Students’ Perceptions of Using ChatGPT and Quizlet for Vocabulary Learning

Diem Bich Huyen Bui[[1]](#footnote-1), Tran Nhu Uyen Le[[2]](#footnote-2)

Abstract

Vocabulary is considered a core element of language acquisition and plays a crucial role in reading comprehension. Despite its importance, many learners have struggled with vocabulary learning due to the lack of tools or strategies to create personalized vocabulary sets. With the development of digital platforms and artificial intelligence (AI), new opportunities have emerged to improve the vocabulary learning process. However, research exploring the integration of AI-based tools, particularly ChatGPT 3.5 (free version), with established vocabulary learning platforms such as Quizlet (free version) remains limited, especially in the Vietnamese context. This research addresses this gap by exploring the perceptions of 115 intermediate-level non-English-majored students at a university in Ho Chi Minh City regarding the use of Quizlet, with the aid of ChatGPT 3.5, to support vocabulary learning for reading comprehension. A mixed-methods approach was employed, using a survey including Likert-scale items and open-ended questions adapted from the Technology Acceptance Model (TAM). Results from the Likert-scale section revealed a positive perception regarding the usability of this combination. Findings in the open-ended parts indicated that the integration of ChatGPT 3.5 with Quizlet enhances vocabulary learning by making the process faster with proper guidance, providing more relevant definitions, and more personalized contexts compared to traditional methods. These findings highlight the pedagogical potential of integrating AI tools into EFL settings, offering a more adaptive, engaging, and learner-centered vocabulary learning experience.

***Keywords*:** artificial intelligence, ChatGPT 3.5, mixed method, Quizlet, vocabulary learning

1. Introduction

In the context of rapid globalization, English has become an essential subject in modern education, serving as a milestone for academic and professional success. Its importance is particularly evident in Asia, where the demand for English proficiency is rapidly increasing (Kirkpatrick, 2015). Among the four skills, reading is a key receptive skill in language learning and forms the foundation for developing productive skills like writing and speaking (Sreena & Ilankumaran, 2018). Through reading, students gain exposure to academic texts, broaden their knowledge, and enhance cognitive abilities such as problem-solving, analysis, and critical thinking (Mukhlisa & Jakhongir kizi, 2025; Sholihah & Lastariwati, 2020). However, reading comprehension depends largely on vocabulary knowledge (Manihuruk, 2020; Masrai, 2019). When encountering unfamiliar words, students often struggle to determine meaning from context, which negatively impacts their reading fluency and motivation (Nguyen, 2023; Vu & Peter, 2021). As a result, vocabulary acquisition is considered indispensable to improving comprehension and overall English proficiency (Robiya et al., 2024; Ilmiddinovich, 2021). In many Asian countries, including Vietnam, reading difficulties are often linked to limited vocabulary knowledge (Nguyen, 2023).

Research shows that Vietnamese learners’ insufficient vocabulary size is closely tied to an overreliance on traditional methods that emphasize rote memorization (Nguyen & Javorsky, 2025; Nguyen et al., 2024). These approaches encourage memorizing long word lists without understanding usage in context, leading to weak retention and poor application in reading or real-life situations. This limits meaningful vocabulary learning and creates dependency on teachers for explanation.

With the rise of digital technology, vocabulary learning through online tools has emerged as a promising solution. Among them, Quizlet is widely recognized for improving learner motivation and vocabulary retention (Nguyen & Le, 2022; Nguyen, 2024; Mykytka, 2023). A meta-analysis by Özdemir and Seçkin (2024) confirmed that Quizlet supports long-term retention through features like flashcards, learn, test, and games that promote active recall. However, Quizlet does not generate contextual example sentences, especially from reading passages. While context-based tasks enhance retention, they are often time-consuming for students and typically created by teachers (Vu & Bui, 2023).

Recently, ChatGPT has also proven effective in vocabulary learning, as it can generate context-based examples from reading passages through guided prompts (Abas et al., 2023; Krouska et al., 2024). However, ChatGPT alone may lack interactive features or the excitement factor needed to sustain engagement (Kartal, 2023). Combining ChatGPT with Quizlet may offer a complementary approach that leverages the strengths of both tools. Current literature reveals a lack of research on integrating Quizlet (free version) with Chat-GPT (free version 3.5) in vocabulary learning, particularly within the Vietnamese EFL context. Therefore, this study suggests an approach that combines Quizlet with ChatGPT to create a potential method for vocabulary learning.

This study explores Vietnamese EFL learners’ perceptions of using Quizlet and ChatGPT for vocabulary learning. Theoretically, it contributes to extending the application of the Technology Acceptance Model (TAM), particularly in terms of perceived usefulness and perceived ease of use, within the context of AI-assisted language learning. Practically, the study offers valuable insights for educators, curriculum designers, language teachers, and learners in Vietnam, highlighting a cost-effective and accessible alternative for vocabulary acquisition through digital tools. To fulfill the purpose of the study, the paper was conducted to answer the following research question:

What are students’ perceptions towards the utilization of Quizlet (free version) with the aid of ChatGPT version 3.5 for vocabulary learning?

2. Literature Review

2.1. Vocabulary and its aspects

Vocabulary can be defined in various ways. According to Oxford Learners’ Dictionaries (2023), it refers to “all the words a person knows and uses, all the words in a language.” Neuman and Dwyer (2009) define it as “the words we must know to communicate effectively: words in speaking (expressive vocabulary) and words in listening (receptive vocabulary)” (p.385). Ayuliana (2024) describes it as “a group of terms known by an individual or a big group of individuals” (p. 6), emphasizing that vocabulary knowledge includes understanding nuances, associations, and connotations across various contexts. In this study, vocabulary is understood as the knowledge of words and their meanings, along with the ability to use them effectively across language skills, especially in reading (Neuman & Dwyer, 2009).

Nation (2001), cited in Nation (2013), categorizes vocabulary into three components: form, meaning, and use. This shows vocabulary involves more than memorizing words; it requires understanding form (spoken, written, word parts), meaning (form and meaning, concepts and referents, and associations), and use (grammatical functions, collocations, and constraints on use such as register and frequency). This multidimensional view underscores the need for a comprehensive learning approach. Based on Nation’s framework and the scope of this study, the paper focuses on two aspects: meaning in context (particularly in reading) and spoken form (pronunciation).

Understanding word meaning in context is essential, as it directly influences comprehension. Dash (2008) notes that many words have multiple meanings depending on context, making contextual awareness critical. Nation (2001), cited in Nation (2013), and Zarfsaz and Yeganehpour (2021) also stress that context improves both vocabulary acquisition and retention. Pronunciation, though often tied to speaking, also supports reading. Ihsani et al. (2025) argues that accurate pronunciation facilitates word recognition, enabling learners to remember and apply vocabulary effectively.

