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Exploring ChatGPT Literacy among Pre-Service English Teachers in Vietnam

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Abstract

This study investigates the ChatGPT literacy of Vietnamese pre-service EFL teachers. A mixed-methods approach was employed. An adapted questionnaire was administered to 112 pre-service English teachers at a Vietnamese university, followed by semi-structured interviews with 12 participants. Quantitative results revealed a moderate overall level of ChatGPT literacy, with the highest scores in benefits and limitations, and lowest scores in prompts and assessment. Qualitative findings also revealed teachers' solid understanding of ChatGPT's advantages and disadvantages, as well as their ability to critically evaluate its outputs and consider ethical issues in the context of language teaching. However, the teachers recognized their own limitations, especially in areas such as crafting effective prompts and designing assessments. These findings underscore the need for targeted training programs and policies to enhance Vietnamese pre-service EFL teachers' ChatGPT literacy.

1. INTRODUCTION

The rapid integration of artificial intelligence (AI) in education, particularly through large language models such as ChatGPT, has transformed how teachers and students engage with language learning (Bonner et al., 2023). ChatGPT tool offers opportunities for personalized feedback, content creation, automated assessment, and interactive language practice (Kohnke et al., 2023). As educational technologies become increasingly accessible, it is essential to ensure that both in-service and pre-service teachers possess the knowledge, skills, and ethical awareness necessary to effectively use AI tools in the classroom.

In response to the growing presence of ChatGPT in English language teaching and learning, recent studies have emphasized the importance of this tool's literacy, defined as the ability to understand, critically evaluate, and ethically apply it in pedagogical settings (Ma et al., 2024). This construct includes dimensions such as recognizing its benefits and limitations, crafting effective prompts, evaluating AI-generated responses, integrating ChatGPT into assessment, and maintaining ethical practices. Developing ChatGPT literacy among teachers, especially those still in training, is crucial for preparing them for a future where AI becomes an integral part of language instruction.

Despite the increasing attention to AI-based tools in education, research on pre-service teachers' preparedness and literacy levels remains limited, particularly in developing contexts such as Vietnam. While some studies have explored teachers' perceptions or acceptance of generative AI tools (Vo & Nguyen, 2024; Feng et al., 2025), few have provided empirical evidence on pre-service teachers' literacy.

To address this gap, this study aimed to answer the following question:

How do Vietnamese pre-service EFL teachers self-perceive their ChatGPT literacy in English language teaching and learning?

This study adds to the growing body of literature on AI literacy in language instruction by shedding light on the readiness of future teachers in Vietnam. The findings have implications for curriculum design, teacher training, and policy-making, particularly in equipping pre-service teachers with AI-related pedagogical competencies in a rapidly evolving technological landscape.

2. THEORETICAL OVERVIEW AND RESEARCH HISTORY

2.1. Benefits of Using AI/ChatGPT in Language Education

The rapid innovation of technology has introduced significant educational support for educators. AI helps educators adapt to the demanding nature of modern educational environments by fostering dynamic and responsive teaching practices (Zaim et al., 2024). Furthermore, the benefits of AI extend beyond classroom practice; it provides personal support for novice teachers whose limited experience or language proficiency may hinder their teaching confidence (Vera, 2023). AI helps adaptive teaching by creating questions and topics that are suitable for each student. This makes teachers feel more confident in their ability to meet the needs of a wide range of students (Admane et al., 2024).

Researchers have found that AI chatbots such as ChatGPT can be an assistant for language teachers and learners. ChatGPT is a generative AI language model developed by OpenAI, based on the transformer architecture, capable of understanding and producing human-like text through natural language processing (Roumeliotis & Tselikas, 2023). Its core functionality lies in its ability to generate coherent responses, summarize texts, provide explanations, and engage in conversation across diverse domains (Alomari, 2024). ChatGPT can help teachers make lesson plans, create example texts or exercises, and give students immediate comments on their writing. This could make them more

motivated and help them learn in a way that fits their needs (Pham & Le, 2024). According to Amin (2023), this tool lets teachers give students more personalized learning experiences, help them practice language in real time, and make better lesson plans. Qu and Wu (2024) add that using ChatGPT as a computer-assisted language learning tool may get students more interested in learning and help them do better in both online and offline classes. This contributes to increased teacher productivity and enhances individual student support. Teachers can leverage their teaching practice by the tool to facilitate tailored learning experiences, develop or adjust teaching resources, compose replies to student questions, and participate in cross-disciplinary education (Chiu, 2024).

