Insights Into Vietnamese Bilingual Students' Quizlet-Based English Vocabulary Learning

Thao Quoc Tran[*]
Faculty of English Language, Hutech University, Ho Chi Minh City, Vietnam

Vy Lan T. Nguyen
UK Academy, Ba Ria City, Vietnam

Abstract—**Modern technology has revolutionized the education by offering various tools that can enhance the teaching and learning process in general and English language teaching and learning in specific. Among a wide range of educational apps, Quizlet has been applied in vocabulary teaching and learning in different contexts. Therefore, this study aims at investigating bilingual students' Quizlet-based English vocabulary learning. It involved a cohort of 50 bilingual students, who were conveniently sampled from an international school in Vietnam, in answering the questionnaires. The collected data were analysed in terms of descriptive statistics with the use of software SPSS. The findings have shown that bilingual students perceived Quizlet as a useful, enjoyable, easy, and convenient tool for English vocabulary language learning, and they reckoned that Quizlet could improve their vocabulary learning. Based on such findings, this study has come up with pedagogical implications for the use of Quizlet in English vocabulary teaching and learning in the research context and other similar ones.**

Index Terms—**bilingual student, English, perception, Quizlet, vocabulary**

I. INTRODUCTION

The emergence of technology has facilitated the process of education in general and language teaching and learning in specific (e.g., Jorge et al., 2003; Raja & Nagasubramani, 2018; Tran & Duong, 2022). Accordingly, technology has played a key role in enhancing the quality of education, especially English language teaching. Jorge et al. (2003) point out that technology provides the assistance and practical supports to both learners and teachers. Likewise, Chapelle (2008) states that teachers have opted to apply technology to remove time and space limitations in teaching and learning and avoid lagging behind the time because of realizing the implication and potentials of new technologies. In the same line, Raja and Nagasubramani (2018) assert that modern technology and tools help to improve students' learning and interactivity.

In the context of Vietnam, technology has been extensively applied in English language teaching and learning (Tran & Duong, 2021), and it has played a vital role in enhancing English language teaching and learning in general and vocabulary teaching and learning in specific. Different technological apps have been used to facilitate the vocabulary teaching and learning, and one of which is Quizlet which can assist learners' vocabulary learning (Nakata & Webb, 2016). Learners can get engaged in using Quizlet to learn vocabulary through different modes from learning mode to testing mode (Webb, 2007). Learners can choose any words for certain reasons and design their own learning modules or study sets. Thompson and MacDonald (2005) have proved that Quizlet allows learners to share their own wordlists with other learners, which generates a basis form of learning community, is positive for learning performances. Learners can view the terms as well as their definitions and pictures in the flashcard mode to learn vocabulary. Moreover, they can listen to the pronunciation of words in that learning mode. Learners can also take advantage of the sets created by teachers or make their own vocabulary sets for learning.

Although Quizlet has been considered a useful medium for English vocabulary learning, many concerns about how learners employ Quizlet for their Vocabulary learning have arisen. It has been observed that EFL students do not encounter many difficulties in using Quizlet to learn vocabulary, and they can make use of features (e.g., audios, images, flashcard, spelling, tests) embedded to Quizlet to learn vocabulary. Additionally, there have been many studies in relation to the effects of Quizlet that have been conducted; nevertheless, there is a scarcity of research on secondary school students' use of Quizlet to learn vocabulary in the context of an international school in Vietnam. To that void, this study attempts to explore bilingual students' use of Quizlet-based English vocabulary learning in the context of an international school in Vietnam. This study addresses the following research questions:

1. What is bilingual students' perception of the use of Quizlet-based English vocabulary learning?
2. What is bilingual students' perception of the effectiveness of Quizlet-based English vocabulary learning?

[*] Corresponding Author. Email: Tq.thao@hutech.edu.vn

This study is theoretically expected to enrich evidence in relation to using Quizlet as a technological tool in developing students' vocabulary and to contribute its part to the literature body which can provide a further understanding of the Quizlet-based vocabulary learning. Practically, this study is hoped to inform stakeholders (e.g., teachers, administrators and parents) about the application of the Quizlet in the classroom. It can be one of the choices to vocabulary teaching strategy to cultivate students' vocabulary in bilingual contexts. Additionally, the result of this study can be a reference for EFL policy makers and faculty members in Vietnam to adapt and adopt the incorporation of Quizlet and other online game-apps into their teaching practice to boost students' English vocabulary learning.

