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# Vietnamese secondary school EFL students' motivation and attitudes toward using ChatGPT for vocabulary learning

**Thuan Anh Pham[1], Cuong Huy Pham[2]**
[1]Department of English, Huynh Van Nghe Secondary School, Ho Chi Minh City, Vietnam
[2]Faculty of English, Ho Chi Minh City University of Economics and Finance, Ho Chi Minh City, Vietnam

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**ABSTRACT**

The escalating adoption of artificial intelligence (AI) in language education, particularly ChatGPT, has drastically altered vocabulary teaching and learning practices in secondary schools in Vietnam, where rote learning and teacher-centered approaches are common norms. This study examines secondary school students' motivation and attitudes toward using ChatGPT for vocabulary development. A mixed-methods design was employed, drawing on a survey with 208 ninth-grade students and semi-structured interviews with eight of the respondents. The survey data revealed the students' moderate degrees of motivation to use ChatGPT, with extrinsic motivation surpassing intrinsic motivation. Their attitudes were generally positive, showing relatively high enjoyment and low anxiety in utilizing ChatGPT for vocabulary learning. The students considered ChatGPT a useful and convenient resource and expressed willingness to continue using it despite their concerns over its reliability and the risk of over-reliance. The interview data augmented these patterns, highlighting ChatGPT's interactivity and flexibility while emphasizing the continued importance of teachers' classroom support. This study provides corroborating evidence for ChatGPT as a versatile complementary tool for vocabulary learning that fosters learners' motivation and positive attitudes. However, its adoption requires careful integration with teacher guidance and AI literacy training.



***Corresponding Author:***

Cuong Huy Pham
Faculty of English, Ho Chi Minh City University of Economics and Finance
141 - 145 Dien Bien Phu, Gia Dinh Ward, Ho Chi Minh City, Vietnam
Email: cuongph@uef.edu.vn

## 1. INTRODUCTION

Vocabulary is widely recognized as a foundation for language learning as it contributes to enhancing language skills, such as reading, writing, speaking, and listening skills, by serving as the tool for receiving and conveying messages [1], [2]. A learner's lexical repertoire can be an evident indicator of how well they are doing and a good general measure of how well they speak a language [3]. The vocabulary employed in spoken and written English constitutes a crucial aspect of language learning. However, most English as a foreign language (EFL) learners find it challenging to acquire new words due to their limited exposure to input in the target language, especially in a non-English speaking environment [1], [4]. In the context of Vietnam, classroom practices remain teacher-centered and exam-oriented [5]. Learners tend to rely on rote memorization and have scarce opportunities for language use in real-world settings, impeding their vocabulary retention [6], [7]. These constraints result in minimal contextualized learning and affect their long-term vocabulary retention [2].

The last few years have witnessed the proliferation of educational technologies, particularly artificial intelligence (AI)-powered platforms and tools for language learning and teaching [8], [9]. ChatGPT,

in particular, exposes learners to words in context through authentic examples and customized explanations, thus engaging them in more interactive and active learning processes [9], [10]. Although Woodrow [11] acknowledges the value of technology in closing the gap between classroom and real-world language use, there was an increasing need to know how such tools particularly influence learners' ongoing involvement, especially in contexts where motivation tends to drop over time. For instance, the growing integration of ChatGPT into language education in Vietnam has challenged pedagogical strategies as there has been insufficient empirical data regarding its classroom implementation [12]. The versatility of AI tools for Vietnamese secondary school learners in language learning is still not thoroughly investigated, particularly considering their motivation and attitudes toward utilizing ChatGPT for vocabulary practice.

These pedagogical and technological constraints on teaching and learning practices in Vietnam may undermine learners' motivation and attitudes toward engaging in vocabulary development [13], [14]. Motivation is a fundamental psychological construct driving learners to initiate, sustain, and direct goal-oriented behaviors and boosting their engagement and resilience in the learning process, especially in AI-mediated settings [15], [16]. There have been various models and classifications of motivation drawing on research in multiple strands and contexts. In this study, motivation entails intrinsic and extrinsic components [17], with the former referring to learners' sense of identity and fulfillment within themselves and the latter being instigated by external rewards, such as grades or praise, rather than internal values that foster their course of action [11]. These two types of motivation synergically influence learners' cognitive appraisal of their learning circumstances, decision-making, and levels of involvement in their learning [15], [17]. Further, learners' attitudes are largely attributable to their achievements and success in language learning, particularly in AI-mediated contexts [18], [19]. Attitudes are usually examined in three intertwined aspects depicting learners' behavioral, cognitive, and emotional regulation [20]. These dimensions focus on their specific learning activities, the mental processes underpinning their decision to commit themselves to such activities and the amount of effort they expend, and their feelings throughout their learning endeavors [21], [22].

