I regard them as an efficient way of getting the job done	46. I prefer to stand back from a situation	73. I do whatever is expedient to get the job done
20. I like to relate my actions to a general principle	47. I can often see inconsistencies and weaknesses in other people's arguments	74. I quickly get bored with methodical, detailed work
21. In discussions I like to get straight to the point	48. On balance I talk more than I listen	75. I am keen on exploring the basic assumptions, principles and theories underpinning things and events
22. I tend to have distant, rather formal relationships with people at work	49. I can often see better, more practical ways to get things done	76. I'm always interested to find out what people think
23. I thrive on the challenge of tackling something new and different	50. I think written reports should be short and to the point	77. I like meetings to be run on methodical lines, sticking to laid down agenda, etc.
24. I enjoy fun-loving, spontaneous people	51. I believe that rational, logical thinking should win the day	78. I steer clear of subjective or ambiguous topics
25. I pay meticulous attention to detail before coming to a conclusion	52. I tend to discuss specific things with people rather than engaging in social discussion	79. I enjoy the drama and excitement of a crisis situation
26. I find it difficult to produce ideas on impulse	53. I like people who approach things realistically rather than theoretically	80. People often find me insensitive to their feelings
27. I believe in coming to the point immediately	54. In discussions I get impatient with irrelevancies and digressions	

The questionnaire is scored by awarding one point for each ticked item. There are no points for crossed items. After students ticked the statements, the learning style can be identified easily by looking at the table below:

Table 3. Honey and Mumford Learning Style Questionnaire (2000)

2	7	1	5
4	13	3	9
6	15	8	11
10	16	12	19
17	25	14	21
23	28	18	27
24	29	20	35
32	31	22	37
34	33	26	44
38	36	30	49
40	39	42	50
43	41	47	53
45	46	51	54
48	52	57	56
58	55	61	59
64	60	63	65
71	62	68	69
72	66	75	70
74	67	77	73
79	76	78	80
Activist	Reflector	Theorist	Pragmatist

### *Data collection & analysis*

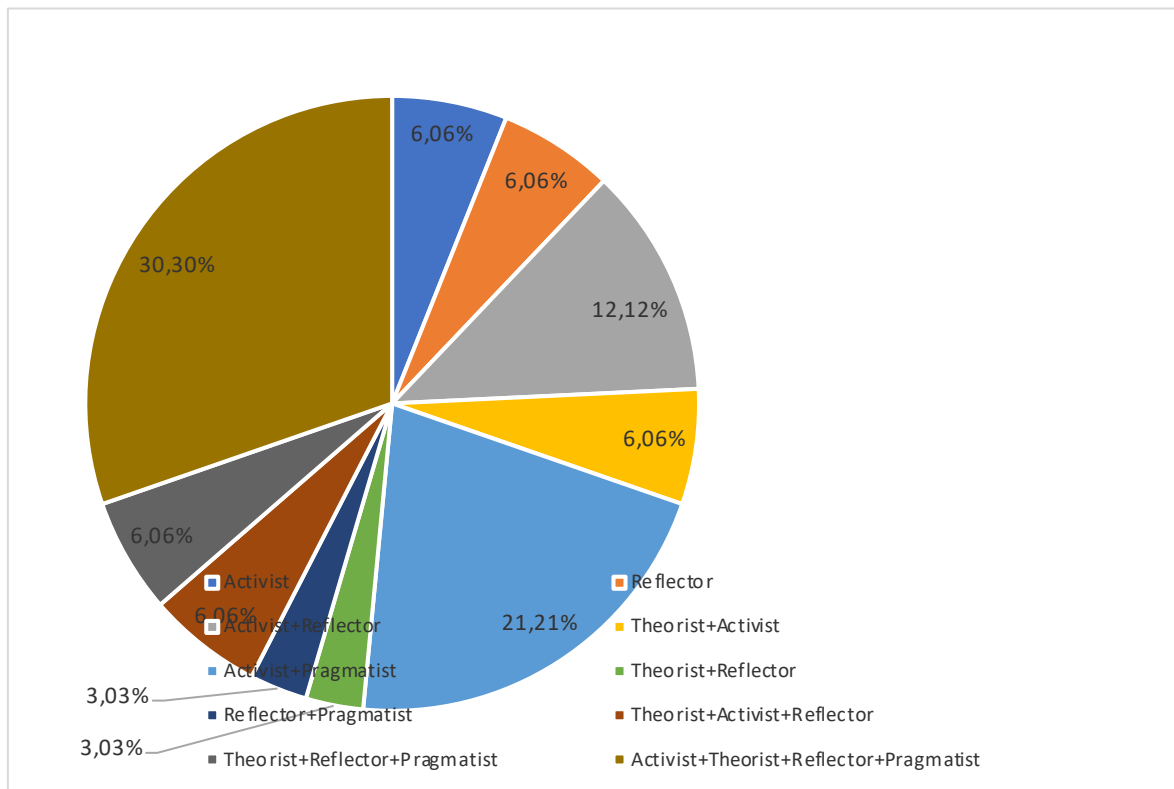
The survey method was used to collect data and classify the learning styles of students at the Faculty of Tourism – Hanoi Open University, which involves questions about the situation of learning English and the student's learning styles. The survey was sent online using Google Forms. After the survey was done, the authors used the descriptive statistics method to analyze the data of all the students to identify the typical learning style.

After identifying the typical learning style, the authors applied a Project to help improve that style. After the project finished, the authors used the comparing-and-contrasting method to prove the effectiveness of the project in improving the typical learning style of tourism students.

## Results/Findings and Discussion

The authors derived the following results from the student survey, based on an adaptation of *The Learning Styles Questionnaire* by Honey and Mumford (2000). Firstly, the learning styles of students at Excellent level.