In terms of assessment, AI tools such as ChatGPT have been employed for various academic purposes, including grammar checking, essay scoring, and language practice, often supported by chatbots and virtual assistants (Alharbi et al., 2024). Educators nowadays can interpret the data generated by AI systems, from which they could identify room for improvement and offer additional support. Amin (2023) shows that AI tools benefit EFL classrooms in general in two key ways: by recognizing assessment techniques and providing immediate feedback that fosters the clarity and effectiveness of educational materials.

2.2. Challenges of Using AI/ChatGPT in Language Education

Some educators actively adopt AI to improve educational practices and outcomes, while others express caution regarding the potential for overreliance on AI tools (Crawford et al., 2024). Besides, another challenge facing the teachers is the increase in academic dishonesty and plagiarism, since students might exploit AI tools to gain certain advantages (Werse & Smith, 2025). Athanassopoulos et al. (2023) add that teachers may face challenges in effectively integrating ChatGPT into their work due to unfamiliarity with the technology. In some cases, teachers may even struggle to differentiate between content generated by ChatGPT and that produced by learners, which can lead to difficulties in assessment. This act may cause time consumption for teachers, and more importantly, the risk of misjudgment. Even though one of the benefits of ChatGPT is personalized learning, this personalization demands the collection and analysis of a massive amount of personal data (Vargas-Murillo et al., 2023). Therefore, it raises serious concerns regarding data privacy and other personal information intrusiveness.

AI and chatbots, especially ChatGPT, are not only changing the way language is taught and learned, but they are also offering useful information about how to teach and learn languages. This is creating new possibilities and challenges in education (Baidoo-Anu & Ansah, 2023). It is very important for instructors to learn about AI in order to deal with the problems that come up when using AI in general and ChatGPT in particular. Because of this, EFL teachers will need a well-structured framework that takes into account the moral, intellectual, and teaching effects of using AI tools in the classroom.

2.3. AI/ChatGPT Literacy in Language Education

Ma et al. (2024) bring the idea of ChatGPT literacy to the field of language education, building on the idea of AI literacy as a whole. This level of literacy includes the skills needed to use ChatGPT successfully for teaching and learning languages, understand its limitations, evaluate its answers critically, use effective prompts, include it in assessments, and make sure it is used in an ethical way. Ma et al. (2024) come up with a theoretical framework based on this detailed description. It has six main dimensions: benefits, limitations, prompts, evaluation, ethics, and assessments. This framework is designed to help language teachers use ChatGPT to improve the quality of their lessons and the results that students get. The framework is different from general AI literacy since it takes into account the special features and teaching problems that come with larger language models like ChatGPT (Ma et al., 2024). Figure 1 shows how this framework is put together.

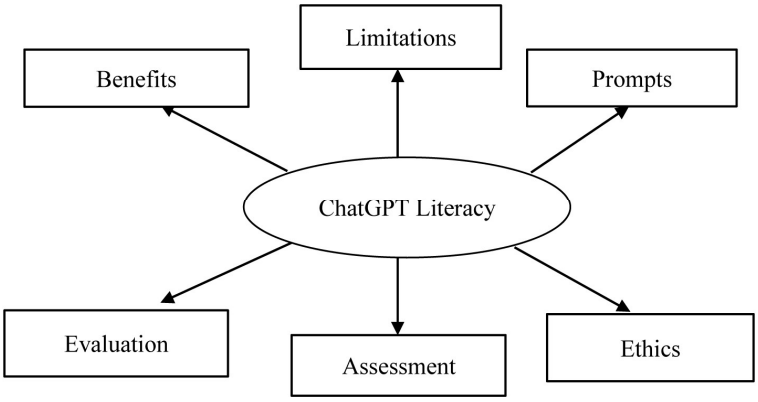

Figure 1. Theoretical Framework for ChatGPT Literacy in Language Education

Source: Ma et al. (2024)