2.2. Quizlet and its role in vocabulary learning

Quizlet is a widely used digital tool that supports vocabulary learning, primarily through its flashcard feature, which promotes active recall and stronger retention compared to passive study (Nguyen & Le, 2023; Kholis & Nadhif, 2023). Nguyen and Le (2023) found that learners using Quizlet significantly outperformed those using traditional methods. Quizlet’s multimedia features, including audio and images, offer a multisensory experience that supports both abstract understanding and pronunciation (Bayaksud et al., 2024). This multimodal approach, particularly in an online setting, fosters deeper learning.

The platform also promotes learner autonomy by allowing users to customize study sets and control their learning pace. Bayaksud et al. (2024) noted that this flexibility fosters learner ownership, while Kholis and Nadhif (2023) found that such autonomy supports self-regulated learning. Similarly, Vu and Bui (2023) reported that integrating Quizlet into classroom instruction enhanced academic vocabulary retention, boosted engagement and concentration, and received positive feedback from students.

2.3. ChatGPT and its role in vocabulary learning

Recent studies highlight the effectiveness of ChatGPT, OpenAI’s generative AI chatbot known for delivering coherent responses and personalized feedback (Munaye et al., 2025), in enhancing vocabulary acquisition across educational settings. Aldowsari and Aljebreen (2024) found that Saudi high school students using ChatGPT scored higher in vocabulary post-tests and held positive attitudes. Similarly, Siswanto et al. (2025) reported greater vocabulary gains among Indonesian university EFL students who used ChatGPT independently compared to those using traditional methods. Despite differing contexts, both studies underscore the benefits of guided or self-directed use of ChatGPT for personalized, interactive learning and motivation.

Mugableh (2024) also showed that ChatGPT-generated exercises significantly improved both vocabulary breadth and depth among Saudi university students. Algraini (2024) reported that 101 Saudi female EFL learners valued ChatGPT’s real-time feedback, contextual examples, and engaging interface. In Vietnam, Luu and Bui (2025) found strong support among university students for using ChatGPT outside class, especially for its contextualized examples, ease of use, and personalized support when guided prompt use was provided. Ngo (2024) and Losi et al. (2024) further emphasized ChatGPT’s role in fostering autonomous learning, consistent with constructivist pedagogy. Its capacity to generate instant examples enables students to take control of their vocabulary learning.

Additionally, AI chatbots like ChatGPT provide tailored learning experiences, adjusting content and feedback to individual needs. Studies by Dumitru (2024) and Albdrani and Al-Shargabi (2023) describe ChatGPT as a personalized tutor that adapts responses and difficulty based on learners' proficiency.

2.4. Perceptions

Perception refers to how individuals interpret and make sense of sensory information, experiences, and interactions (Ajzen, 1991). In learning, it shapes how students engage with tools like Quizlet and ChatGPT, as their understanding is influenced by cognitive and emotional responses to stimuli (LeDoux, 1989). Perceptions are active, affecting interactions with learning tools based on both external features and internal factors such as attention, memory, and emotions.

2.5. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by Davis in 1986, is a widely used framework for understanding user acceptance of technology. Building on the Theory of Planned Behavior (TPB), TAM simplifies and focuses on two main factors namely Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), as the primary factors influencing users' attitudes toward technology (Lai, 2017), which subsequently affect their Behavioral Intention to Use (BITU). Behavioral intention, in turn, is a strong predictor of actual technology use (Davis, 1989; Venkatesh et al., 2003).

In the context of this study, which explores students' perceptions of Quizlet and ChatGPT for vocabulary learning, the TAM framework by Davis (1986) is valuable for understanding how perceptions of these tools influence students’ intention to use them.

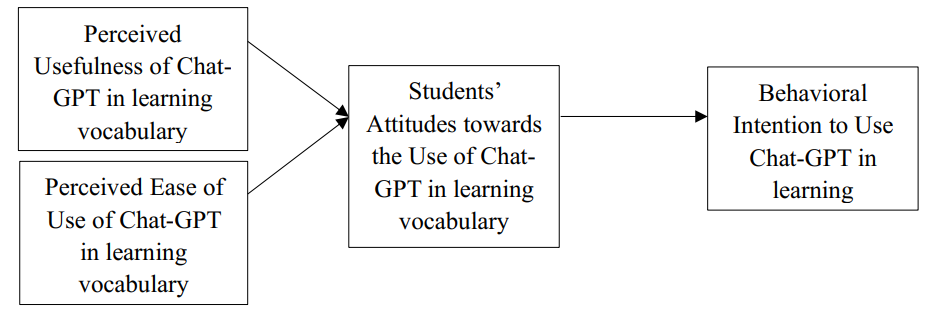
Perceived Usefulness (PU) is a central concept in TAM, referring to the degree to which a person believes that using a technology will enhance their performance in a specific task (Davis, 1989). Regarding Perceived Ease of Use (PEOU), which denotes the extent to which an individual believes that using the technology will be free of effort (Davis, 1989). When users find a system both useful and easy to use, they are more likely to develop a favorable attitude toward it. This, in turn, influences their Behavioral Intention to Use (BITU), which refers to the degree to which a person intends to use the technology and strongly predicts actual usage behavior (Davis, 1989).

2.6. Conceptual framework

Those aforementioned theoretical foundations lead to the conceptual framework of the study, which illustrates how students’ Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) of Quizlet, with the aid of ChatGPT, influence their Behavioural Intention to Use (BITU) these two tools in vocabulary learning. This model is **adapted from the Technology Acceptance Model (TAM)** proposed by Davis (1989) and further modified based on the framework developed by Luu and Bui (2025) for the use of Chat-GPT in learning vocabulary (Figure 1). In the current study, this conceptual framework reflects the proposed relationships between the constructs, as shown in **Figure 2** below.