II. LITERATURE REVIEW

It is recognized that learners' perception plays an important role in understanding the use of Quizlet in vocabulary learning process. Many scholars (Köse & Mede, 2016) have asserted that learners' perceptions are found to affect the integration of Quizlet and English vocabulary learning. Furthermore, research on learners' perceptions of Quizlet has showed that Quizlet is regarded as a convenient, user-friendly and useful learning tool for vocabulary learning (Chien, 2015; Lander, 2016). Dizon (2016) states that Quizlet can be useful, easy and enjoyable for learners to learn vocabulary. Likewise, Anjaniputra and Salsabila (2018) mention that learners feel enjoyable to use Quizlet to learn vocabulary. Within the scope of this study, the use of Quizlet-based English vocabulary learning can be of usefulness, enjoyment, ease of use and convenience.

With respect of the effectiveness of Quizlet-based English vocabulary learning, scholars (e.g., Apriliani, 2021; Sangtupim & Mongkolhutthi, 2019; Nguyen et al., 2021; Pham, 2022; Ho et al., 2020) have indicated that Quizlet is an effective tool for vocabulary learning. Sangtupim and Mongkolhutthi (2019) mention that learners can improve their vocabulary via Quizlet. In the same line, Ho et al. (2020) state Quizlet is effective for vocabulary improvement as it provides learners with better results compared to traditional methods. Additionally, Apriliani (2021) confirms that Quizlet is effective for learning vocabulary thanks to its wide range of features and the usability of the application. Pham (2022) argues that the 'Test' feature in Quizlet is useful as it helps learners to review vocabulary effectively. In another aspect, Nguyen et al. (2021) believe that Quizlet is an effective tool for autonomous learning and it can provide them with an interesting method of acquiring vocabulary.

Prior studies relevant to the use of Quizlet for English vocabulary learning have been conducted in different contexts. For example, the study of Dizon (2016) was conducted with the purpose of examining the effectiveness of Quizlet for developing English vocabulary. The study involved 9 students from a Japanese university and collected data through a pre-test and post-test. During the treatment, the students took part in a training course that incorporated Quizlet into vocabulary learning. The researcher found that students had significant gains in their vocabulary learning and concluded that Quizlet was an effective tool for vocabulary acquisition. In another context, Özer and Koçoğlu (2017) conducted a study to investigate the effects of Quizlet and vocabulary notebooks on vocabulary acquisition. The study involved 89 students who were divided into two different control groups, and each group was taught with a specific method. Pre-tests and post-tests were used to measure the ability of the students. The researchers discovered that there were no significant differences between the use of Quizlet and vocabulary notebooks on vocabulary acquisition. In the study of Setiawan and Wiedarti (2020), the researchers aimed to determine how effective Quizlet was at improving the motivation of students for learning vocabulary. Sixty-five students were included in this study and divided into two groups. The researchers observed the control groups to determine whether groups that learned with Quizlet had more or less motivation than those that did not. Students who learned with Quizlet displayed higher levels of motivation and were more enthusiastic than those who did not learn with Quizlet. Aksel (2021) conducted a study to investigate the effectiveness of Quizlet on vocabulary achievement for ESL students. The study also investigated students' perceptions of Quizlet for vocabulary learning. Ninety-two university students form a Turkish university were involved. Quantitative analysis was used to determine their perceptions while pre-tests and post-tests were used to determine the effectiveness of Quizlet. It was found that Quizlet was effective for teaching vocabulary and that students felt positive towards using it as a learning tool. In the same year, Aprilani (2021) investigated the perceptions of high school students of using Quizlet for learning English vocabulary. The researcher collected qualitative data by interviewing five students from a senior high school in Indonesia. The findings indicated that students felt that Quizlet was an interesting tool for learning vocabulary and that it made them feel enthusiastic when learning. The researcher also recommended the use of Quizlet for teaching vocabulary.

In the context of Vietnam, Ho (2019) conducted a study to determine the efficacy of Quizlet for vocabulary teaching in comparison to paper flashcards. There were three phases in this study, namely a pre-test, training period of four weeks, and post-test. Thirty-nine high school students were involved in this study. These students were divided into two groups. The groups were taught vocabulary with Quizlet and paper flashcards. One group was taught first with Quizlet, after which the method was changed to flashcards, and the other group did the reverse. The results of the pre-test and post-test indicated that while both methods were effective for improving vocabulary acquisition, Quizlet was more efficient. In the study of Ho et al. (2020), the researchers wanted to find out the effectiveness of Quizlet for enhancing vocabulary acquisition in non-English major freshmen and determine their attitudes towards the Quizlet application. Sixty participants were involved in the study and the researchers implemented a quasi-experimental design with two groups and pre-tests and post-tests for each group. One group was taught vocabulary without the use of Quizlet,