Under Ma et al. (2024)'s framework, teachers need to learn how to both see the benefits of using ChatGPT in the classroom and deal with the problems that come with it. Baskara and Mukarto (2023) posit that maximizing the tool's effectiveness requires acknowledging its dual nature. For example, teachers should be aware that this tool can offer personalized comments and interesting materials, but also cause mistakes and cultural biases. Teachers and students can find new ways to solve problems when they are aware of these limits (Yang et al., 2024).

One important competency in this framework is prompt engineering, which means coming up with clear, pedagogically purposeful instructions to get the best responses from AI. Korzynski et al. (2023) state that the quality of the prompts has a notable effect on both how relevant ChatGPT's output. Developing strong skills in crafting effective prompts is crucial for both language educators and learners to engage productively with it. This process goes beyond simply assessing the output. It requires an understanding of how the wording and structure of a prompt can directly influence the quality and relevance of the response (Ciampa et al., 2023).

Evaluating ChatGPT's answers, especially in terms of how accurate and ethical they are, is another critical part. Given that this tool may sometimes produce responses that are inaccurate, inappropriate, or ethically questionable (Baskara & Mukarto, 2023), it is crucial for both teachers and learners to critically assess its outputs in terms of accuracy, relevance, and potential bias. To improve students' critical thinking and information literacy, teachers need to show students how to check AI-generated material and properly cite it (Kohnke et al., 2023).

It is also important to integrate assessments, since many teachers now use AI tools to make both formative and final tests. Moqbel and Al-Kadi (2023) state that teachers need to know the basics of AI in order to make tests that are true, reliable, and in line with learning goals. Improving teachers' competence in utilizing ChatGPT for assessment purposes is crucial to upholding academic integrity and unlocking its full educational value in language education (Amin, 2023).

Finally, ethical considerations are central to ChatGPT literacy. This includes safeguarding privacy, ensuring data security, and adhering to academic integrity standards. Teachers should be aware of the ethical concerns when using ChatGPT and think of ways to handle them. It is also important for both teachers and students to understand the privacy and safety risks of using this tool (Kohnke et al., 2023).

2.4. Previous Studies

Some research has been done on AI literacy in the area of language education. In China, Pan and Wang (2025) examined changes in AI literacy and how they were related to age and teaching experience

among 782 high school and middle school English teachers. Using data from questionnaires and semi-structured interviews, their study found four different levels of literacy: poor, moderate, good, and excellent. It also found strong links between teachers' AI literacy levels, their age, and the number of years they have been teaching. In addition, Liu et al. (2025) conducted in-depth semi-structured interviews with nine EFL practitioners working in China's shadow education sector to examine their perceptions and uses of AI. Their study uncovered a wide range of perspectives, varying levels of AI knowledge, diverse strategies for applying and evaluating AI tools, and ethical concerns.

Regarding ChatGPT literacy, to the best of the researcher, there are not many studies conducted on it. Ma et al. (2024) have carried out a mixed-method study to explore ChatGPT literacy of 492 people from all over the world, including university teachers, school teachers, and pre-service teachers. A questionnaire with both closed- and open-ended questions was employed. Quantitative results found that teachers had a medium to high level of ChatGPT literacy. Qualitative results also showed that ChatGPT was used at different steps of teaching, from planning the lessons to giving both formative and summative tests.

In short, while there has been some research on AI literacy, there remains a scarcity of research on ChatGPT literacy, especially among pre-service EFL teachers in the Vietnamese context. The present study aims to fill the gap by investigating this topic among Vietnamese pre-service EFL teachers.