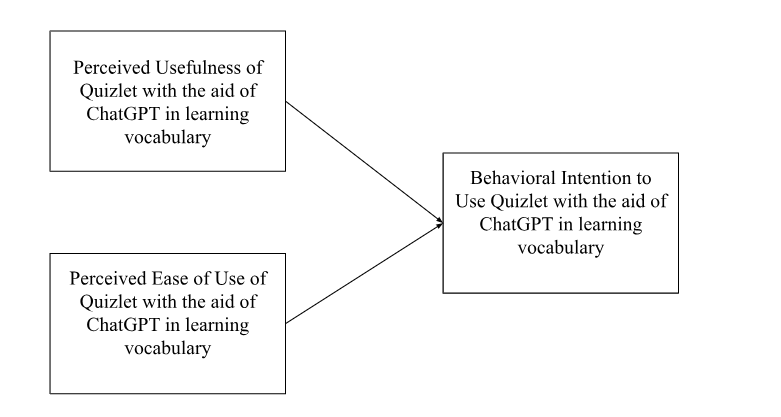
**Figure 1**

*Adapted TAM model for the use of Chat-GPT in learning vocabulary by Luu and Bui (2025)*

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**Figure 2**

*Adapted TAM model for the use of ChatGPT and Quizlet in vocabulary learning*

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In this study, understanding students' perceptions of the usefulness of Quizlet and ChatGPT helps reveal how these tools support vocabulary acquisition. PU reflects whether students view these tools as valuable for improving vocabulary learning – particularly in remembering word meanings, generating relevant definitions, creating contextualized practice, supporting memorization, improving pronunciation, enhancing contextual usage, and enabling personalized learning. PEOU refers to how easily students can perform these tasks, such as generating vocabulary sets, creating exercises, and integrating ChatGPT with Quizlet with minimal effort. When students perceive the tools as both useful and easy to use, their Behavioural Intention to Use (BITU) is likely to increase. In this study, BITU captures students' commitment and willingness to continue using these tools for vocabulary learning.

2.7. Previous studies

While both Quizlet and ChatGPT have demonstrated effectiveness individually, a noticeable gap exists in research regarding their combined use. Ifadloh (2025) discussed their complementary strengths, with ChatGPT providing context-based vocabulary practice and Quizlet offering structured, repetitive learning. Moreover, Kwiatkowska et al. (2025) focused on personalized learning without addressing how combining ChatGPT with Quizlet could optimize vocabulary learning. This gap is critical, as integrating ChatGPT’s context-based learning with Quizlet’s structured repetition could offer a more comprehensive approach to vocabulary acquisition, particularly for reading comprehension.

Despite the strengths of both Quizlet and ChatGPT, Platzer (2020) pointed out the lack of research on their combined use. This study aims to fill that gap by exploring how integrating ChatGPT’s interactive features with Quizlet’s flashcards can improve vocabulary learning for L2 students. While Quizlet's spaced repetition is great for reinforcing vocabulary, it can't generate dynamic exercises like fill-in-the-blank sentences with parts of speech (Shcherbakova & Baranenko, 2024). On the other hand, using ChatGPT alone may become less engaging, as it lacks the structured, repetitive learning elements that Quizlet offers (Jomaa et al., 2025). Combining these tools could not only boost vocabulary acquisition but also improve reading comprehension by providing context and structure.

In Vietnam, no research has yet explored the combined use of ChatGPT and Quizlet for vocabulary learning, particularly in the context of reading. While studies have examined the individual benefits of each tool (Vo & Nguyen, 2024; Dang et al., 2024), the integration of both tools remains unexplored. This study aims to address that gap and offer insights into how combining these tools can enhance vocabulary learning and reading comprehension.

3. Methodology

***3.1. Design of the study***

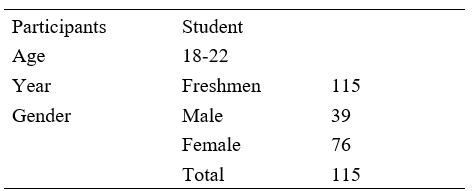
To effectively explore students’ perceptions of using Quizlet with the aid of ChatGPT for vocabulary learning, this study employed a cross-sectional design, allowing data to be collected from a specific group at one point in time, suitable for capturing perceptions in a particular learning setting (Creswell, 2021). A mixed-methods approach was used, which is especially useful for examining complex aspects such as motivation, attitudes, and vocabulary strategies (Phakiti, 2014). Quantitative data were gathered through a 15-item Likert-scale questionnaire via Google Forms to identify patterns and generate generalizable insights (Johnson & Christensen, 2024). Four open-ended questions were added to capture students’ experiences, providing contextual depth (Creswell & Poth, 2018) and allowing them to express their perspectives more fully (Heigham & Croker, 2009). This approach was chosen to gain a more nuanced understanding of students’ perceptions. While quantitative data help explain what students think, they often fail to uncover underlying beliefs or emotions (Mirhosseini, 2020). Conversely, qualitative data provide depth but may lack the structure or statistical power for broader analysis (Johnson & Christensen, 2024). Combining both methods offers a fuller picture, quantifying patterns while interpreting learners’ perspectives in more detail (Creswell & Poth, 2018; Mirhosseini, 2020).

3.2. Participants

The study involved **115 first-year university students at an EMI university in Ho Chi Minh City, who had prior experience using both ChatGPT and Quizlet to support their vocabulary learning, with reading serving** as the input for the context. All participantspossessed an **English proficiency level of intermediate or above**, which was considered appropriate for the study, as they would be able to **generate prompts in English and interact meaningfully with AI-driven vocabulary tasks.** Students were invited to participate in the research voluntarily and provided with informed consent after reading the consent form, which outlined the study's purpose and procedures. The distribution of the 115 participants is presented in **Table 1.**

**Table 1.**

*Participants demographic profile*



3.3. Sampling

This study employed a **purposive sampling** strategy, which is a type of non-probability sampling technique commonly used in educational research when researchers intentionally select participants who are most likely to provide relevant and rich information for the study purpose. This approach was chosen due to **practical constraints** and the research focus, which aligned with Creswell and Guetterman’s (2024) recommendation that **purposive sampling is suitable for studies exploring perceptions within a defined group r**ather than aiming for statistical generalizability.

***3.4. Data collection instrument***

The data for this study were collected through a questionnaire comprising three main sections. The survey began with an informed consent form to ensure ethical compliance, particularly regarding anonymity, confidentiality, and voluntary participation (Cohen et al., 2020; Creswell & Poth, 2018). This section also gathered background information on participants’ prior experience using ChatGPT and Quizlet for vocabulary learning, specifically through reading passages to generate contextual word meanings.

The second section included 15 Likert-scale items rated on a 5-point scale (1 = Strongly Disagree, 5 = Strongly Agree), based on the Technology Acceptance Model (TAM) by Davis (1989) and adapted from Luu and Bui (2025). The items focused on Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Behavioural Intention to Use (BI), drawing from previous AI-supported language learning studies (Luu & Bui, 2025; Alfadda & Mahdi, 2021; Farros et al., 2021) (see Appendix A). They were revised to suit the study’s focus on using Quizlet and ChatGPT for vocabulary learning in context, addressing students’ experiences with generating vocabulary, understanding meaning and usage, and practicing with flashcards.