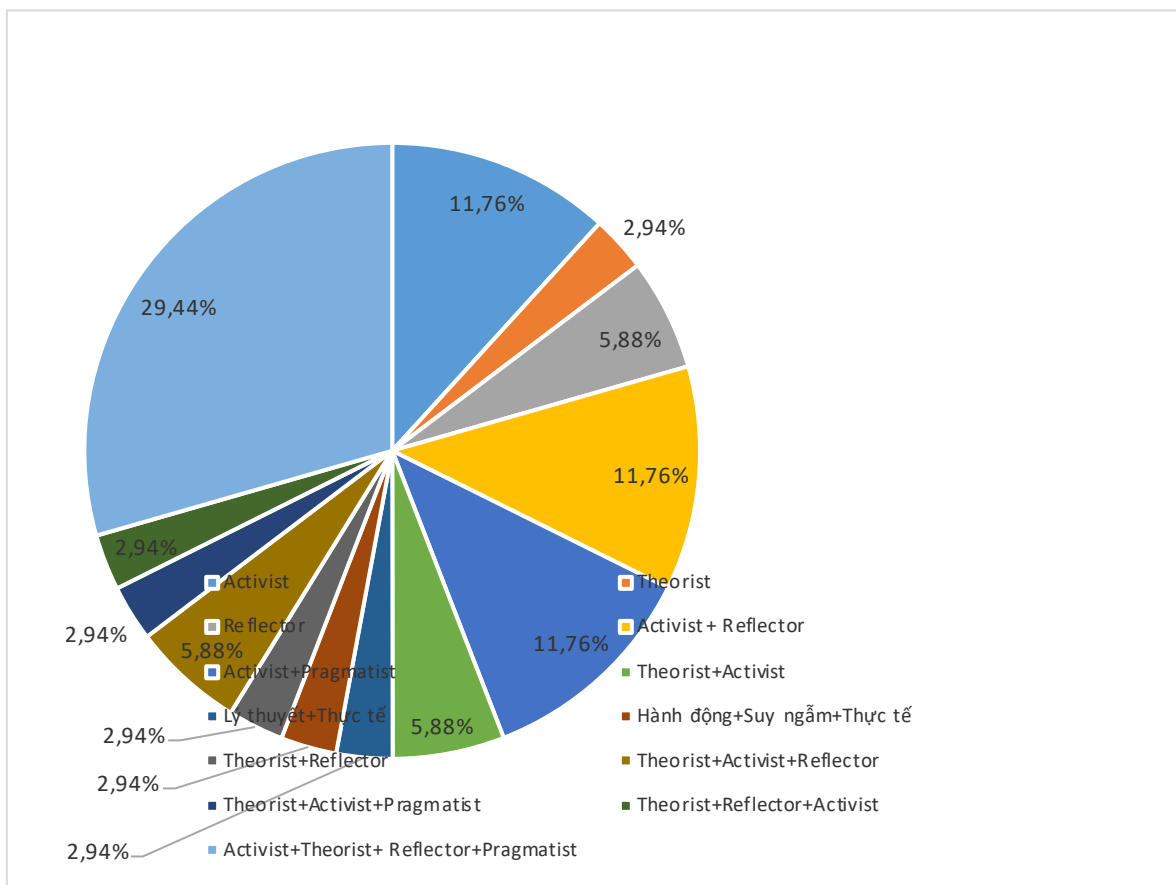
Chart 2. Learning Style of students at Excellent level



According to statistics from chart 2, the research team found that the group of students with Excellent academic performance has a diversity of learning methods. As can be seen, the combination of all four teaching methods accounts for the highest proportion of 30.30% of the total number of students, far surpassing the remaining styles. Activists rank the second most popular style with 21,21%, which can be easily explained by the practical approach of teaching-learning in the Faculty of Tourism. The combination of activist and one or two other styles make up around 6% - 12%. In summary, by analyzing the chart above, we can see the highlights of the group of students with excellent academic performance, which is the harmony of all four learning styles.

Analysis of learning styles of Good level students shows similar results:

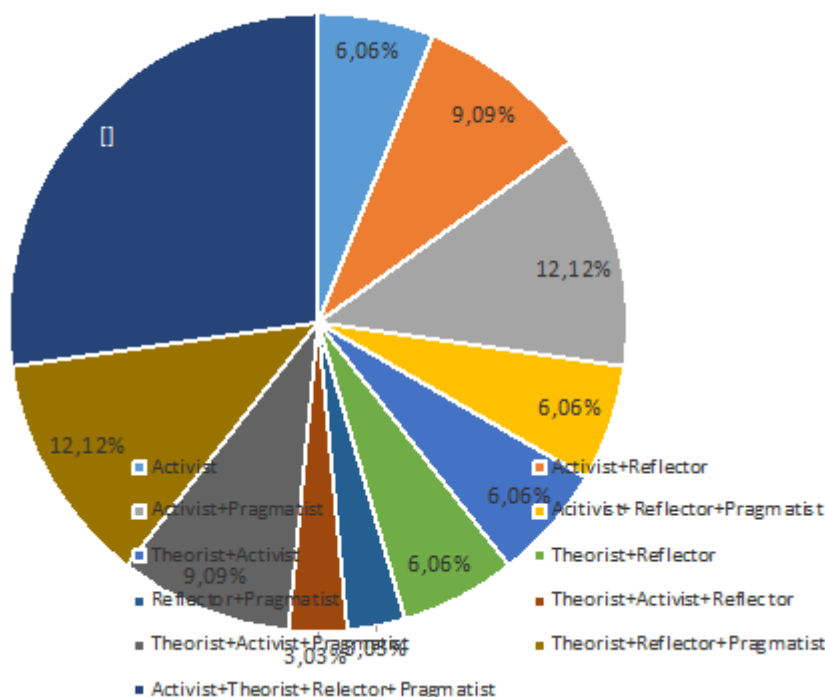
Chart 3. Learning Style of students at Good level



As can be seen from chart 3, the learning styles of tourism students at good academic levels are various, but the most common was the combination of two to four learning styles. The combination of 4 styles is the most popular, with roughly 30%, and that of two styles secure at around 11.76%. Of the two styles, a combination of activists with other styles is more popular than theorists with other styles (11.76% as opposed to 2.94%). It means that activist is the preferred and suitable style for many tourism students, and it will be more effective if it is incorporated with the other 3 styles. From all the analyzed data, it can be concluded that the combination of 4 learning styles was dominant and that there should be strategies to help students apply all 4 styles smoothly.

The result of the Learning styles of students at the Average level show signs of similarities:

Chart 4. Learning Style of students at Average level



From chart 4, we can see that students with average academic performance are similar to the two excellent and good groups in that they can have one, two, three, or even four learning methods combined together, which accounts for the largest proportion of 27.28%. In addition, the chart also shows that the majority of students with average academic performance have the theoretical method in their preferred style. This is understandable because, according to the survey, these students tend to think rationally and answer in a logical way. Therefore, this can also lead to sometimes needing a thorough and in-depth exploration of the problem to be more open to their own thinking. In this group of students, there are also people who have reflective behavior. They are very careful when giving their answers, spending a lot of time considering the problem from many aspects before giving their opinions. However, this causes them to be under time pressure, and they will be very nervous when doing work whose deadline is about to expire. It can be seen that time pressure can prevent them from completing the assigned work well.

From the given chart, the integration of 4 styles is once again proved the most popular style. The only issue here is how to help learners increase this style so that they can reach the level of good and excellent academic levels soon.

All the data given can help the researchers to answer the research questions:

***The typical learning style for tourism students at the Faculty of Tourism – Hanoi Open University.***

From all the theory and data analysis above, it can be concluded that the most effective learning style for tourism students at Hanoi Open University is the combination of the 4



learning styles: activist, reflector, theorist, and pragmatist. Of the four learning styles, activist is the most dominant. Thus, for learning styles to be highly effective, the research team proposes that the most effective teaching method is transformation, combining all four learning styles together (activist + reflector + theorist + pragmatist). Therefore, we need a suitable and highly applicable method for all types of students to easily perform that combination.