3. DATA AND RESEARCH METHODS

3.1. Research Design

This study utilised a mixed-methods approach to achieve a thorough comprehension of the ChatGPT literacy among Vietnamese pre-service EFL teachers. A quantitative survey assessed general literacy levels, whereas qualitative interviews delved into individuals' perceptions of their ChatGPT literacy. This design facilitated data triangulation, guaranteeing both comprehensiveness and profundity in the results (Creswell, 2014).

3.2. Participants

Using convenience sampling, 112 Vietnamese pre-service EFL teachers enrolled in a TESOL 2 course at a public institution in Vietnam were recruited. The average age of the participants was 22 years, and they were all in their last year of college. In terms of gender, 68% (n=76) were female and 32% (n=36) were male.

3.3. Instruments

3.1.1. Questionnaire

The primary quantitative instrument used in this study was an adapted version of the ChatGPT Literacy questionnaire originally developed by Ma et al. (2024). There were two parts of the questionnaire: Demographics and ChatGPT literacy. Part 1 explored students' demographic information while part 2 included 26 items, organized into six dimensions of ChatGPT literacy: Benefits, Limitations, Prompts, Evaluation, Assessment, and Ethics.

Each item was scored on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The items were adapted and translated into Vietnamese to ensure clarity and cultural relevance for the local context. The questionnaire was validated by two experts in ELT. In addition, a pilot test was conducted with 10 pre-service teachers to ensure the linguistic accuracy and reliability of the questionnaire. Based on the pilot results, minor revisions were made to improve item clarity. The internal consistency of the questionnaire was verified using Cronbach's alpha, and all six dimensions showed acceptable reliability values (α ranging from .72 to .88).

3.1.2. Semi-Structured Interviews

To provide deeper insights into participants' perceptions of their ChatGPT literacy, a qualitative component was included via semi-structured interviews. A total of 12 participants were purposefully selected from the survey respondents. The interview protocol of 12 questions was developed to explore pre-service teachers' perceptions of their ChatGPT literacy as well as suggestions for future training or curriculum support. All the questions were checked by the experts and were piloted by 3 participants. Each interview lasted between 25 and 40 minutes and was conducted either in person or via video chat, based on the participant's option. All interviews were conducted in Vietnamese, audio-recorded with consent, and subsequently transcribed verbatim for the analysis.

3.4. Data Collection

The online questionnaire was distributed via Google Forms to the participants. Participation was voluntary, and informed consent was obtained at the beginning of the form. Following the questionnaire phase, 12 participants were invited for follow-up interviews, using purposive sampling. These participants were selected based on their variation in self-reported ChatGPT literacy levels and willingness to elaborate on their perceptions.

3.5. Data Analysis

The questionnaire data were analysed with IBM SPSS Statistics version 27. Descriptive statistics (mean scores, standard deviations) were calculated to determine the overall level of ChatGPT literacy and its sub-dimensions among participants. The following grading scale was adopted to interpret the questionnaire results: 1.00 - 1.80 = very low level, 1.81 - 2.60 = low level, 2.61 - 3.40 = moderate level, 3.41 - 4.20 = high level, and 4.21 - 5.00 = very high level. In addition, thematic analysis (Braun & Clarke, 2006) was applied to the interview transcripts. To ensure rigor and trustworthiness, two independent researchers coded the data.

4. RESULTS AND DISCUSSION

4.1. Results

4.1.1. Overall Results of Participants' Chatgpt Literacy Levels

Findings from descriptive statistics revealed a moderate level of Vietnamese pre-service EFL teachers's ChatGPT literacy, with an overall mean score of 3.30 (SD = 0.73), as presented in Table 1. Among the six dimensions of ChatGPT literacy, Benefits (M = 3.42, SD = 0.72) and Limitations (M = 3.39, SD = 0.75) received the highest mean scores. On the other hand, Assessment (M = 3.14, SD = 0.81) and Prompts (M = 3.15, SD = 0.80) scored the lowest. The Evaluation (M = 3.36, SD = 0.64) and Ethics (M = 3.29, SD = 0.76) dimensions fell in the middle range.