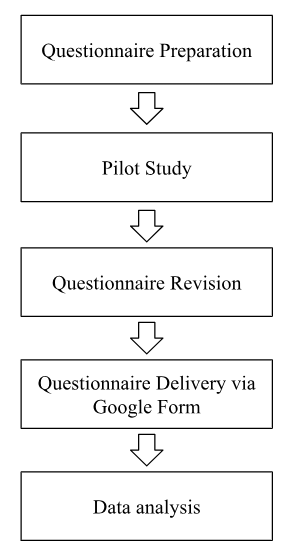
The third section comprised four open-ended questions designed to explore students’ challenges, comparisons with traditional tools, the motivational impact of flashcards, and reasons for continued or discontinued use. The entire questionnaire was administered via Google Forms, selected for its accessibility, ease of use, and cost-effectiveness. It enabled students to complete the survey remotely and flexibly, facilitating efficient data collection (Ruliyanti et al., 2021).

***3.5. Procedure of the study***

As illustrated in Figure 3, the data collection process began with selecting a research topic, followed by developing a structured questionnaire and study outline. The questionnaire was based on the conceptual framework grounded in the Technology Acceptance Model (TAM), which includes three constructs: Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Behavioural Intention to Use (BITU). A pilot survey was conducted to assess the clarity, validity, and reliability of the instrument (Creswell & Creswell, 2018), involving 20 volunteer participants with prior experience using Quizlet and ChatGPT-3.5 for vocabulary learning with reading input. The questionnaire was distributed via Google Forms, shared on Facebook, and delivered in classrooms to boost response rates. No issues were reported regarding item clarity. To evaluate internal consistency, Cronbach’s alpha was calculated, yielding a value of 0.867, which confirmed the instrument’s reliability (Tavakol & Dennick, 2011). For the main data collection, an informed consent form was provided at the beginning of the survey, outlining participants’ rights and ethical considerations (Arellano et al., 2023). After collecting responses, the researchers conducted coding and analysis, followed by a process of drafting and refining the findings.

**Figure 3**

*Data collection procedure*



***3.6. Data analysis***

After completing of the online survey, both quantitative and qualitative data were exported directly from Google Forms to Google Sheets, taking advantage of the platform’s real-time data capture and automatic integration (Vasantha Raju & Harinarayana, 2016). The dataset was then transferred to Microsoft Excel for initial screening, which involved checking for incomplete submissions, identifying potential outliers, and removing invalid responses to ensure data reliability. Quantitative and qualitative responses were subsequently separated for parallel analysis.

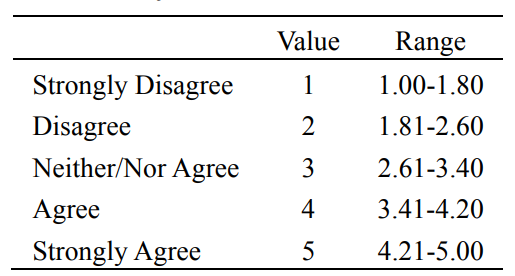
The quantitative component consisted of 15 five-point Likert-scale items, categorized into three constructs based on the Technology Acceptance Model (TAM):

* Perceived Usefulness (PU) - coded as U1 to U6
* Perceived Ease of Use (PEOU) - coded as E1 to E6
* Behavioral Intention (BI) - coded as B1 to B3

The data were analyzed using IBM SPSS Statistics Version 26, selected for its reliability, ease of use, and effectiveness in managing survey data with multiple variables (Pallant, 2020; Muijs, 2022). Its comprehensive statistical tools make it well-suited for analyzing structured questionnaires. Descriptive statistics, including mean (M) and standard deviation (SD), were computed to summarize trends across the three subscales, following recommendations by Muijs (2022) and Johnson and Christensen (2024). The mean scores were categorized and imterpreted based on Sözen and Güven’s (2019) model as in Table 2.

**Table 2.**

*Scoring range of Likert scale of the survey by Sözen and Güven’s (2019)*



Qualitative data were collected from four open-ended questions, with 97 of 115 participants providing relevant responses (coded P1–P97); 18 were excluded due to incomplete or insufficient answers. For responses in Vietnamese, a two-step process, including independent translation and result comparison by two researchers, was employed to ensure accuracy and semantic consistency.

Thematic analysis followed Braun and Clarke’s (2006) six-step model: familiarization, coding, theme generation, reviewing, defining, and reporting. This enabled the systematic identification of key patterns, including perceived benefits, challenges, motivation, and intentions for continued use. Manual coding was conducted in Excel using inductively developed categories.

To ensure trustworthiness, inter-rater reliability was established through independent coding by a second rater. Following Tinsley and Weiss’s (2000) recommendation, discrepancies were discussed until full agreement was reached. A third rater, an expert in educational technology and applied linguistics, also reviewed the codes and themes for clarity and coherence, further enhancing analytical rigor.

4. Results

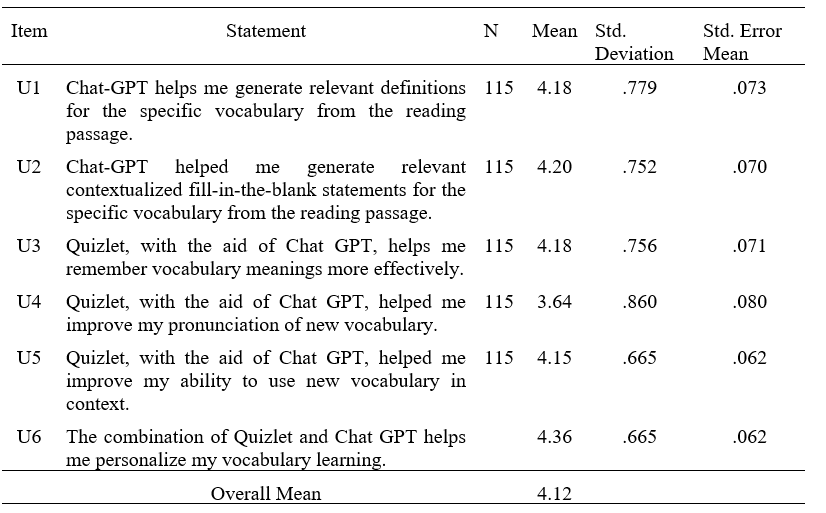
***4.1. Quantitative data***

*4.1.1. Perceived Usefulness*

Table 3 displays the means and standard deviations for the six items under the Perceived Usefulness (PU) construct.