***The effectiveness of the project: “The Feeling of Tourists on their Visits to Vietnam” in improving the learning styles of tourism students at Faculty of Tourism – Hanoi Open University.***

As mentioned above, project-based learning can help transform learning styles. Here are some illustrations of a City-tour project that help students of tourism combine and transform the 4 learning styles.

***-Project title: “The Feeling of Tourists on their Visits to Vietnam”***

***- Project objectives:*** to improve the learning style of tourism students and to help each student transform the 4 learning styles.

***- Project participants:*** The selected subjects were 20 students of Good levels in the 3<sup>rd</sup> year. They are students who took part in the Learning Style survey and would like to improve their existing learning style to improve their study results when they come to learn Specialized subjects. The reason why these students were chosen was that they were still not proficient in their learning style, and the exam results were not up to their expectations. Therefore, they needed guidelines to apply suitable learning styles in particular classroom lessons to upgrade their academic level. The duration was 3 months, from June 1 to August 30, 2022. That was the summer time, and there were no English classes at school. Therefore, the Project result can be reliable.

***- Project stages:*** To transform learning styles, students need to experience a series of well-designed and repeated activities. They need to go through 4 stages of the project, including designing a list of questions to ask tourists about their feelings when visiting Vietnam on the topics chosen by students like Cuisine, Tourist Attractions, Accommodation, Food and Beverage services... Then, they interview tourists at tourist destinations and synthesize them into reports and presentations for evaluation. They need to take part in 15 training sessions, 4 hours/ each session on the project process, focusing on suggested activities that learners should take to apply each step of the project. There will be 03 outings trips to interview Foreign tourists on their visit to Vietnam, observed by lecturers, and 03 reports in the class after the interview. At the end of the project, all the students are interviewed, and the test results of the next semester are analyzed to justify the effectiveness of the project.

***- Project schedule:***

Table 4. Schedule of the Project: The Feelings of foreign tourists on their visit to Vietnam."

Schedule	Task	Objectives/ Activities	Learning style
Day 1	Orientation meeting	The teacher informs the goal of the project: + to improve the learning style of each student + to help each student successfully transform 4 learning styles -Divide students into 5 groups; each group has 4 students. Each group was interviewed 3 times. Ten guests at a time.	Activist
Day 2	Guidelines on designing questionnaire	-Students design questionnaires under the guidelines of the teacher	Reflector Theorist
Day 3	-Correction of questionnaires -Guest in Tourism Psychology to prepare for the interview	- The teacher evaluates the questionnaire, and students cross-check it to learn from their group's questionnaire. - To prepare for the interview, a tourist psychology expert was invited to give advice when approaching tourists of different cultures, such as choosing people who are similar to tourists, choosing popular tourist destinations, not asking for too personal information, asking What (What kind of accommodation do you stay in VN?) before asking How (How do you feel about your accommodation?), psychology of European, Asian, African, America ...	Reflector
Day 4	Interview 1	-Students choose their own location and interview 10 guests from 10 different groups. -Objectives: Students begin to feel confident when interacting with guests.	Pragmatist
Day 5	Interview Report 1	-Students discuss in groups before the report interview	Activist
Day 6	Interview 2	-Students interview the next 10 guests from 10 different groups -Objective: to help students feel confident interacting with guests	Pragmatist
Day 7	Interview report 2	-Students discuss in groups and report based on the lessons learned from the first interview and the results obtained from the second interview.	Activist
Day 8	Interview 3	- Students interview the next 10 guests from 10 different groups -Goal: Students understand customer psychology and are completely proactive.	Pragmatist
Day 9,10	Instruction to describe graphs	-Teachers guide students to use technology to do their own research on how to synthesize information, turn information into tables, and draw graphs based on aggregated information	Activist
Day 11	Instruction on how to write an academic report	Students follow the guidelines and practice	Activist
Day 12	Consulting on report writing	-Teachers meet with each student to answer questions related to report writing: commonly used	Theorist

		structures, common errors, how to write results, and discuss	
<b>Day 15</b>	Project presentation	-Teachers create an evaluation criteria (Rubrics)	Reflector Pragmatist

*-Project result:* The test result of the specialized subject after the project shows an increase from 0.3 – 1.0 points, and the interview result proves that the project did.

Table 5. Test results before and after taking the Project

<i>Student</i>	<i>Before Project</i>	<i>After Project</i>
1	6.2	7.0
2	7.8	8.5
3	5.0	7.0
4	4.0	5.0
5	7.5	8.5
6	8.2	8.7
7	5.0	6.0
8	8.5	9.6
9	6.8	7.5
10	5.3	5.5
11	9.0	9.7
12	7.2	8.5
13	5.6	6.0
14	7.5	8.0
15	6.5	7.5
16	8.0	9.0
17	6.5	7.6
18	8.0	7.0
19	5.7	6.0
20	7.0	8.0

Table 6. Feedback from students after taking the project

<i>"I like the expert talk because I am equipped with knowledge about psychology and culture, so contact becomes easy. Some interviews turned into intimate conversations lasting up to 30-45 minutes."</i>	<i>"I almost didn't have to memorize anything before taking the exam like before because I did it myself so I could remember the content."</i>
<i>"After being instructed to use Google Scholar to find academic articles, I wrote more coherently. Complex structures become easier, and I can apply them in my writing."</i>	<i>"When we ask customers, they also ask us. They asked about Vietnamese customs, cuisine, and culture. Fortunately, we learned in class, so we felt confident when answering. When I took the final exam, I almost didn't have to study anything and still got a high score."</i>

<p>- "In the first interview, I didn't dare to approach the guests proactively, but the second and third times, I knew what to do to attract their attention, which was to smile and say hello politely. I found it difficult to remember the communication structures in class, but after talking to guests, I no longer forgot them."</p>	<p>"Before the Project, I mainly participate in group discussions or role-play, but still shy to talk to foreign visitors. During the project, I practiced the interview in class and listened to the expert talking about Cultural differences; I am more confident to interview visitors from many cultures now."</p>
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Source: Project portfolios - Faculty of Tourism – Hanoi Open University

### Conclusion

Identifying the typical learning styles is significant to tourism students so that they can see their strengths and weaknesses and, thereby, choose appropriate learning methods to promote their strengths and improve their weaknesses. Through a survey done on a group of specialized students of the same academic performance, we discovered that the typical learning style is the combination of 4 styles: Activist, Theorist, Pragmatist, and Reflector. Suggestions to combine and transform the four learning styles are given based on the theory of Project-based learning theory and the experiences of authors when observing students' performance during the course of study. We recommend further large-scale studies on learning styles in order to explore this research topic more thoroughly.