whereas the other was with the use of Quizlet. The researchers found that Quizlet was effective for improving the vocabulary acquisition of the participants. Nguyen et al. (2021) investigated the effectiveness of Quizlet for autonomous vocabulary learning. The study collected quantitative data from 100 participants at a university in Ho Chi Minh City, Vietnam. The researchers found that students experienced enhanced learning motivation from Quizlet due to the enjoyment that the application provided. It was also found that many participants actively made use of the application for autonomous vocabulary learning. In Pham's (2022) study, the researcher wanted to discover the perceptions that students have of Quizlet for vocabulary learning. The researcher made use of both qualitative and quantitative research and included 148 students in the study. A questionnaire and semi-structured interview were used for data collection. The researcher discovered that students preferred Quizlet as a tool for vocabulary learning due to its convenience. In brief, it is noticed that different types of students got involved in the use of Quizlet for vocabulary learning, but there is a scarcity of research on bilingual students' Quizlet-based vocabulary learning. To that void, this study attempted to scrutise bilingual students' Quizlet-based English vocabulary learning in the context of an international school in Vietnam.

III. RESEARCH METHODOLOGY

A. Research Setting and Participants

This quantitative study adapted a post-positivist perspective, using the quantitative approach to garner bilingual students' Quizlet-based English vocabulary learning (Creswell, 2014; Creswell & Creswell, 2018). The study was conducted in the context of an international school in Vietnam which offered educations from kindergarten to high school. Students had to take a Vietnamese – English curriculum. The Vietnamese curriculum complies with the program of Education and Training of Vietnam, while the English curriculum complies with international Oxford curriculum. The courses were in charge of both Vietnamese and foreign teachers (e.g., USA, UK, Australia). Students had to take general English courses in which Quizlet (free version) was deployed to facilitate their English vocabulary learning. Additionally, students were also required to use Quizlet at home for further vocabulary learning activities.

This study involved a cohort of 50 sixth-grade students, who were conveniently sampled, in answering the questionnaires. Among them, 76% (38) students reported that they spent less than one hour daily learning vocabulary with Quizlet, while 20% (10) students allocated from one to three hours daily to Quizlet-based vocabulary learning and 4% (2) students allotted more than five hours daily to Quizlet-based vocabulary learning.

B. Research Instrument

A closed-ended questionnaire adapted from the Dizon's (2016) study was employed for data collection. It is composed of two main sections: Section A collecting participants' background information; Section B containing 20 items (9 items for the use of Quizlet-based English vocabulary learning in terms of usefulness, enjoyment, and ease of use; 11 items for the effectiveness of Quizlet-based English vocabulary learning in terms of vocabulary improvement, time and place, and motivation and autonomy). The five-point Likert scale (from Strongly disagree to Strongly agreed) was designed for all 20 items. The Cronbach's alpha of the questionnaire was .78, which means the questionnaire was reliable.

C. Procedures for Data Collection and Analysis

Before the main study took place, the instrument was piloted with ten students who shared similar characteristics with those in the main study. After modification to the instrument had been carried out, each participant was given a copy of questionnaire which took him approximately 15-20 minutes to finish. All the returned copies of questionnaire were double-checked for the validity of the answers. Regarding the data analysis, the software SPSS (version 23) was utilised in terms of descriptive statistics (Mean: M; Standard deviation: SD). The interval scale of the five-point Likert scale was understood as 1.00-1.80: Strongly disagree; 1.81-2.60: Disagree; 2.61-3.40: Neutral; 3.41-4.20: Agree; 4.21-5.00: Strongly agree (Kan, 2009). Additionally, the intra-rating method was conducted to assure the validity and reliability of the data analysis.

IV. RESULTS AND DISCUSSION

A. Results

(a). Bilingual Students' Use of Quizlet-Based English Vocabulary Learning

As seen in Table 1, the total mean score of bilingual students' use of Quizlet-based English vocabulary learning is 3.48 out of five (SD=.94). The mean scores of the four components (usefulness, enjoyment, ease of use and convenience were 3.59 (SD=.88), 3.48 (SD=.88), 3.44 (SD=.97), and 3.58 (SD=.90) respectively. This means that bilingual students reckoned that Quizlet-based English vocabulary learning was useful, enjoyable, easy and convenient for them.

TABLE 1
BILINGUAL STUDENTS' USE OF QUIZLET-BASED ENGLISH VOCABULARY LEARNING

No.	Components	N=50	
		M	SD
1	Usefulness	3.59	.88
2	Enjoyment	3.48	.88
3	Ease of use	3.44	.97
4	Convenience	3.58	.90
	Average	3.52	.94

Specifically, the results in Table 2 reveal that bilingual students agreed that "using Quizlet [made] learning vocabulary more interesting" (item A1: M=3.66; SD=.93) and "Quizlet [offered] useful ways to learn vocabulary" (item A2: M=3.52; SD=.83).