**Table 3.**

*Descriptive Statistics for PU (N=115)*



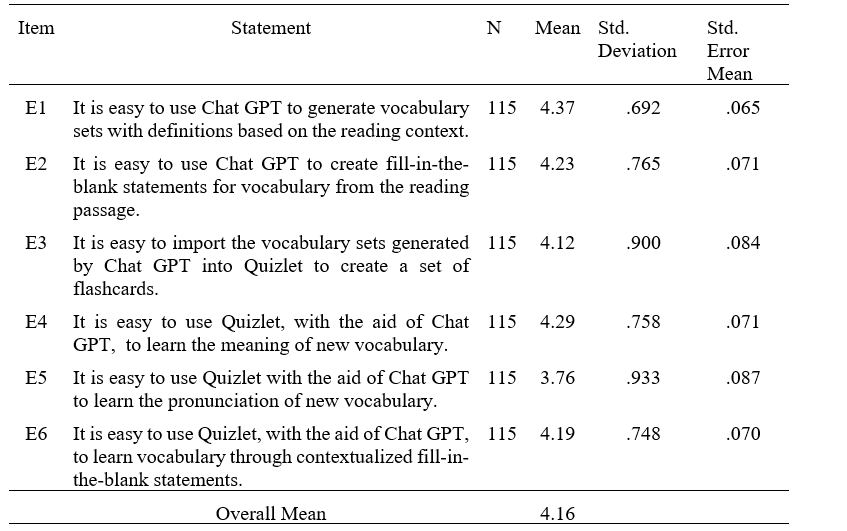
The results indicated that students had positive perceptions about the effectiveness of ChatGPT and Quizlet in supporting vocabulary learning, with an overall PU mean of 4.12. The item with the highest mean score was U6 (M = 4.36, SD = 0.665) (Sözen & Güven, 2019), showcasing students’ appreciation for the tools’ adaptability to their individual learning preferences. This was followed by U2 (M = 4.20), U1 and U3 (both M = 4.18), and U5 (M = 4.15), suggesting that students also valued the tools’ usefulness in generating contextualized examples, supporting vocabulary retention, and applying new words in context. The lowest-rated PU item was U4 (M = 3.64, SD = 0.860), which reflects pronunciation as a less influential or accessible function.

*4.1.2. Perceived Ease of Use*

Table 4 presents the means and standard deviations for six items measuring Perceived Ease of Use (PEOU).

**Table 4.**

*Descriptive Statistics for PEOU (N=115)*



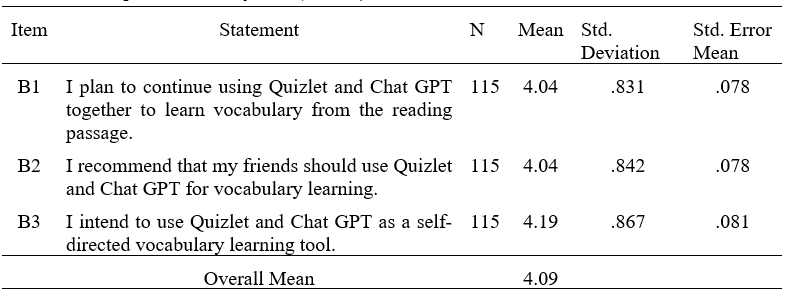
Overall, participants expressed a generally high level of agreement regarding the ease of using ChatGPT and Quizlet in their vocabulary learning process. The overall mean for PEOU was 4.16, reinforcing the perceived simplicity of using the two platforms together (Pimentel, 2010; Sözen & Güven, 2019). The highest-rated item was E1 (M = 4.37, SD = 0.692) (Sözen & Güven’s, 2019), showing that students found ChatGPT particularly intuitive for generating learning content. This was followed by E4 (M = 4.29), E2 (M = 4.23), E6 (M = 4.19), and E3 (M = 4.12), indicating that students generally found it easy to use ChatGPT and Quizlet for learning vocabulary meanings, generating contextualized fill-in-the-blank statements, and importing content into Quizlet. The lowest-rated item was E5 (M = 3.76, SD = 0.933), indicating that pronunciation support was a relatively less accessible feature, which may reflect either its lower perceived intuitiveness or limited use within the learning context.

*4.1.3. Behavioural Intention to Use*

Table 5 shows the results for the three items measuring Behavioural Intention (BI).

**Table 5.**

*Descriptive Statistics for BI (N=115)*



Regarding the last aspect of TAM, the responses for Behavioural Intention (BI) revealed a generally strong intention to continue using ChatGPT and Quizlet, with a mean BI score of 4.09 (Sözen & Güven, 2019). The item with the highest mean was B3 (M = 4.19, SD = 0.867), reflecting strong learner autonomy and intention to integrate these tools outside of classroom instruction. The two remaining BI items, B1 and B2, both received a mean score of 4.04, suggesting students were both willing to continue using the tools and to recommend them to peers

Overall, the findings suggest that students found the combined use of ChatGPT and Quizlet to be both easy to use and effective for vocabulary learning. The high mean score for PEOU (M = 4.16) suggests strong usability (Sözen & Güven, 2019), particularly in generating vocabulary sets (E1) and learning meanings through Quizlet (E4). However, lower ratings for pronunciation-related tasks (E5, U4) highlight limited functionality in this area. Students also perceived the tools as useful (PU mean = 4.12), especially for personalized learning (U6), emphasizing the value of autonomy and contextual relevance. Their intention to continue using these tools was also high (BI mean = 4.09), particularly for independent learning (B3).

***4.2. Qualitative data***

Aside from the quantitative data, a qualitative approach was employed to gain a deeper understanding of students’ perspectives on integrating ChatGPT and Quizlet in vocabulary learning. To capture learners’ insights, four open-ended questions were included in the instrument. These questions explored students’ challenges, perceived benefits, motivational experiences, and future intentions when using the combined tools. Analysis of the responses revealed several key patterns across the constructs of perceived ease of use, perceived usefulness, and behavioural intention to use.

*4.2.1. Perceived Usefulness (PU)*

Perceived usefulness was strongly emphasized across Q2 and Q4, where participants shared positive experiences. Students (P1, P13, P14, P22, P29, P31) highlighted that combining both tools deepened their understanding of word meanings and improved retention. P14 stated, “I can learn faster and remember longer,” while P22 noted, “It helps me remember because ChatGPT gives the example, and Quizlet helps me revise them until I master them.” Many reported that ChatGPT’s contextual explanations, paired with Quizlet’s review functions, helped shift their learning from rote memorization to meaningful comprehension.