## Acknowledgment

This study could not have been finished without the decision of Hanoi Open University on the implementation of students' scientific research on: "Research on effective learning styles for specialized students at the Faculty of Tourism – Hanoi Open University," which acts as a useful source, of reference for this article. The authors also sincerely thank Honey and Mumford for their learning styles model, which helped us find a better direction for the completion of our study. Last but not least, my partners, Ms Nguyen Thi Thao, Ms. Phan Thi Phuong Mai, and all 191 students worked hard throughout the process of coming up with ideas, conducting research, and completing the project and the article.

## References

- Bilodid, A. (2022). Foreign Language Skills as the Main Factor of Successful Career in the Hospitality and Tourism Industry. *Grail of Science*, 12, 467-470. [DOI 10.36074/grail-of-science.29.04.2022.081](https://doi.org/10.36074/grail-of-science.29.04.2022.081)
- Lertchalermtipakoon, P., Wongsunbun, U. & Kawinkoonlasate, P. (2021). Need Analysis: English Language Use by Students in the Tourism and Hospitality and Industry. *English Language Teaching*, 14(3), 59-71. <https://doi.org/10.5539/elt.v14n3p59>
- Cuevas, J. (2015). Is Learning Styles-based Instruction Effective? A Comprehensive Analysis of Recent Research on Learning Styles. *Theory and Research in Education*, 13(3), 308-333. <https://doi.org/10.1177/1477878515606621>
- Thelen, H. (1954) *Dynamics of Group at Work*. University of Chicago Press. <https://www.uchicago.edu/doi/abs/10.1086/639785>
- Reid, J. M. (1995). Learning Styles in the ESL/EFL Classroom. Foreign Language Teaching and Research Press. <https://api.semanticscholar.org/CorpusID:142817224>
- Rose, C. (1995) *Accelerated Learning*. Chaminade College Press. <https://api.semanticscholar.org/CorpusID:198856455>
- Duff, A. & Duffy, T. (2002). Psychometric Properties of Honey & Mumford's Learning Style Questionnaire (LSQ). *Personality and Individual Differences*, 22, 147-163. <https://www.researchgate.net/publication/285963150> Influence of Learning Styles
- Li, Z. (2021). *A Study on the Influence of Presentation Mode of Rain Class Content on Learners' Cognitive Load*. China West Normal University Press.
- Kolb, D. A. & Fry, R. (1975). *Toward an Applied Theory of Experiential Learning*. John Wiley & Sons. <https://www.researchgate.net/publication/238759143> Toward an Applied Theory of Experiential Learning
- Kolb, D. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Prentice Hall.

- [https://www.researchgate.net/publication/235701029\\_Experiential\\_Learning\\_Experience\\_As\\_The\\_Source\\_Of\\_Learning\\_And\\_Development](https://www.researchgate.net/publication/235701029_Experiential_Learning_Experience_As_The_Source_Of_Learning_And_Development)
- Honey, P. and Mumford, A. (2000) *The Learning Styles Questionnaire*, Peter Honey Publications. <https://www.talentlens.com/career-development/honey-and-mumford-learning-styles-questionnaire.html>
- Honey P., Mumford A. (1992). *Setting the Scene for Learning Styles*. Peter Honey Publications. <https://acts.co.nz/ABACUS/L6/Mod6/Honey%20&%20Mumford%20-%20Learning%20Styles.pdf>
- Mohd Razimi Husin, M. R., Shaffeei, K., Ahmad, H. & Shuib, T. R. (2021). Companion Teacher Based on Sociological Stimulus during Learning to Improves the Acceptance of Inclusive Education Pupils in Receiving Skills and Information. *Linguistics and Culture Review*, 5(1). <https://doi.org/10.21744/lingcure.v5nS1.1500>
- Katz, L. G., & Chard, C. (2000). *Engaging Children's Minds: The Project Approach*. ERIC Press. <https://eric.ed.gov/?id=ED456892>
- Thomas, J. W., & Mergendoller, J. R. (2000). *Managing Project-Based Learning: Principles from the Field*. Buck Institute for Education. [https://dr-hatfield.com/science\\_rules/articles/Managing%20Project%20Based%20Learning.pdf](https://dr-hatfield.com/science_rules/articles/Managing%20Project%20Based%20Learning.pdf)
- Stoller, F. (2006). *Establishing a Theoretical Foundation for Project-Based Learning in Second and Foreign Language Contexts*. Information Age. <https://www.infoagepub.com/products/Project-Based-Second-and-Foreign-Language-Education>
- Chen, L.L. (2004). Cooperative Project-Based Learning and Students' Learning Styles on Web Page Development. *Journal of Educational Technology Systems*, 32(4), 363–375. doi:10.2190/lrxx-9ae5-f0ya-e92g
- Gomez, L.M. (2001). *Project-Based Learning*. George Lucas Educational Foundation. <https://www.edutopia.org/louis-gomez-project-based-learning>
- Markham, T. (2009). *Project-based Learning Handbook: A Guide to Standards-focused Project-based Learning*. Buck Institute for Education. <https://archive.org/details/projectbasedlear0000mark>
- Buck Institute for Education. (2018). *PBL Handbook: Engage Your Students with Project Based Learning*. <http://www.bie.org/pbl/hand.html>
- Kraus, H. A. (2009). Generating Depth and Engagement: the Development of a Project-based Curriculum. *AsiaCALL Online Journal*, 4(1), 30-38. <https://asiacall.info/acoj/index.php/journal/article/view/2>
- Tran, T. K. T. (2021). Teaching and Learning English for Tourism After the Covid-19 Pandemic in Universities and Solution Proposals. *Proceedings of the 17th International Conference of the Asia Association of Computer-Assisted Language Learning (AsiaCALL 2021)*, 135–140. <https://doi.org/10.2991/assehr.k.210226.017>

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## Teaching Critical Thinking to English-Majored Students through the Pathways Coursebooks (2<sup>nd</sup> edition) at UFLS-UD: Challenges and Solutions

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### ABSTRACT

**Keywords:** Critical thinking; Pathways coursebooks; language skills; English-majored students.

Critical thinking (CT), a 21st-century skill, not only plays a crucial role in students' academic success but is also a fundamental capacity increasingly sought upon in the competitive global job market. However, there has been limited research in Vietnam on how to foster CT through English language teaching in higher education. This study fills this gap by investigating the challenges of teaching CT through the teaching of four English practical skills at the University of Foreign Language Studies - the University of Da Nang (UFLS-UD) via the *Pathways Listening, Speaking, and Critical Thinking* (2nd edition), which is a global, innovative academic English coursebook series carefully designed to develop integrated English language skills and CT. Coursebooks have been used in the curriculum at the Faculty of English and the Faculty of Foreign Language Teacher Education since 2021. However, how to effectively explore coursebooks' resources to develop students' critical thinking skills has not been investigated. With the employment of research methods, namely, survey questionnaires and semi-structured interviews, our study is an attempt to identify the abovementioned challenges, thereby suggesting solutions to enhance the quality of teaching CT combined with language skills for English-majored students.