While abundant research has brought to the fore the affordances and challenges confronting language learners in utilizing AI tools to enhance their learning efficiency and outcomes, their behavioral, cognitive, and emotional responses to the shifts in their learning conditions and their motivation to indulge themselves in the learning process remain relatively underexplored [16], [23]. In addressing this research gap, the present study examines secondary school EFL learners' motivation and attitudes toward using ChatGPT for vocabulary learning. It is guided by the following two research questions:

- To what extent does using ChatGPT motivate ninth-grade students in vocabulary learning? (RQ1)
- What are ninth-grade students' attitudes toward learning vocabulary through ChatGPT? (RQ2)

## 2. METHOD

This study draws on the first author's graduate research project. It adopted an explanatory sequential mixed methods design [24] to investigate secondary school EFL students' motivation and attitudes toward using ChatGPT in vocabulary learning. The choice of school was determined through convenience sampling, as the first author worked full-time there. Two phases of data collection were undertaken, including a survey with 208 respondents in phase 1, as in Table 1 and semi-structured interviews with eight students (labeled as S1 to S8) who participated in the survey and volunteered to provide more input in phase 2. Prior consent was elicited from all stakeholders, with the authors' commitment to confidentiality and anonymity. Before the data collection, students were given a four-week familiarization period during which they used ChatGPT to engage in structured and gradually scaffolded vocabulary activities. They used this AI tool both in class, under teacher guidance, for 5-10 minutes per session and outside classrooms for independent practice. Learning activities progressed from relatively simple tasks, such as writing word definitions and example sentences, to more cognitively demanding ones, including generating synonyms and collocations. Students' ChatGPT use was monitored through learning logs, ensuring that they had comparable experience using ChatGPT prior to answering the questionnaire and participating in interviews.

The questionnaire, consisting of 25 items, aimed to obtain data related to participants' levels of intrinsic (5 items) and extrinsic (5 items) motivation and three dimensions of attitude (5 items per dimension) toward utilizing ChatGPT in learning vocabulary based on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A pilot study was initially conducted with 20 students who were not included in the main study. Feedback from the pilot participants was used to refine and adjust the wording for better comprehensibility and clarity, ensuring the validity of all questionnaire items. To augment the quantitative results, the semi-structured interviews elicited further data on students' employment of AI tools in their vocabulary practice. The questionnaire and all interviews were in the participants' mother tongue to facilitate their understanding and expression of ideas. Before each interview, the first author explained the nature of data gathering for the project, which would not cause any potential harm to the students.

The questionnaire responses were loaded into SPSS for descriptive and inferential statistical analysis. The students' motivation levels and attitudes were presented in mean scores and standard deviation. The mean values were interpreted according to five ranges, including 1.0-1.8 (strongly disagree), 1.81-2.60 (disagree), 2.61-3.40 (moderately agree), 3.41-4.20 (agree), and 4.21-5.0 (strongly agree). The reliability test was applied to the entire questionnaire with a Cronbach's alpha of 0.873, indicating a high level of internal consistency. Construct validity was secured through the authors' adherence to existing literature, addressing the intrinsic and extrinsic properties of motivation [17] and the three components of attitudes, namely affective, behavioral, and cognitive [20]. Deductive thematic analysis was applied to interview data guided by Braun and Clarke [25]. This involved developing familiarity with the data, aligning it with the pre-assigned theoretical themes, and reporting findings with relevant excerpts of qualitative data.

