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

Tran Tin Nghi[1*], Tran Huu Phuc[2]

[1] Ho Chi Minh City University of Industry and Trade, Vietnam

[2] University of Foreign Language Studies – The University of Da Nang, Vietnam

[*]Correspondence: Tran Tin Nghi, Ho Chi Minh City University of Industry and Trade, Vietnam. E-mail: nghitt@hufi.edu.vn

https://orcid.org/0000-0001-6549-3895

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ABSTRACT

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.

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

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

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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

Participant	**Frequency of Usage**
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

Participant	**Usage Patterns**	**Impact on Critical Thinking Skills**
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

Participant	**Utilization of Media in Language Learning**
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

Participant	**Practices in Navigating Digital Environments**
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

Participant	**Impact on Navigational Abilities**
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

Participant	Challenges
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

Participant	Opportunities
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

Participant	Ethical Concerns
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

Participant	Social Implications
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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Biodata

Dr. Tran Tin Nghi *currently works as the Dean of the Faculty of Foreign Languages, Ho Chi Minh City University of Industry and Trade, Ho Chi Minh City, Vietnam. He is interested in second language learning and teaching, corpus studies, literacy studies, and cognitive linguistics.*

Google Scholar ID:
https://scholar.google.com/citations?user=ynBV1b4AAAAJ&hl=en&oi=ao

Scopus Author ID: https://www.scopus.com/authid/detail.uri?authorId=57212464873

Assoc. Prof. Tran Huu Phuc *is currently the Rector of University of Foreign Language Studies – The University of Da Nang. He is also the Chairman of the CTESOL, a part of the Association of Vietnam Universities and Colleges. He holds a PhD in Applied Linguistics, granted by University of the West of England, Bristol, UK in 2013. His research interests are Teaching English as a Foreign Language, Corpus linguistics, and Cognitive Linguistics.*

Email: thphuc@ufl.udn.vn

Scopus Author ID: *https://www.scopus.com/authid/detail.uri?authorId=57212474083*

Google Scholar: *https://scholar.google.com.vn/citations?user=SPTkIOUAAAAJ&hl=en*

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 nghitt@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?*