### Introduction

Rapid globalization and advanced technology have resulted in significant changes in the education system, focusing on academic knowledge and development and personal and nonacademic skills (Oliveri & Markle, 2017). It is essential that students be taught soft skills to encounter significant developments in the 21<sup>st</sup> century. Therefore, critical thinking (CT) has become increasingly emphasized in all educational programs to prepare students for the demands of the future job market (Ennis, 2018). It is believed that students equipped with CT skills and dispositions will become more capable of dealing with challenges and complicated problems in life (McPeck, 2016).

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Due to the importance of CT, language teaching and learning should incorporate CT into language classrooms, as teaching CT can help students become autonomous and active in achieving learning goals (D'Alessio et al., 2019; Utriainen et al., 2016). At the University of Foreign Language Studies, University of Danang, CT has been an emphasis in language teaching since the new coursebook *Pathways* (2018) was introduced into the curriculum. Although coursebooks have been used for two years, little has been done to investigate how to effectively use coursebooks in teaching CT to English major students. Hence, this study aims to fill this gap in the literature and proposes some recommendations for using coursebooks to teach CT effectively.

## Literature review

### *What is CT?*

CT has been the focus of many previous studies (Bailin et al., 1999; Paul & Elder, 2007; Facione, 2011). Although there are different ways of defining CT, it is agreed that CT involves individuals' abilities and skills in using logic, justification, and standards of argumentation to analyze problems, find optimal solutions, and achieve goals. In language teaching, Marin and Pava (2017) described CT thinkers as those who are active, are continuously asking questions, and are seeking information that helps them connect what they learn in their language classroom with their daily lives. Moreover, they will use their language skills flexibly to communicate creatively and achieve their learning goals.

### The "Pathways" coursebook series

#### *The integration of CT in the "Pathways" series*

"Pathways" by National Geographic Learning (2018) is a series of English language learning coursebooks designed to help learners of English develop their language skills and cultural awareness. The series offers a comprehensive approach to English language education and includes various levels, from beginner to advanced. While the primary focus of "Pathways" is language acquisition, it also integrates critical thinking elements into its curriculum. "Pathways" promote critical thinking through discussion and debate activities. These activities encourage students to express their opinions, defend their viewpoints, and consider different perspectives on issues, fostering critical thinking and communication skills.

Additionally, "Pathways" often present language and cultural content in real-world contexts. This approach encourages students to think critically about how language is used in everyday situations and how culture influences communication. The series also includes problem-solving exercises requiring students to use their language skills to solve real or hypothetical issues. This promotes critical thinking and linguistic application simultaneously. In general, "Pathways" aim to help students develop their language proficiency and their ability to think critically in English and engage with diverse cultural perspectives. This integration of critical thinking enhances the effectiveness of language acquisition and prepares learners for meaningful communication in English.

The integration of CT in "Pathways" is a distinctive feature of the series compared to other

coursebooks that have been published worldwide. This is also the first series with the application of CT teaching and learning in every language skill: listening, speaking, reading and writing. Due to the integration of CT throughout coursebooks, teachers’ and students’ awareness of CT development has increased, which has resulted in the frequent practice of CT skills in all lessons and units carefully designed in “Pathways” coursebooks.

Figure 1.

Integration of CT in Reading Skill (Source: Pathway Level 2: Reading, Writing and Critical Thinking)

The image shows a page from a textbook with a reading passage and various exercises. The passage discusses happiness in Mexico and Singapore, mentioning factors like family, friends, and financial stability. It includes a Venn diagram comparing the two countries. Exercises include identifying the main idea, understanding details, and critical thinking tasks like inferring meaning and justifying opinions.

Figure 2.

Integration of CT in Writing skill (Source: Pathways Level 2: Reading, Writing and Critical Thinking)

The image shows a writing task section from a textbook. It includes a goal for writing a paragraph about an innovation, a brainstorming activity, a planning section with steps for writing an outline, an outline template, and a revising practice section with a draft and a checklist for revision.

Figure 3.

Integration of CT in Listening skill (Source: Pathways Level 3: Listening, Speaking and Critical Thinking)

**A Listening** An Earth Sciences Lecture

**BEFORE LISTENING**

**1** Work in a small group. You will hear a lecture about a national park in Madagascar. What national parks are important in your country? Explain.

**WHILE LISTENING**

**2** Listen to the lecture and take notes. Then use your notes to complete a sentence summarizing what you heard.  
A geology professor described \_\_\_\_\_.

**3** Listen again to part of the lecture and take notes. Then use your notes to complete the diagram by writing the correct letter in each space. One answer has been done for you.

**Formation of the Tsingy de Bemaraha**

**4** More cave roofs collapse, leaving deep canyons and rock pillars.  
**b** Over time, the holes become larger and form small caves.  
**c** Rain dissolves the top of these pillars to form sharp points.  
**d** The action of water enlarges existing weak points and holes.  
**e** The tops of some caves collapse, creating bigger caves.  
**f** Water begins to erode the limestone, causing holes and weaknesses.

**LISTENING SKILL: Recognizing Digressions**

Sometimes a lecturer or speaker may say something that is not directly relevant to his or her main points. During these temporary digressions, or sidebars, the speaker may tell a story or add information that is interesting or amusing but only indirectly related to the topic. Recognizing a digression can help you focus on the more important points a speaker is making. A speaker will often, but not always, use a specific phrase when starting or ending a digression.

Starting a digression:  
 Interestingly, ...      As an aside, ...      This is off the topic, but ...  
 Returning to the main topic:  
 Anyway, ...      As I was saying, ...      Getting back to the topic, ...

**5** Read and listen to an extract from the lecture. Mark the two sentences in which the speaker digresses from her main point. Also mark the words that signal a return to the main point.

Today we'll begin by discussing some limestone landscapes. As you probably know, this rock is formed when sea creatures die and fall to the ocean floor. Over time, layers of skeletons build up, and the bottom layers are pressed down. Eventually, the pressure turns them into limestone. Interestingly, the term limestone doesn't come from the color of the rock, which is typically white or gray, not green, but from lime, an important industrial product made from limestone. Anyway, limestone is a relatively hard rock, but water can wash it away, especially water that is slightly acidic. Uh, we usually think of acid rain as being caused by human industry, but sometimes acid rain can be caused by gases from volcanoes. Now as I was saying, water can erode limestone.

**6** Mark each statement as either a key point (KP) or a digression (D). Then listen again to part of the lecture and check your answers.

- \_\_\_\_\_ It takes a very long time for water to shape limestone landscapes.
- \_\_\_\_\_ The name for karst landscapes originally comes from German.
- \_\_\_\_\_ An alternative name for the Tsingy area is the "Forest of Kilives."
- \_\_\_\_\_ Water is the main factor in the formation of the Tsingy landscape.
- \_\_\_\_\_ Tourism in parks in Madagascar has been affected by political events.