Table 1. Demographic information of the survey respondents (N=208, aged 15)

| Variables | Category | N | Percentage (%) |
|---|---|---|---|
| Gender | Male | 90 | 43.3 |
| | Female | 118 | 56.7 |
| ChatGPT use | Never | 11 | 5.4 |
| | Rarely | 12 | 5.7 |
| | Sometimes | 16 | 7.7 |
| | Several times a week | 78 | 37.5 |
| | Daily | 91 | 43.7 |

## 3. RESULTS AND DISCUSSION

### 3.1. Students' motivational responses to vocabulary learning with ChatGPT

Table 2 shows students' levels of motivation to use ChatGPT as a tool for vocabulary practice. The overall average score was 3.34, meaning that students were moderately motivated. Their intrinsic motivation was at a moderate level, with a mean score of 3.24 (SD=0.789), while the extrinsic motivation had a higher mean score of 3.43 (SD=0.807).

Regarding students' intrinsic motivation in Table 3, the overall mean score was 3.24 (SD=0.789), implying that they valued the motivational features of ChatGPT in vocabulary learning but did not necessarily view this as an internal driver. The five items (1-5) focus on students' enjoyment, personal interest, inspiration, concentration, and confidence in using ChatGPT for vocabulary practice, respectively. Item 2 had the highest mean score, showing their personal interest in using ChatGPT for vocabulary practice. However, ChatGPT might distract them from learning, with item 4 having the lowest mean score.

Table 2. Descriptive statistics of motivation subscales

| Motivation subscales | Mean | SD | Levels |
|---|---|---|---|
| Intrinsic | 3.24 | 0.789 | Moderate |
| Extrinsic | 3.43 | 0.807 | High |
| Total (N=208) | 3.34 | 0.744 | Moderate |

Table 3. Students' intrinsic motivation to learn vocabulary with ChatGPT

| Items | Statements | N=208 | |
|---|---|---|---|
| | | M | SD |
| 1 | I enjoy learning vocabulary using ChatGPT. | 3.31 | 0.934 |
| 2 | Using ChatGPT makes vocabulary learning more interesting. | 3.41 | 0.954 |
| 3 | I feel more inspired when I use ChatGPT to learn vocabulary. | 3.12 | 1.034 |
| 4 | ChatGPT helps me stay focused when learning new words. | 3.09 | 1.005 |
| 5 | Learning vocabulary with ChatGPT helps me feel more confident. | 3.25 | 0.980 |
| | Total (N=208) | 3.24 | 0.789 |

The interview data show the extent to which ChatGPT transformed students' learning experiences into something more interactive and playful. S1 stated, "*I feel excited and comfortable because it helps me to learn vocabulary easily. Besides, it's flexible and interactive.*" S3 echoed this by highlighting the playful dimension of ChatGPT, "*ChatGPT can make various games that are so alluring to me. Instead of learning by heart boringly, choosing both playing and studying is better*." These perspectives revealed the intrinsic enjoyment that ChatGPT introduced to vocabulary learning. Conversely, S5 mentioned that ChatGPT was helpful, but its lack of real-life interaction undermined his motivation: "*One of the difficulties I've faced when using ChatGPT to learn vocabulary is it doesn't provide real-life interaction.*" In some instances, this

AI tool might fail to respond to students' specific needs, as complained by the students: "*Sometimes the answers are too general or not exactly what I need*" (S7) or "*It always gives a lot of general information, which is a bit overwhelming for me*" (S8). These insights illustrate that while ChatGPT could spark interest, sustained motivation depended on the relevance and authenticity of the content provided.

The analysis of extrinsic motivation in Table 4 indicated that students exhibited a primarily positive disposition toward vocabulary learning, with an overall mean score of 3.43 (SD=0.807). The five items (6-10) focus on external motivators such as scores, vocabulary improvement, learning effectiveness, praise, and convenience, respectively. Prominent contributors to students' extrinsic motivation include the convenience of ChatGPT (item 10, mean=3.65, SD=1.024), its effectiveness (item 8, mean=3.57, SD=0.951) and the desire to get better academic results (item 6, mean=3.43, SD=1.127).

These indicators of extrinsic motivation were highlighted in the interviewees' remarks. S2 noted, "*ChatGPT has helped me a lot in learning vocabulary by suggesting new words based on topics that I'm interested in, generating quizzes, and helping me use them in real-life contexts.*" Similarly, S5 saw the combined value of ChatGPT as a source of excitement and convenience, stating that "*I feel excited and find it's convenient. Because I can discover new words without spending any money.*" The practicality of ChatGPT as a vocabulary learning tool was consistently emphasized, as "*it explains meanings, gives synonyms and antonyms, and shows how to use words in sentences*" (S1), "*ChatGPT supports me with synonyms and antonyms, with real-life examples, so it's very practical*" (S4), and "*I prefer combining ChatGPT and traditional methods together, because this combination is more efficient than individual methods*" (S5). These reflections indicate that ChatGPT's effectiveness was widely acknowledged.