Table 1. Overall Descriptive Results of Participants' ChatGPT Literacy Levels

Dimension	M	SD	Level
Benefits	3.42	0.72	High
Limitations	3.39	0.75	Moderate
Prompts	3.15	0.80	Moderate
Evaluation	3.36	0.64	Moderate
Assessment	3.14	0.81	Moderate
Ethics	3.29	0.76	Moderate
Overall	**3.30**	**0.73**	**Moderate**

4.1.2. Benefits and Limitations

As shown in Table 2, the Benefits dimension obtained an overall mean of 3.42 (SD = 0.72), corresponding to a high level. Within this dimension, the highest mean score was for Item 1 with M = 3.51 (SD = 0.87), reflecting participants' ease of use. Conversely, the lowest score was for Item 4 with M = 3.32 (SD = 0.89), suggesting relatively lower perceived confidence in using ChatGPT to enhance language teaching.

Table 2. Descriptive Results of the Benefits Dimension

Benefits	M	SD	Level
1. I find it easy to use ChatGPT for language teaching	3.51	0.87	High
2. I know what benefits ChatGPT can bring to language teaching	3.44	0.74	High
3. I can use ChatGPT to help with language teaching	3.41	0.69	High
4. I can use ChatGPT to improve language teaching	3.32	0.89	Moderate
Overall	**3.42**	**0.72**	**High**

Table 3 presents the findings for Limitations. The overall mean was 3.39 (SD = 0.75), interpreted as moderate. Item 5 received the highest rating (M = 3.52, SD = 0.78), suggesting teachers' strong awareness of potential shortcomings. The lowest rating was Item 7 with M = 3.28 (SD = 0.80), indicating less confidence in their ability to handle these limitations.

Table 3. Descriptive Results of the Limitations Dimension

Limitations	M	SD	Level
5. I am aware of the limitations of using ChatGPT for language teaching	3.52	0.78	High
6. I am aware of the constraints of using ChatGPT as a primary tool in teaching	3.37	0.73	Moderate
7. I can overcome the limitations of using ChatGPT for language teaching	3.28	0.80	Moderate
8. I can combine other technology or resources with ChatGPT for efficiency	3.40	0.71	Moderate
Overall	**3.39**	**0.75**	**Moderate**

From the interviews, many participants reported that they could easily identify the advantages of ChatGPT, such as providing immediate feedback, generating examples, and supporting lesson preparation. However, they also expressed awareness of its limitations, particularly concerning inaccurate content and lack of cultural nuance. As one interviewee noted:

"ChatGPT is useful to save time in preparing activities, but I know sometimes its answers are not always reliable." (P3)

4.1.3. Prompts

The Prompts dimension, displayed in Table 4, had an overall mean of 3.15 (SD = 0.80), falling into the moderate range. Item 10 scored highest (M = 3.22, SD = 0.79). In contrast, Item 11 was lowest (M = 3.08, SD = 0.81), showing participants' uncertainty in refining prompts effectively.

Table 4. Descriptive Results of the Prompts Dimension

Prompts	M	SD	Level
9. I know how to write effective prompts to assist language teaching	3.12	0.75	Moderate
10. I know how to elicit useful responses from ChatGPT to assist teaching	3.22	0.79	Moderate
11. I know how to modify prompts based on ChatGPT-generated responses	3.08	0.81	Moderate
12. I know how to structure prompts to assist language teaching	3.17	0.73	Moderate
Overall	**3.15**	**0.80**	**Moderate**

A recurring concern revealed from the qualitative data was the difficulty of designing effective prompts. While most participants could use simple prompts, they admitted that more advanced prompt engineering was still challenging. One participant explained:

"I often don't know how to adjust my prompts to get exactly what I want for teaching." (P5)

4.1.4. Evaluation

Table 5 summarizes the Evaluation results. The overall mean was 3.36 (SD = 0.64), interpreted as moderate. Item 13 received the highest rating (M = 3.47, SD = 0.84). The lowest was Item 18 with M = 3.27 (SD = 0.82), reflecting limitations in adapting AI outputs.