**AFTER LISTENING**

**7** Work in a small group. Discuss these questions.

- What are some things that you learned from the lecture that you did not know before?
- The speaker makes a number of digressions during the lecture. For a speaker, what are some advantages and disadvantages of making digressions?

Figure 4.

Integration of CT in Speaking skill (Source: Pathways Level 3: Listening, Speaking and Critical Thinking):

**CRITICAL THINKING: EVALUATING**

**1** Work in a small group. Look at the photos and read the information. Then discuss the questions.

The word *chindogu* translates as "weird tools." The International Chindogu Society was founded by Japanese designer and inventor Kenji Kawakami and U.S. journalist Dan Peppi. Kawakami, who came up with the name *chindogu*, has invented hundreds of strange and unusual objects. Chindogu inventions are impractical solutions to everyday problems. Every invention is somewhat useless, but always fun.

- Have you ever heard of *chindogu* or anything similar before?
- What do you think of the idea of *chindogu*? Why?
- Would you ever use either of the *chindogu* inventions? Explain.
- What other *chindogu*-style alarm clocks or helmets can you imagine?

**A** I've never heard of *chindogu* before. Have you?  
**B** No, but I think the inventions are really ...  
**C** I agree, but don't you think they're also ... ?

**2** Kawakami demonstrates his alarm clock. It has a snooze button under a bed of sharp pins to make sure you don't go back to sleep.

**3** This *chindogu* is the perfect bike helmet for those who like to wear hair in braids or ponytails.

**CRITICAL THINKING: SYNTHESIZING**

**4** Work with a partner. Discuss what two or three principles describe *chindogu* inventions. Then mark which of the principles below summarize the opinions of Dieter Rams (DR) about design and which describe *chindogu* inventions (C).

- \_\_\_\_\_ It cannot have a very useful function.
- \_\_\_\_\_ It has to look visually appealing to users.
- \_\_\_\_\_ It must be designed to last for a long time.
- \_\_\_\_\_ It should be funny.
- \_\_\_\_\_ It must have a practical, useful function.

**LESSON TASK Presenting a Design**

**A** Work in a small group. Come up with your own idea for a *chindogu* invention. Make sure your idea meets the principles of *chindogu* in exercise F.

**B** In your group, work together to draw or create a picture of your design. Then use the outline below to play a three-minute talk.

- Introduction with a question to the audience. (Have you ever ... ?)
- Explanation of what your invention is called and how it works.
- Explanation of who might use it.

**C** Practice your presentation. Keep these points in mind.

Make sure:

- you display the picture of the design that you created
- that everyone in your group has the chance to say something
- you can deliver your talk in three minutes or less

**D** As a group, deliver your talk and answer any questions from other students. Then listen to the other groups present their ideas, and ask questions.

**E** Work with a partner. Discuss these questions.

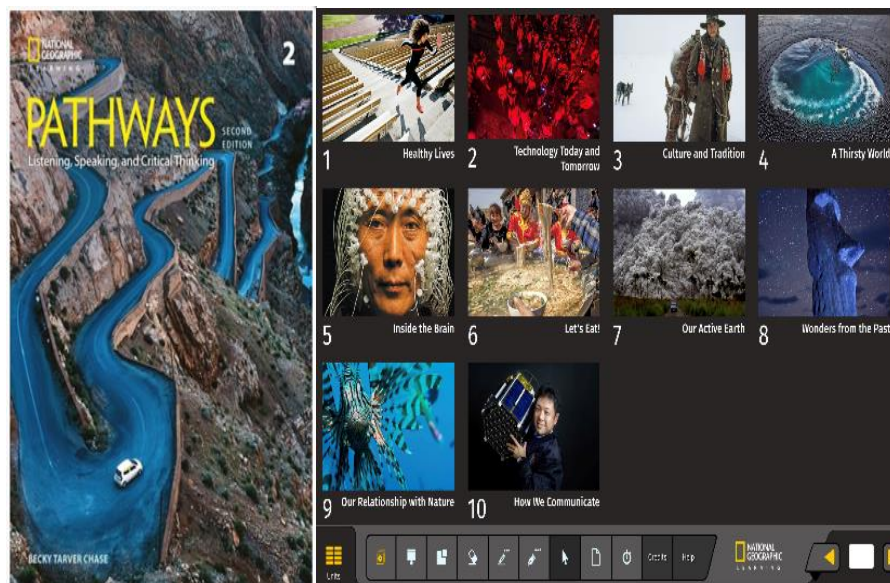
- Did all of the presented ideas meet the *chindogu* principles?
- Which of the ideas did you think was the most interesting? Why?
- What part of your presentation were you most pleased with? Why?
- What will you try to do better next time you give a presentation? Why?

**CRITICAL THINKING: EVALUATING**

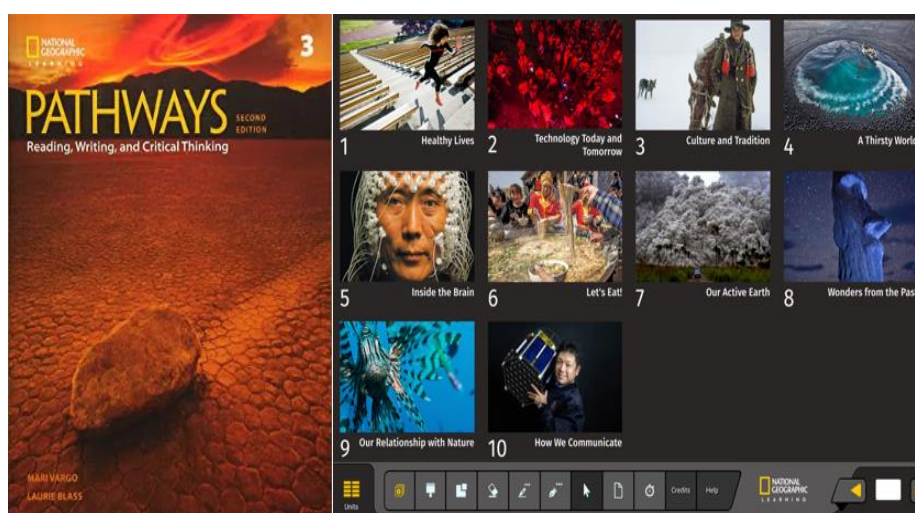
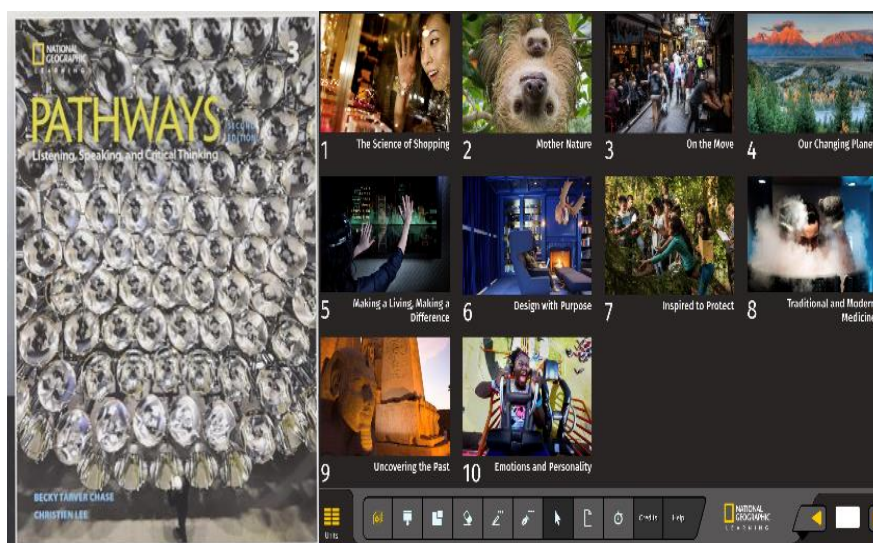
At UFLS-UD, since the 2021-2022 academic year, "Pathways" coursebooks have been selected as the official coursebooks for English-majored students at the Faculty of English and ELT students at the Faculty of Language Teacher Education. The Level 2 and Level 3 coursebooks