Table 4. Students' extrinsic motivation to learn vocabulary with ChatGPT

| Items | Statements | N=208 | |
|---|---|---|---|
| | | M | SD |
| 6 | I use ChatGPT because I want to get better scores in English. | 3.43 | 1.127 |
| 7 | I can improve my vocabulary with the support of ChatGPT. | 3.26 | 1.073 |
| 8 | I feel that ChatGPT supports my learning effectively. | 3.57 | 0.951 |
| 9 | When I can answer vocabulary questions using ChatGPT, I get praise. | 3.24 | 1.207 |
| 10 | I think ChatGPT makes vocabulary learning more convenient. | 3.65 | 1.024 |
| | Total (N=208) | 3.43 | 0.807 |

### 3.2. Students' attitudes toward utilizing ChatGPT in vocabulary learning

Table 5 presents the descriptive statistics of students' attitudes toward utilizing ChatGPT in vocabulary learning. The overall mean score of 3.45 indicates students' positive attitudes. The two subscales of cognitive and emotional attitudes were at high levels, whereas the behavioral dimension fell into the moderate level.

The survey results show that students' behavioral attitudes were at a moderate level (M=3.39, SD=0.830), suggesting a relatively positive orientation in their actual use of ChatGPT for vocabulary practice, as seen in Table 6. Five items (11-15) in the behavioral subscale concern students' continued utilization, recommendations to peers, autonomous practice with ChatGPT, their action plans, and their proactive participation in ChatGPT-mediated activities. Items 11 and 14 had mean scores of 3.56 (SD=0.958) and 3.43 (SD=1.027), respectively, indicating students' decision and commitment to future use of this tool to support their vocabulary development.

Table 5. Descriptive statistics of students' responses to attitude subscales

| Attitude subscales | Mean | SD | Levels |
|---|---|---|---|
| Behavioral | 3.39 | 0.830 | Moderate |
| Cognitive | 3.56 | 0.803 | High |
| Emotional | 3.41 | 0.847 | High |
| Total (N=208) | 3.45 | 0.753 | High |

Table 6. Students' behavioral attitudes toward vocabulary learning with ChatGPT

| Items | Statements | M | SD |
|---|---|---|---|
| 11 | I will continue using ChatGPT to support my vocabulary learning. | 3.56 | 0.958 |
| 12 | I would recommend ChatGPT to my friends for improving their English vocabulary. | 3.38 | 1.037 |
| 13 | I often try to use ChatGPT when I study vocabulary on my own. | 3.30 | 1.026 |
| 14 | I plan to use ChatGPT more frequently in the future. | 3.43 | 1.027 |
| 15 | I participate more actively in vocabulary activities in class when ChatGPT is involved. | 3.26 | 1.033 |
| | Total (N=208) | 3.39 | 0.830 |

The interview data confirmed students' regular utilization of this tool for vocabulary learning, as noted by S2, "*I use it almost every day, especially when I read texts and find new words.*" The versatility of ChatGPT is an advantage, as S5 stated, "*I would recommend ChatGPT to my classmates for vocabulary learning, because it saves time and makes learning more interesting.*" This endorsement indicates that students viewed ChatGPT as socially acceptable and beneficial, reinforcing its legitimacy as a learning aid. However, not all students agreed on the rewarding effects of ChatGPT, noting that "*Using ChatGPT usually makes me lazier, becoming passive and no more creative in thinking*" (S6). This provokes a tension in which ChatGPT facilitated immediate access to knowledge but did not always promote active learning behaviors and creativity.

On the cognitive subscale in Table 7, items 16-20 revolve around students' belief and evaluation of the effectiveness of ChatGPT in their vocabulary learning. The overall mean score of cognitive attitudes was 3.56 (SD=0.803), revealing students' perceived usefulness. Item 18 had the highest mean score of 3.79 (SD=0.925), followed by item 17 (M=3.69, SD=0.975) and item 16 (M=3.59, SD=0.962), all denoting students' acknowledgement of the supporting role of ChatGPT in their vocabulary practice.