TABLE 2
BILINGUAL STUDENTS' USE OF QUIZLET-BASED ENGLISH VOCABULARY LEARNING IN TERMS OF USEFULNESS

No.	Content	N=50	
		M	SD
A1	Using Quizlet makes learning vocabulary more interesting	3.66	.93
A2	Quizlet offers useful ways to learn vocabulary	3.52	.83

Table 3 shows that bilingual students thought that "the different learning modes on Quizlet [were] enjoyable" (item A5: M=3.6; SD=.78), they "[liked] to use Quizlet to learn English vocabulary (item A3: M=3.44; SD=.95), and they "[preferred] using Quizlet rather than using other learning methods for learning vocabulary" (item 4: M=3.41; SD=.92).

TABLE 3
BILINGUAL STUDENTS' USE OF QUIZLET-BASED ENGLISH VOCABULARY LEARNING IN TERMS OF ENJOYMENT

No.	Content	N=50	
		M	SD
A3	I like to use Quizlet to learn English vocabulary.	3.44	.95
A4	I prefer using Quizlet rather than using other learning methods for learning vocabulary.	3.41	.92
A5	I think that the different learning modes on Quizlet are enjoyable.	3.60	.78

As regards Table 4, bilingual students reported that they "[could] easily use study sets on Quizlet created by other people to learn vocabulary" (item A9: M=3.5; SD=.88), "[could] easily understand how to use Quizlet to learn vocabulary" (item A6: M=3.52; SD=.97), and "[used] Quizlet to learn vocabulary without help from parents or teachers" (item A8: M=3.46; SD=1.03). Nonetheless, they were unsure if they "[did not] have any problems when using Quizlet" (item A7: M=3.26; SD=1.15).

TABLE 4
BILINGUAL STUDENTS' USE OF QUIZLET-BASED ENGLISH VOCABULARY LEARNING IN TERMS OF EASE OF USE

No.	Content	N=50	
		M	SD
A6	I easily understand how to use Quizlet to learn vocabulary.	3.52	.97
A7	I don't have any problems when using Quizlet.	3.26	1.15
A8	I use Quizlet to learn vocabulary without help from my parents or teachers.	3.46	1.03
A9	I can easily use study sets on Quizlet created by other people to learn vocabulary.	3.50	.88

It is observed in Table 5 that bilingual students reported that "it [was] convenient for [them] to use Quizlet to learn vocabulary at any time' (item A10: M=3.66, SD=.84), and they could "learn vocabulary on Quizlet at any place" (item A12: M=3.58, SD=.97) and "use Quizlet effectively on different devices to learn vocabulary" (item A11: M=3.50, SD=.90).

TABLE 5
BILINGUAL STUDENTS' USE OF QUIZLET-BASED ENGLISH VOCABULARY LEARNING IN TERMS OF CONVENIENCE

No.	Content	N=50	
		M	SD
A10	It is convenient for me to use Quizlet to learn vocabulary at any time.	3.66	.84
A11	I can use Quizlet effectively on different devices to learn vocabulary.	3.50	.90
A12	I can learn vocabulary on Quizlet at any place.	3.58	.97

(b). Bilingual Students' Perceptions of the Effectiveness of Quizlet-Based English Vocabulary Learning

The results in Table 6 indicate that the total mean score of bilingual students' perceptions of the effectiveness of Quizlet-based English vocabulary learning is 3.49 out of five (SD=.96). The mean scores of two components are 3.50 (SD=.99) for motivation and autonomy and 3.48 (SD=.97) for vocabulary improvement. The findings can be understood that bilingual students perceived that Quizlet-based English vocabulary learning could improve their vocabulary and enhance their motivation and autonomy.

TABLE 6
BILINGUAL STUDENTS' PERCEPTIONS OF THE EFFECTIVENESS OF QUIZLET-BASED ENGLISH VOCABULARY LEARNING

No.	Components	N=50	
		M	SD
1	Vocabulary improvement	3.48	.97
2	Motivation and autonomy	3.50	.99
	Average	3.49	.96

In terms of vocabulary improvement, bilingual students believed that Quizlet "[was] better at improving vocabulary than other learning methods" (item 4: M=3.62; SD=.92), "[helped them] to improve [their] vocabulary" (item B1: M=3.42; SD=.99) and "[helped them] to remember words better" (item B3: M=3.41; SD=.96). They also agreed that they "[could] learn many words via Quizlet" (item B2: M=3.56; SD=1.01), and "[felt] more confident about [their] vocabulary knowledge after using Quizlet" (item 5: M=3.44; SD=.99).