are used to teach students integrated skills in the first two years of their training programme. Level 2 coursebooks are for students at the B1 level (CEFR), and Level 3 coursebooks are for those at the B2 level (CEFR). Each level covers 2 categories: Reading, Writing, and Critical Thinking, Listening, Speaking, and Critical Thinking.

“Pathways” Level 2 illustrations:



Level 3 illustrations:



### *Challenges in teaching CT in the English language classroom*

CT plays a crucial role in enhancing students' cognitive abilities, problem-solving skills, and decision-making capabilities (Paul & Elder, 2006). However, it is not always easy to teach CT in English classrooms. Recent studies have investigated several factors that complicate the task of teaching CT in an English classroom. One significant challenge in teaching CT in English classrooms is limited instructional time and curriculum constraints. English classrooms often cover a broad range of content, including literature, grammar, and writing skills. These demands can leave minimal room for explicitly teaching CT skills (Ennis, 2011). Time constraints may lead to a focus on content coverage rather than providing opportunities for in-depth analysis and critical reflection. Regarding curricular constraints, Brookfield (2012) also found that English curricula may prioritize literary analysis and essay writing, leaving little room for explicit instruction in CT. Therefore, teachers may feel constrained by this gap in the syllabi.

Another challenge in applying CT in language classrooms is teachers' background training in CT. Researchers have the same voice over the lack of teacher training and expertise in regard to CT instruction. Many teachers may not have received adequate training in how to teach CT effectively. They may be uncertain about which methods and strategies to employ (Paul & Elder, 2006), or they may not know what techniques to use to promote CT in English classrooms (Halpern, 2014). This lack of training and expertise can hinder the incorporation of CT activities into lesson plans and limit the opportunities for students to develop their CT abilities. Therefore, a number of language teachers admit that they need training in theories and practices to teach critical thinking skills (Al-Kindi & Al-Mekhlaf, 2017; Masadeh, 2021).

Assessing and evaluating CT skills pose a considerable challenge for English teachers. According to Facione (2015), traditional assessment methods, such as multiple-choice tests or rote memorization, often fail to accurately measure students' CT abilities. Evaluating critical thinking skills requires the use of performance-based assessments that assess students' abilities to analyze, synthesize, and evaluate information critically. However, designing and implementing such assessments can be time-consuming and demanding for teachers. Additionally, inappropriate assessments in ELT courses trouble teachers in testing CT skills, as more focus is placed on linguistic knowledge rather than CT (Li, 2016). Teachers may feel compelled to "teach to the test", leaving limited time for the development of CT skills.

### *Research Questions*

The study was seeking to answer the following research questions:

1. How can the Pathways coursebooks be used to develop students' critical thinking?
2. What are the difficulties teachers face when using the Pathways coursebooks in teaching critical thinking?

## **Methods**

### *Pedagogical Setting & Participants*

This study was conducted at the University of Foreign Language Studies, University of Danang, one of Central Vietnam's top universities. The university has applied some innovations in teaching and learning; for example, Nguyen (2024) did a literature review to redefine translation in language classrooms at university. Vo (2023) also highlighted the importance of e-exams at university level. However, although CT is an important skill for students, it has only been used in English language practice classrooms for two years since the introduction of pathway coursebooks in 2021.

The research participants were all 8 teachers who had used the Pathways coursebooks in the Faculty of English and the Faculty of Foreign Language Teacher Education, the University of Foreign Language Studies, and the University of Da Nang. Among these teachers, four were in charge of teaching listening-speaking-critical thinking, and 4 were in charge of teaching reading-writing-critical thinking. The students were English or ELT majors in their first year and second year at the university.

### *Design of the Study*

This study employs a mixed-method approach to investigate how lecturers make use of the Pathways coursebooks to teach CT to students.

### *Data collection & analysis*

First, an online survey was sent to all the 8 teachers who had used the Pathways coursebooks in the Faculty of English and the Faculty of Language Education, the University of Foreign Language Studies, the University of Da Nang. After the survey, the researchers interviewed 04 senior teachers, who represented 4 pairs of teachers in charge of teaching the Listening-Speaking-Critical Thinking and the Reading-Writing-Critical Thinking. The semi-structured interviews were conducted with these 04 senior teachers individually to get their insights into how CT has been taught in their classroom when they use the Pathways coursebooks.

The online survey's data was calculated into percentages using the Google Survey. The semi-structured interviews were first coded into themes by one researcher. After that, the other two researchers checked and validated the coding themes.

The survey has 14 questions divided into 3 main parts. The first part (3 questions) were designed to collect the participants' background information. The second part (4 questions) focuses on participants' rating of the usefulness of using Pathways to teach the four language skills. The last part (7 questions) is to get participants' feedback on (i) the difficulties and challenges of using Pathways to teach CT and (ii) students' development of CT when using Pathways.

The interviews which were conducted to were coded and grouped into 3 main themes as in the survey. The first researcher who did not conduct the interviews did the coding. After that, the coding themes were validated by the other two researchers. The three researchers did the coding individually to ensure the reliability and validity of the coding process.

## **Results/Findings and discussion**

### *The usefulness of the Pathways coursebooks*

Both the survey and interviews indicate the usefulness of Pathways coursebooks in teaching CT. All the lecturers agreed that the coursebooks can help them teach CT effectively in their language classroom. Moreover, all the teachers believe that teaching CT is important in their language classroom. One teacher stated, "The curriculum has given me a fresh approach to teaching critical thinking (CT) in the language classroom, something I have not done before and have not seen in previous curricula. Pathways have encouraged me to change my teaching methods and focus more on how students think and reason, which is the foundation of their cognitive development. I highly appreciate the quality of the CT questions included in the coursebooks. These questions all require learners to have a more multidimensional perspective on natural, scientific, and social issues."