Table 7. Students' cognitive attitudes toward vocabulary learning with ChatGPT

| Items | Statements | M | SD |
|---|---|---|---|
| 16 | I believe ChatGPT is an effective tool for learning vocabulary. | 3.59 | 0.962 |
| 17 | I think using ChatGPT helps me understand vocabulary better. | 3.69 | 0.975 |
| 18 | ChatGPT provides useful explanations and examples for vocabulary learning. | 3.79 | 0.925 |
| 19 | I believe ChatGPT supports independent vocabulary learning better than traditional methods. | 3.37 | 1.052 |
| 20 | I think ChatGPT can improve my long-term vocabulary retention. | 3.37 | 1.006 |
| | Total (N=208) | 3.56 | 0.803 |

The interview data reinforced the survey results, with students consistently reporting that "*ChatGPT helps me by explaining meanings, giving synonyms and antonyms, and showing how to use the word correctly*" (S1), "*It shows different contexts of a word, which makes it easier to remember and use correctly*" (S8) or "*ChatGPT supports me with synonyms and antonyms, with real-life examples, so it's very practical*" (S4). Conversely, the relatively low mean scores of items 19 and 20 suggest that while students recognized ChatGPT's immediate benefits, they were hesitant about its role in fostering independent learning and vocabulary retention.

The survey results for the emotional subscale in Table 8 were also positive, with an overall mean score of 3.41 (SD=0.847). Students' emotional responses concern their degree of comfort, enjoyment, anxiety, comparison with traditional learning methods, and confidence. Students' comfort (item 21), reduced anxiety (item 23), and enjoyment (item 22) in interacting with ChatGPT were reported at high levels, with mean scores of 3.53 (SD=1.021), 3.51 (SD=0.968) and 3.41 (SD=1.008), respectively.

The interviews provided corroborating data for these findings. While S2 confided that "*since I'm an introvert, asking ChatGPT is less embarrassing than asking my teachers*," S8 reported that "*I feel relaxed and confident because it helps me understand difficult words.*" These reflections suggest how ChatGPT mitigated the social anxiety often associated with learning in classrooms without AI mediation.

Table 8. Students' emotional attitudes toward vocabulary learning with ChatGPT

| Items | Statements | M | SD |
|---|---|---|---|
| 21 | I feel comfortable using ChatGPT to learn English vocabulary. | 3.53 | 1.021 |
| 22 | I enjoy interacting with ChatGPT when learning new words. | 3.41 | 1.008 |
| 23 | ChatGPT reduces my anxiety when learning difficult vocabulary. | 3.51 | 0.968 |
| 24 | Using ChatGPT makes vocabulary learning more enjoyable than using traditional methods. | 3.32 | 1.001 |
| 25 | I feel more confident about my vocabulary learning when I use ChatGPT regularly. | 3.28 | 0.973 |
| | Total (N=208) | 3.41 | 0.847 |

### 3.3. Discussion

Regarding the first research question, students' motivation was quantitatively stronger when it was shaped by external factors such as academic achievement, recognition, and convenience, rather than by purely internal enjoyment or personal interest. The interview data corroborated this pattern, with students consistently emphasizing the practical benefits of ChatGPT, while fewer students highlighted personal enjoyment as the driving force behind their learning. These findings align with the recognition of extrinsic motivators such as the convenience, accessibility, and flexibility afforded by ChatGPT [10], [26], [27]. Research in the context of Vietnam similarly affirmed that students utilized ChatGPT mainly for exam preparation and vocabulary enhancement due to its cost-effectiveness and efficiency [12], [28]. Accordingly,

secondary school teachers in Vietnam should pay more attention to fostering learners' intrinsic motivation by developing a positive learning environment and classroom strategies that arouse their interest in learning English, particularly vocabulary, drawing on local resources such as bilingual newspapers, storybooks, or captioned movies, and local role models of successful learners. This will enrich their approaches to language learning and help them realize that a good command of English is achievable with sufficient effort.