Participants (P10, P12, P15, P27, P32) also valued the tools’ support for independent, self-paced learning. P12 remarked, “I can create vocabulary based on what I read, then test myself using Quizlet.” The flexibility of mobile-based access allowed students to study anytime, such as on the bus or during breaks (P5, P8, P33, P41, P44). P8 shared, “I can learn on the bus or while waiting in line, since it's all on my phone.”

Some students (P19, P26, P30, P53) appreciated ChatGPT’s quick responses, noting it was more efficient than traditional dictionary use. However, a few (P6, P38, P97, P109) expressed concerns about ChatGPT’s accuracy when definitions seemed inconsistent or unclear, which impacted trust. Others (P40, P93) mentioned financial concerns, indicating that continued use would depend on whether core features remain free or affordable.

*4.2.2. Perceived Ease of Use (PEOU)*

In terms of ease of use, participants shared a mix of challenges and favourable experiences, with responses mainly derived from Q1 and Q4. Several students (P2, P14, P17, P33) reported difficulty with crafting effective prompts for ChatGPT, stating that unclear phrasing often led to irrelevant or confusing results. Others (P11, P57, P5, P105) mentioned that ChatGPT's responses were sometimes too lengthy or contained advanced vocabulary, which made them feel overwhelmed. For example, P11 shared, “*ChatGPT provided good example sentences, but the definitions were too long and I got lost reading them.*” However, a significant number of students (P1, P6, P28, P40) indicated no such issues, describing the tools as easy to use and straightforward once they became familiar with them. P6 shared, “*I find ChatGPT easy to use. I just type the relevant prompts and get what I need*.” and others emphasized how the learning process became more intuitive over time. P5 also added that compared to paper-based methods, “*Just with some simple steps such as putting the context to ChatGPT and asking it to generate the definitions and examples that fit my level of proficiency and import them to Quizlet, I can study and test my vocabulary anywhere*” highlighting the method’s convenience and mobility.

*4.2.3. Behavioural Intention (BI)*

Regarding behavioural intention, responses drawn mainly from Q3 and Q4 showed that most students expressed a clear desire to continue using the tools, provided they remained effective, user-friendly, and accessible. Many participants (P2, P3, P7, P9, P13, P14) reported that the learning process felt enjoyable and motivating due to the interactive nature of Quizlet and the immediate support provided by ChatGPT. For these learners, the tools helped build consistent study habits and reduced the pressure of traditional vocabulary learning. P7 expressed, “*I feel excited because I can study vocabulary every day without pressure*,” and P9 commented, “*The learning is fun with flashcards when I can test myself and get immediate feedback.*” Participants (P10, P14, P44, P82, P89, P114) emphasized emotional factors, such as enjoyment, interest, and self-improvement, as central to their intention to keep using the tools in the future. P89 noted, “*I still want to use it in the future because I want to keep learning and exploring vocabulary that fits my personal style.*” At the same time, a few students (P5, P27, P33) expressed neutral or unchanged motivation, suggesting that the method, while effective for some, may not significantly affect every learner’s engagement. Overall, the qualitative findings reinforce the quantitative results, showing strong acceptance of the combined use of ChatGPT and Quizlet in vocabulary learning, while also highlighting specific areas, such as prompt design, audio/pronunciation features, and integration convenience, which could enhance learner experience further.

1. **Discussion**

***5.1. Perceived Usefulness (PU)***

Results from the questionnaires revealed that students perceived the integration of ChatGPT and Quizlet as highly useful for vocabulary learning (M = 4.12). The most positively rated item was the ability to personalize learning, followed by generating contextual exercises, providing relevant definitions, improving vocabulary retention, and using new vocabulary in context.

This can be attributed to students’ ability to input prompts into ChatGPT and generate vocabulary lists with definitions tailored to the reading context and their proficiency level. For example, P12 shared, “I can create vocabulary based on what I read, then test myself using Quizlet,” showing how students personalized vocabulary content. P6 noted, “I find ChatGPT easy to use. I just type the relevant prompts and get what I need,” suggesting that prompt creation became more intuitive with practice. Quizlet, in turn, supported retention through interactive tools. P22 stated, “It helps me remember because ChatGPT gives the example, and Quizlet helps me revise them until I master them,” and P14 added, “I can learn faster and remember longer,” indicating the combination made learning more efficient and memorable.

These results align with Luu and Bui (2025), who emphasized ChatGPT’s usefulness in generating contextualized content, and with Nguyen and Le (2023) and Vu and Bui (2023), who highlighted Quizlet’s effectiveness in supporting vocabulary retention through spaced repetition.

However, the usefulness of Quizlet’s pronunciation feature was rated lower (M = 3.64, SD = 0.860), likely due to limited audio support. P16 remarked, “Personally, I think the main problem was the lack of focus on pronunciation, but it's not that important for me because I just want to understand the text,” suggesting that meaning took precedence. P21 noted, “The pronunciation from Quizlet is not very accurate,” and both P52 and P55 shared that the audio sometimes failed to support their learning or help them distinguish word sounds effectively. This finding is consistent with Algraini (2024), who observed that pronunciation is often inconsistent or does not match standard dictionary models in flashcard-based tools.

***5.2. Perceived Ease of Use (PEOU)***

Regarding Perceived Ease of Use, students rated the tools as easy to use, with an overall PEOU mean of 4.16, suggesting the combination was simple and effective for vocabulary learning. The most appreciated feature was the ease of generating vocabulary via ChatGPT, followed by learning meanings through Quizlet with ChatGPT support, creating fill-in-the-blank statements, learning vocabulary through contextualized sentences, and importing vocabulary sets into Quizlet flashcards.

Open-ended responses supported these findings. P6 shared, “I find ChatGPT easy to use. I just type the relevant prompts and get what I need,” highlighting its intuitive prompt design. P12 stated, “I can create vocabulary based on what I read, then test myself using Quizlet,” and P5 added, “Just with some simple steps... I can study and test my vocabulary anywhere,” reflecting how ease of use enabled autonomy and mobile learning.

Students also valued the personalized, self-paced nature of the process, shifting from passive memorization to context-based learning. P22 noted, “I asked ChatGPT to make example sentences about travel and food because those are topics I like,” while P44 said, “I told ChatGPT to make easier sentences because I’m not confident with difficult vocabulary.” Participants like P20, P45, P86, and P94 also reported adapting content to match their interests or proficiency, with P45 modifying prompts to better meet their goals.

ChatGPT became more intuitive as students practiced structuring prompts, which they reused across tasks. Importing vocabulary into Quizlet was also seen as simple, supporting independent learning. These results align with Luu and Bui (2025), who found ChatGPT accessible with initial guidance, and with Bayaksud et al. (2024) and Nguyen and Le (2023), who emphasized Quizlet’s mobile-friendly, flexible design. Despite these strengths, pronunciation remained less accessible.