Table 5. Descriptive Results of the Evaluation Dimension

Evaluation	M	SD	Level
13. I can evaluate the accuracy of the information provided by ChatGPT	3.47	0.84	High
14. I can evaluate the relevance of the information provided by ChatGPT	3.38	0.77	Moderate
15. I can identify potential biases in the information provided by ChatGPT	3.33	0.91	Moderate
16. I analyze critically the information provided by ChatGPT	3.39	0.76	Moderate
17. I verify the source of ChatGPT information when I have a doubt	3.34	0.83	Moderate
18. I know how to modify ChatGPT-generated information to suit my teaching	3.27	0.82	Moderate
Overall	**3.36**	**0.64**	**Moderate**

Most pre-service teachers highlighted the importance of evaluating ChatGPT outputs critically. They reported relying on their existing knowledge to check accuracy and appropriateness. For instance, a participant stated:

"I always double-check what ChatGPT gives me, especially when I plan to use it in class." (P9)

4.1.5. Assessment

As shown in Table 6, Assessment had an overall mean of 3.14 (SD = 0.81), interpreted as moderate. The highest score was Item 19 with M = 3.20 (SD = 0.81). The lowest was Item 22 (M = 3.08, SD = 0.85), suggesting weaker familiarity with AI-assisted test item creation.

Table 6. Descriptive Results of the Assessment Dimension

Assessment	M	SD	Level
19. I can adopt appropriate assessment involving the use of ChatGPT	3.20	0.81	Moderate
20. I know how to assess student learning if they are allowed to use ChatGPT	3.15	0.76	Moderate
21. I know how to use ChatGPT to help students produce output in assessment	3.12	0.75	Moderate
22. I know how to use ChatGPT to generate test questions for assessment	3.08	0.85	Moderate
Overall	**3.14**	**0.81**	**Moderate**

While some participants acknowledged ChatGPT's potential in generating test questions and providing formative feedback, they expressed uncertainty regarding how well AI-generated assessment items align with intended learning outcomes. Issues related to the validity, fairness, and reliability of such assessments were repeatedly raised.

One participant emphasized:

"ChatGPT can give me questions quickly, but I am not sure if those questions really match the learning outcomes we set." (P2)

4.1.6. Ethics

The Ethics dimension (Table 7) achieved an overall mean of 3.29 (SD = 0.76), categorized as moderate. Item 26 recorded the highest score (M = 3.46, SD = 0.77), while Item 25 had the lowest (M = 3.18, SD = 0.79), indicating room for growth in awareness of potential misuse.

Table 7. Descriptive Results of the Ethics Dimension

Ethics	M	SD	Level
23. I am aware of privacy when I use ChatGPT	3.20	0.73	Moderate
24. I am aware of information security issues when I use ChatGPT	3.32	0.76	Moderate
25. I am aware of the abuse of using ChatGPT	3.18	0.79	Moderate
26. I comply with ethical principles when I use ChatGPT	3.46	0.77	High
Overall	**3.29**	**0.76**	**Moderate**

Participants expressed their awareness of ethical aspects such as plagiarism, over-reliance, and data privacy. Some emphasized the need to use ChatGPT as a supporting tool rather than a replacement for teacher expertise. One teacher remarked:

"We should not depend on ChatGPT too much; we need to use it responsibly." (P7)

Finally, most participants believed that formal training and curriculum support would help them improve their ChatGPT literacy. They expressed interest in workshops and hands-on practice sessions to build skills in prompts, evaluation, and assessment. For example, one participant suggested:

"If the university can give us training, we will know better how to check for accuracy, avoid plagiarism, and design prompts that work for teaching." (P11)

4.2. Discussion

The findings of this study revealed that Vietnamese pre-service EFL teachers demonstrated a moderate level of ChatGPT literacy across the six examined dimensions. This result is broadly consistent with previous research that has highlighted both the promise and the challenges of integrating AI tools into language education (Ma et al., 2024; Kohnke et al, 2023). The moderate scores suggest that while pre-service teachers are beginning to explore ChatGPT's educational potential, they are still developing the deeper competencies required for sustained and responsible use. This trend reflects a transitional stage: many participants are confident in identifying benefits and recognizing limitations, but remain less experienced in advanced areas such as prompt engineering and assessment design. This aligns with studies reporting that teachers often approach AI tools cautiously, balancing enthusiasm with concerns about pedagogical fit and ethical use (Chan & Lee, 2023; Kim, 2025).