The second research question investigated students' attitudes toward employing ChatGPT for vocabulary practice. The quantitative results show that students exhibited positive emotional responses and perceived utility of ChatGPT, although their actual learning behavior was comparatively moderate. Behaviorally, a clear gap emerged between intention and action. While students reported their desire to continue using ChatGPT and even introduced the tool to their friends, these intentions did not always lead to action. This inconsistency echoes contemporary research that points to the irregularity in students' learning behavior given the mediation of ChatGPT [29]–[32]. On the emotional side, students commented on the comfort and reduced anxiety derived from the support of ChatGPT. These findings resonate with existing literature, which shows that ChatGPT reduced writing anxiety by providing private feedback and students' perceived usefulness correlated with emotional comfort [33], [34]. In the same vein, students' cognitive attitudes toward ChatGPT use denoted the perceived value of this tool. This acknowledgement of the rewards of this tool was also identified in other studies in which students explicitly extolled the benefits and versatility of AI technologies in language learning [10], [29], [35]. The behavioral discrepancy among learners requires language teachers to develop classroom activities that involve learners' development of learning plans and concrete activities that actualize them. To this end, a task-based or project-based approach that promotes problem-solving could be utilized, contributing to proactively engaging learners in the learning process and enabling them to be more accountable for their learning.

## 4. CONCLUSION

The study shows that students exhibited a moderate overall level of motivation in using ChatGPT for vocabulary learning, with their extrinsic motivation being slightly higher than intrinsic motivation. With the support of ChatGPT, they viewed their personal enjoyment and interest in vocabulary development, attainment of higher scores, learning efficiency, and convenience as their major drivers. Students' attitudes toward ChatGPT were positive across the three components. Behaviorally, students expressed their willingness to use the tool regularly and recommend it to peers. Cognitively, they perceived ChatGPT as a useful, efficient, and convenient resource. Emotionally, they reported a relatively high degree of enjoyment, comfort, and reduced anxiety when practicing vocabulary with ChatGPT. These findings show that AI tools can be used to foster learners' motivation and positive attitudes toward vocabulary learning in contexts traditionally characterized by exam-oriented and teacher-centered instruction. Teachers can leverage ChatGPT's emotional and cognitive benefits while addressing behavioral restrictions, fostering more active and long-term learning practices. However, students' concerns about the passivity provoked by ChatGPT use and over-reliance on AI underline the importance of developing their AI literacy and their ability to appraise the affordances and limitations of AI tools.

The study reiterates the significance of taking advantage of technological innovations in augmenting existing pedagogical practices. As the integration of ChatGPT into language teaching and learning is an inevitable trend due to the predominant presence of AI in language education, it should be accompanied by supportive policies, teacher training, and investment in digital facilities. The familiarization process described in this study could be a useful example through which teachers help students develop efficient and effective use of AI tools. This enables them to identify the merits of such technological advances, develop relevant learning strategies to achieve their goals and overcome the potential threats to their learning. While this study elucidates learners' motivational and attitudinal responses toward using ChatGPT for vocabulary development, one major limitation is the lack of grounding the association among elements in an established theoretical framework. Future research could frame these elements in technology acceptance models and examine the synergistic effects of school policies on AI use, local assessment practices, teachers' strategies for fostering AI use for learning purposes, and learners' leverage of such tools for vocabulary development and retention. Issues related to AI literacy and misuse of AI tools could also be investigated to guide learners toward utilizing AI to support learning efficiency and effectiveness. As the students reported hesitancy about long-term vocabulary retention, a pre- and post-vocabulary test could be implemented in future iterations to provide empirical data on the learning outcomes, thus complementing these attitudinal findings.

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

## CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

## INFORMED CONSENT

We have obtained informed consent from all individuals included in this study.

## DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author, [CHP], upon reasonable request.

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## BIOGRAPHIES OF AUTHORS

**Thuan Anh Pham** is the head of the Department of English at Huynh Van Nghe Secondary School, Vietnam. He has more than 10 years of experience in English language teaching at the secondary level. He recently completed a master's degree in English Language at the University of Economics and Finance. His research interests focus on learner motivation, vocabulary development, and the pedagogical integration of artificial intelligence in English as a Foreign Language education. He can be contacted at email: phamanhthuan2012@gmail.com.

**Cuong Huy Pham** is an associate professor in Applied Linguistics and dean of the Faculty of English, Ho Chi Minh City University of Economics and Finance, Vietnam. He obtained his Ph.D. in Applied Linguistics from Massey University, New Zealand. His research interests include affective factors in language education, language learning spaces, and curriculum development. He can be contacted at email: cuongph@uef.edu.vn.