***5.3. Behavioural Intention (BI)***

The behavioural intention to continue using both tools was strong (M = 4.09), with the highest agreement for independent use in vocabulary learning. Students valued the tools’ flexibility, adaptability, and accessibility, particularly the ability to study on their own schedule and on mobile devices. These factors enhanced motivation and supported continued engagement. This was also reflected in the open-ended responses. For example, P14 shared, “I’ll keep using it if it stays quick and helpful,” while P15 said, “If I remember words better and enjoy learning, I will continue using them.” Similarly, P16 noted, “If it continues to help me recall things better, I’d still use it,” and P17 emphasized that usability and memory retention were key factors in their decision to continue.

This finding aligns with the Technology Acceptance Model (Davis, 1989; Venkatesh et al., 2003), which emphasizes the role of usefulness and ease of use in shaping intention. It is also consistent with Luu and Bui (2025), as well as Vo and Nguyen (2024) and Vu and Bui (2023), who highlighted the long-term benefits of mobile, interactive tools like Quizlet. Regarding the combined use of ChatGPT and Quizlet, the findings in this study align with Bayaksud et al. (2024), who found that Quizlet’s multimodal and mobile-friendly features increased learners’ motivation and intention to continue using it as a self-directed learning tool. In this study, students similarly expressed a strong willingness to keep using both tools, especially due to the personalization and flexibility they offer when used together. However, a few students noted that continued use would depend on access and further guidance, which suggests that providing prompt examples and training is essential to fully support independent learning.

**6. Conclusion**

This study sheds light on how students perceive the integration of ChatGPT and Quizlet for vocabulary learning, particularly in reading comprehension. Overall, learners viewed the combination as accessible, flexible, and pedagogically valuable. ChatGPT was praised for generating contextualized definitions and examples (Abas et al., 2023; Krouska et al., 2024), while Quizlet offered a structured, repetitive environment that supported vocabulary retention (Nguyen & Le, 2022; Özdemir & Seçkin, 2024).

Despite the positive reception, some challenges emerged. Many students initially struggled with crafting effective prompts for ChatGPT, which affected the relevance and clarity of the AI-generated content. In addition, limited pronunciation support across both tools remained a common concern.

The findings carry both pedagogical and theoretical implications. Pedagogically, combining ChatGPT for contextual input and Quizlet for repetition may enhance cognitive efficiency and focused vocabulary learning. Teachers should consider giving specific training on the principles of each tool, explaining the role of input and choice of relevant language proficiency level, providing modelling, and allowing students to practice doing the tasks several times at the beginning of the course to maximize the effects of the implementation of the tools. Theoretically, the study extends the Technology Acceptance Model (TAM) by applying it to AI-assisted language learning. It shows how learners’ perceptions of usefulness and ease of use influence their intention to adopt not just single tools, but integrated digital approaches, emphasizing TAM’s relevance in EFL vocabulary development.

Besides, the study has some limitations. A sample of 115 participants from one university may limit the generalizability of the findings. Furthermore, the study examined perceptions rather than measurable vocabulary gains. Future research should investigate the long-term effects of using ChatGPT and Quizlet on vocabulary acquisition and reading comprehension, as well as the role of prompt proficiency in shaping learning outcomes.

In conclusion, integrating ChatGPT and Quizlet provides a promising and scalable approach to vocabulary learning. With appropriate instructional support, this model has the potential to enhance personalization, autonomy, and learner engagement, aligning with the evolving goals of digital language education.

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**Bionote**

**Le Tran Nhu Uyen** is currently pursuing her undergraduate studies majoring in English Linguistics and Literature at International University - Vietnam National University, HCMC. She works as an English teacher for both young learners and adults, and she has a strong passion for academic research. Her research interests lie in phonetics and phonology, technology-enhanced language learning (TELL), and 21st century learning skills.

Email: nhuuyen170404@gmail.com

Phone number: 094 773 5741

**Diem Bich Huyen Bui** is currently a full-time lecturer and associate of student affairs at the School of Languages, International University - Vietnam National University, HCMC. She completed her undergraduate studies in TESOL and earned her MA in Applied Linguistics from La Trobe University, Australia. She is currently pursuing her PhD in TESOL. Her research interests include formative assessment, learner autonomy, skills development, teaching methodologies and technology-enhanced language learning (TELL).

Email: bdbhuyen@hcmiu.edu.vn

Phone number: 091 850 4964

Appendix A

**Questionnaire – Main parts**

**STUDENTS’ PERCEPTIONS OF USING CHATGPT AND QUIZLET FOR VOCABULARY LEARNING**

**Section 1. Likert-scale questions**

The survey questions below are used to figure out the students’ perceptions of using ChatGPT and Quizlet for vocabulary learning. Please read each one carefully and rate them from 1 to 5 based on how much you agree or disagree, according to your own experience. Use the scale below to guide your responses.

**Scale:**

1 – Strongly Disagree

2 – Disagree

3 – Neutral

4 – Agree

5 – Strongly Agree

There are no right or wrong answers. Your honest responses are important and will contribute meaningfully to the research.

(Dưới đây là các câu hỏi khảo sát nhằm tìm hiểu quan điểm của bạn về việc sử dụng ChatGPT và Quizlet trong việc học từ vựng. Vui lòng đọc kỹ từng câu hỏi và đánh giá mức độ đồng ý của bạn dựa trên trải nghiệm cá nhân, theo thang điểm từ 1 đến 5. Hãy sử dụng thang đo dưới đây để hướng dẫn cho câu trả lời của bạn:

1 – Hoàn toàn không đồng ý

2 – Không đồng ý

3 – Trung lập / Bình thường

4 – Đồng ý

5 – Hoàn toàn đồng ý

Không có câu trả lời đúng hay sai. Sự phản hồi trung thực của bạn là rất quan trọng và sẽ đóng góp ý nghĩa cho nghiên cứu này.)

1. ***Perceived Usefulness (PU)***

Below are statements that present the **Perceived Usefulness of Quizlet, with the aid of Chat GPT, in learning vocabulary**.

1. ChatGPT helps me generate relevant definitions for the specific vocabulary from the reading passage. (ChatGPT giúp tôi tạo ra định nghĩa phù hợp cho từ vựng cụ thể từ bài đọc.)

Strongly disagree => Strongly agree

1. ChatGPT helps me generate relevant contextualized fill-in-the-blank statements for the specific vocabulary from the reading passage. (ChatGPT giúp tôi tạo ra câu điền vào chỗ trống phù hợp theo ngữ cảnh cho từ vựng trong bài đọc.)