The qualitative findings shed light on how Vietnamese pre-service EFL teachers perceive their ChatGPT literacy in language teaching and learning. Overall, participants expressed a well-rounded understanding of the potential of this tool to support lesson preparation, provide feedback, and enhance classroom engagement, as well as its limitations in language teaching. However, they also acknowledged gaps in their own skills, particularly in prompt engineering and assessment design, which they perceived as barriers to fully exploiting the tool. Many participants also emphasized the importance of critical evaluation and ethical awareness, noting concerns about accuracy, overreliance, and student misuse. These perspectives highlight that while pre-service teachers recognize the educational value of ChatGPT, they see their current literacy as emerging rather than fully developed, requiring structured guidance and institutional support. Their reflections align with previous studies (Ma et al., 2024; Liu et al., 2025), stressing that teacher preparation programs need to embed AI literacy training to ensure responsible and pedagogically effective integration of AI into language education.

5. CONCLUSION AND POLICY IMPLICATIONS

This study explored Vietnamese pre-service EFL teachers' ChatGPT literacy by employing a mixed-methods design that combined survey and semi-structured interviews. The quantitative results indicated that participants generally demonstrated a moderate level of ChatGPT literacy across all six dimensions, with the highest scores in Benefits and Limitations and the lowest in Prompts and Assessment. The qualitative results also revealed that while the teachers have a thorough understanding of both its advantages and challenges, they are less confident in prompt construction and assessment integration.

The results of this study have several pedagogical and institutional implications. Vietnam's teacher education programmes should include training in AI and ChatGPT literacy to make sure that future teachers have both technical skills, such as prompt engineering and assessment design. Critical skills, such as knowing how to use AI and ChatGPT in an ethical way and recognising bias are also important. Additionally, the findings show that institutions need to have policies and workshops for teachers that encourage them to use AI tools responsibly in the classroom. These kinds of programmes can help teachers use ChatGPT effectively while also protecting the dignity of the classroom.

This study has some flaws of its own. *First,* the participants were just 112 pre-service teachers from one university. This means that the results can not be generalized for other situations. *Second,* the questionnaire's reliance on self-reported data may not fully show how well people actually know how to use ChatGPT. *Third,* while the qualitative part gave useful information, it was limited to a few people, so it might not show how different the views are of all Vietnam's pre-service teachers.

To make the results more general, larger and more varied samples from more than one school could be used in future studies. Longitudinal research through different steps of teacher education would also help us understand how ChatGPT literacy changes over time. Experimental or intervention-based studies could also look at how focused training programmes affect ChatGPT literacy in certain areas, especially when it comes to Prompts and Assessment. Finally, more study should be done on how using ChatGPT affects learning in the classroom, specifically on how teachers use what they know about ChatGPT to improve their teaching and how their students learn.

DECLARATIONS

Funding: This research received no external funding.

Institutional Review Board Statement: Ethical review and approval were waived for this study because the host institution does not require formal ethics committee review for non-invasive educational research involving adult participants. Nevertheless, the study adhered to the ethical principles of voluntary participation, informed consent, confidentiality, and anonymity.

Transparency: The manuscript presents an accurate and transparent account of the research. All essential aspects of the study have been reported.

Competing Interests: There are no competing interests.

Authors' Contributions: The author was in charge of all research processes, including research design, methodology, writing the original draft, data analysis, and manuscript preparation.

Disclosure of AI Use: The author utilized ChatGPT solely for language enhancement, including grammar correction and editorial support. The author remained responsible for reviewing and verifying all AI-assisted content.

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