Among the four skills, teachers reported that coursebooks are the most useful for teaching CT in reading and speaking.

### *Difficulties teachers face when using the Pathways coursebooks in teaching CT*

In the interviews, teachers clarified that they had difficulties when the teachers' book did not provide instructions on how to make use of CT in teaching. They suggested that the teacher coursebooks of the Pathways should include this part to ensure that teachers can teach CT effectively, as one teacher said, "The publisher should include a guideline to teach CT, as the current teacher's book does not have this part". Another obstacle for teachers is students' lack of relevant background knowledge; thus, teachers must provide students with background knowledge related to the lesson before the main activities can be conducted.

### *Teachers' evaluation of students' development in CT in the Pathways coursebooks*

According to the survey, teachers believed their students developed CT using pathway coursebooks in their language classroom. However, this development is not measurable, which raises the question of how to optimize teaching CT and how to assess students' CT progress to help them maximize their levels of CT development.

### *Teachers' professional training in teaching CT in the Pathways coursebooks*

All the teachers indicated the need for professional training in teaching CT to assist them in teaching CT effectively. They recommended an online training program offered by the publisher to instruct them on how to use the coursebooks to teach CT: "I have not received any training in CT, so I believe online training will suit me the best to cope with the busy teaching schedule and understand how to use the coursebooks to teach CT".

Regarding difficulties in teaching CT in language classrooms, most teachers admitted that they did not have enough time to organize CT activities due to the inappropriate allocation of time for other language skills. As a result, they sometimes decided to remove CT activities to make room for language practice. This finding is in line with previous studies that consider limited instructional time to be one of the main challenges teachers often encounter when teaching CT in class. In contrast, teachers mentioned a lack of instructional materials that could be used as teachers' guides to help shape their teaching more effectively. This difficulty emerges from their recognition that the existing teachers' book is not effective in guiding their CT teaching practice.

Like previous studies (Al-Kindi & Al-Mekhlaf, 2017; Masadeh, 2021), the teachers in this study were interested in professional training in how to teach CT in the language classroom. Teachers need more training in how to ask questions, which may help to improve students' CT skills. Teachers also suggested that CT skills should be assessed in the final test, and there should be more training courses on how to design assessment rubrics for CT skills. In fact, teachers' requirements for CT training are reasonable, as few courses have been organized at the UFLS-UD to familiarize teachers with CT teaching and learning. Therefore, stakeholders should take into account prior training in CT teaching with the aim of effectively teaching CT embedded with other language skills in the classroom.



## Conclusion

CT is undeniably an important skill in educational programs for English-majored students and EFL students because it not only helps students refine their thinking but also fosters their personal growth to prepare them for entry into the workforce. This research is the very first attempt to raise the question of teaching CT in the English language classroom at the university level in Vietnam through the use of the Pathways coursebooks series to identify the challenges teachers encounter and propose some suggestions for improvement. Due to resource constraints, researchers were not able to collect abundant data to investigate the usefulness of using pathways in teaching CT. Further research into classroom practice should be conducted to provide more insights into how to use coursebooks effectively in teaching CT integrated into all four language skills.

## Acknowledgment

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## References

- Al-Kindi, N. S. & Al-Mekhlafi, A. M. (2017). The Practice and Challenges of Implementing Critical Thinking Skills in Omani Post-basic EFL Classrooms. *Canadian Center of Science and Education*, 10(12), 116-133.
- Brookfield, S. D. (2012). *Teaching for Critical Thinking: Tools and Techniques to Help Students Question Their Assumptions*. Jossey-Bass.
- D'Alessio, F. A., Avolio, B. E., & Charles, V. (2019). Studying the impact of critical thinking on the academic performance of executive MBA students. *Thinking Skills and Creativity*, 31, 275–283. <https://doi.org/10.1016/j.tsc.2019.02.002>.
- Ennis, R. H. (2011). The Nature of Critical Thinking: An Outline of Critical Thinking Dispositions and Abilities. *Journal of Research in Education*, 21(2), 1-23.
- Ennis, R. H. (2018). Critical thinking across the curriculum: A vision. *Topoi*, 37(1), 165–184
- Facione, P. A. (2011). Critical thinking: what it is and why it counts. *Insight Asses*. 2007, 1–23.
- Halpern, D. F. (2014). *Thought and knowledge: An introduction to critical thinking*. Psychology Press.
- Le, P.H.H, Nguyen, T.T.B. & Vo, T.L.H. (2020). *Critical Thinking in English Language Teaching*. Hue University Publishing House.
- Li, L. (2016). Integrating thinking skills in foreign language learning: what can we learn from teachers' perspectives? *Thinking Skills and Creativity*, 22, 273–288.
- Masadeh, T. (2021). EFL teachers critical thinking behaviors and the challenges facing them in

- classrooms. *Journal of English Language Teaching*, 10(2), 185-203.
- Marin, M. A., and Pava, L. (2017). Conceptions of critical thinking from university EFL teachers. *Engl. Lang. Teach.* 10, 78–88. <https://doi.org/10.5539/elt.v10n7p78>
- McPeck, J. E. (2016). *Critical thinking and education*. Routledge.
- Nguyen, T. T. H. (2024). Translation in Language Teaching - The Need for Redefinition of Translation. *AsiaCALL Online Journal*, 15(1), 19–33. <https://doi.org/10.54855/acoj.241512>
- Oliveri, M. E., & Markle, R. (2017). *Continuing a culture of evidence: Expanding skills in higher education*. Princeton, NJ: Educational Testing Service. <https://doi.org/10.1002/ets2.12137>
- Paul, R., & Elder, L. (2006). Critical thinking: The nature of critical and creative thought. *Journal of Developmental Education*, 30(2), 34-35.
- Paul, R., & Elder, L. (2014). *The miniature guide to critical thinking - concepts & tools* (7th ed.). Dillon Beach, CA: Foundation for Critical Thinking.
- Vo, T. K. A. (2023). E-exams in Vietnam's Higher Education: Students' Computer Efficacy and Attitudes. *AsiaCALL Online Journal*, 14(2), 62–79. <https://doi.org/10.54855/acoj.231425>
- Utriainen, J., Marttunen, M., Kallio, E., & Tynjälä, P. (2016). University applicants' critical thinking skills: The case of the Finnish educational sciences. *Scandinavian Journal of Educational Research*. <https://doi.org/10.1080/00313831.2016.1173092>.
- Willingham, D. T. (2007). Critical thinking: Why is it so hard to teach? *Arts Education Policy Review*, 108(4), 21-32.

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