Strongly disagree => Strongly agree

1. Quizlet, with the aid of ChatGPT, helps me remember vocabulary meanings more effectively. (Quizlet kết hợp với ChatGPT giúp tôi ghi nhớ nghĩa của từ hiệu quả hơn.)

Strongly disagree => Strongly agree

1. Quizlet, with the aid of ChatGPT, helps me improve my pronunciation of new vocabulary (Quizlet kết hợp với ChatGPT giúp tôi cải thiện phát âm từ mới.)

Strongly disagree => Strongly agree

1. Quizlet, with the aid of ChatGPT, helps me improve my ability to use new vocabulary in context. (Quizlet kết hợp với ChatGPT giúp tôi cải thiện khả năng sử dụng từ mới theo ngữ cảnh.)

Strongly disagree => Strongly agree

1. The combination of Quizlet and ChatGPT helps me personalize my vocabulary learning. (Sự kết hợp giữa Quizlet và ChatGPT giúp tôi cá nhân hóa việc học từ vựng của mình.)

Strongly disagree => Strongly agree

1. ***Perceived Ease of Use (PEOU)***

Below are statements that present the **Perceived Ease of Use of Quizlet, with the aid of Chat GPT, in learning vocabulary**.

1. It is easy to use ChatGPT to generate vocabulary sets with definitions based on the reading context. (Việc sử dụng ChatGPT để tạo danh sách từ vựng kèm định nghĩa dựa trên ngữ cảnh bài đọc là dễ dàng.)

Strongly disagree => Strongly agree

1. It is easy to use ChatGPT to create fill-in-the-blank statements for vocabulary from the reading passage. (Việc sử dụng ChatGPT để tạo câu điền vào chỗ trống cho từ vựng từ bài đọc là dễ dàng.)

Strongly disagree => Strongly agree

1. It is easy to import the vocabulary sets generated by ChatGPT into Quizlet to create a set of flashcards. (Việc nhập danh sách từ vựng do ChatGPT tạo vào Quizlet để tạo bộ thẻ ghi nhớ là dễ dàng.)

Strongly disagree => Strongly agree

1. It is easy to use Quizlet, with the aid of ChatGPT, to learn the meaning of new vocabulary. (Việc sử dụng Quizlet kết hợp với ChatGPT để học nghĩa của từ mới là dễ dàng.)

Strongly disagree => Strongly agree

1. It is easy to use Quizlet with the aid of ChatGPT to learn the pronunciation of new vocabulary. (Việc sử dụng Quizlet kết hợp với ChatGPT để học cách phát âm của từ mới là dễ dàng.)

Strongly disagree => Strongly agree

1. It is easy to use Quizlet, with the aid of ChatGPT, to learn vocabulary through contextualized fill-in-the-blank statements. (Việc sử dụng Quizlet kết hợp với ChatGPT để học từ vựng qua câu điền vào chỗ trống theo ngữ cảnh là dễ dàng.)

Strongly disagree => Strongly agree

1. ***Behavioral Intention to Use (BI)***

Below are statements that present the **Behavioral Intention to Use Quizlet, with the aid of Chat GPT, in learning vocabulary**.

1. I plan to continue using Quizlet and ChatGPT together to learn vocabulary from the reading passage. (Tôi dự định sẽ tiếp tục sử dụng Quizlet và ChatGPT cùng nhau để học từ vựng từ bài đọc.)

Strongly disagree => Strongly agree

1. I recommend that my friends should use Quizlet and ChatGPT for vocabulary learning. (Tôi khuyên bạn bè nên sử dụng Quizlet và ChatGPT để học từ vựng.)

Strongly disagree => Strongly agree

1. I intend to use Quizlet and ChatGPT as a self-directed vocabulary learning tool. (Tôi có ý định sử dụng Quizlet và ChatGPT như một công cụ tự học từ vựng.)

Strongly disagree => Strongly agree

**Section 2. Open-ended questions**

The following questions are open-ended and aim to better understand your experience using **Quizlet with the aid of ChatGPT** for vocabulary learning. Please answer as fully and honestly as you can. There are no right or wrong answers. Your honest responses are important and will contribute meaningfully to the research.

(Các câu hỏi sau đây là dạng mở và nhằm tìm hiểu rõ hơn về trải nghiệm của bạn khi sử dụng Quizlet với sự hỗ trợ của ChatGPT để học từ vựng. Bạn hãy trả lời một cách đầy đủ và trung thực nhất có thể. Không có câu trả lời đúng hay sai. Những phản hồi chân thành của bạn rất quan trọng và sẽ đóng góp ý nghĩa cho nghiên cứu này.)

1. What challenges did you encounter when using ChatGPT and Quizlet together to learn vocabulary? (Please describe any difficulties you faced when generating vocabulary sets, creating flashcards, or using the pronunciation and context-based features.) (Bạn đã gặp những khó khăn nào khi sử dụng ChatGPT và Quizlet cùng nhau để học từ vựng? - Bạn hãy mô tả các khó khăn như việc tạo danh sách từ vựng, tạo thẻ ghi nhớ, hoặc khi sử dụng các tính năng phát âm và câu theo ngữ cảnh.)
2. In what ways did the usage of ChatGPT and Quizlet together help you retain vocabulary better than other methods you have used (like dictionaries or textbooks)? (Việc sử dụng ChatGPT và Quizlet cùng nhau để học từ vựng hiệu quả như thế nào so với các phương pháp mà bạn đã sử dụng - ví dụ như từ điển hoặc sách giáo khoa?)
3. Did the process of creating and using vocabulary flashcards from ChatGPT outputs affect your motivation to learn new words? Please explain in detail. (Việc tạo và sử dụng thẻ từ vựng từ kết quả của ChatGPT có ảnh hưởng như thế nào đến động lực học từ mới của bạn? Vui lòng giải thích chi tiết.)
4. What factors would influence your decision to keep using or stop using this combination for learning vocabulary? (Những yếu tố nào sẽ ảnh hưởng đến quyết định tiếp tục hoặc ngừng sử dụng sự kết hợp này để học từ vựng của bạn? Vui lòng giải thích chi tiết.)

1. Diem Bich Huyen Bui, MA., School of Languages, International University - Vietnam National University HCMC, HCM city, Vietnam; *Email:* [*dbhuyen@hcmiu.edu.vn*](mailto:dbhuyen@hcmiu.edu.vn) [↑](#footnote-ref-1)
2. BA, School of Languages, International University - Vietnam National University HCMC, HCM city [↑](#footnote-ref-2)