TABLE 7
BILINGUAL STUDENTS' PERCEPTIONS OF THE EFFECTIVENESS OF QUIZLET-BASED ENGLISH VOCABULARY LEARNING IN TERMS OF VOCABULARY IMPROVEMENT

No.	Content	N=50	
		M	SD
B1	Quizlet helps me to improve my vocabulary.	3.42	.99
B2	I can learn many words via Quizlet.	3.56	1.01
B3	Quizlet helps me to remember words better.	3.41	.96
B4	Quizlet is better at improving my vocabulary than other learning methods.	3.62	.92
B5	I feel more confident about my vocabulary knowledge after using Quizlet.	3.44	.99

Regarding the results in Table 8, bilingual students agreed that Quizlet "[helped them] to learn vocabulary on [their] own" (item B7: M=3.66; SD=.91) and "[motivated them] to learn vocabulary" (item B5: M=3.43; SD=.94), and they believed that they "[could] effectively learn vocabulary with Quizlet without help from [their] teachers or parents" (item B6: M=3.46; SD=1.11).

TABLE 8
BILINGUAL STUDENTS' PERCEPTIONS OF THE EFFECTIVENESS OF QUIZLET-BASED ENGLISH VOCABULARY LEARNING IN TERMS OF MOTIVATION AND AUTONOMY

No.	Content	N=50	
		M	SD
B5	Quizlet motivates me to learn vocabulary.	3.43	.94
B6	I can effectively learn vocabulary with Quizlet without help from my teacher or parents.	3.46	1.11
B7	Quizlet helps me to learn vocabulary on my own.	3.66	.91

B. Discussion

Two significant findings from this study have been unravelled. Firstly, bilingual students believed that it was useful, enjoyable, easy, and convenient for them to use Quizlet to learn English vocabulary learning. They found Quizlet a useful learning tool to learn vocabulary. This is likely due to the wide range of modes that the Quizlet app has for different types of learning and ways of assessing user's knowledge. Additionally, thanks to features on the Quizlet app, students could make use of study sets created by other people for the vocabulary learning purpose. This finding is supported by Thompson and MacDonald (2015) who have indicated that learners can make use of the learning community on Quizlet for the learning purpose. Moreover, bilingual students in this study were interested in Quizlet as they believed that the Quizlet-based vocabulary learning was enjoyable. One of the plausible explanations for this could be the variety of study sets on the Quizlet, so students could feel eager and interested in using Quizlet for learning vocabulary. This finding is in alignment with that from previous studies (e.g., Aprilani, 2021; Setiawan & Wiedarti, 2020) which have indicated that students feel enthusiastic and do not feel bored when learning vocabulary with Quizlet; therefore, they can be actively engaged and have great enjoyment in Quizlet-based English vocabulary learning. Another point is that it was easy and convenient for students to use Quizlet to learn vocabulary. Since the Quizlet is user-friendly, students could use it via different devices such as computers, tablets, iPads, and mobiles phones. Therefore, they could learn vocabulary via Quizlet at any time and any place. This finding is corroborated with that from Pham's (2022) study who has found out that students preferred to use Quizlet for vocabulary learning due to its convenience.

Secondly, bilingual students perceived that the Quizlet-based English vocabulary learning was effective in terms of enhancing their vocabulary and motivation and autonomy. With respect to the vocabulary enhancement, it was found out that bilingual students could learn many new words via Quizlet. The research participants in this study were still young, and they tended to be eager to learn vocabulary via Quizlet. Additionally, they believed that Quizlet-based English vocabulary learning was more effective in improving their vocabulary than other learning methods. This may be due to the interactive learning mode of the Quizlet which could facilitate students' vocabulary learning process. Another explanation is that students in this study were bilingual, learning at an international school in which English was one of the main languages for instruction; therefore, it may be easy for them to use Quizlet for English vocabulary

learning. This finding coincides with studies conducted by Dizon (2016), Ho (2019), and Ho et al. (2020) who have compared Quizlet with other learning methods and found that Quizlet-based English vocabulary learning was a more efficient learning method than flashcard-based vocabulary learning. In terms of motivation and autonomy enhancement, bilingual students felt motivated when using Quizlet to learn vocabulary. As the Quizlet could be useful, enjoyable, easy, and convenient for students to use, it could help them to learn vocabulary own their own. Accordingly, they believed that Quizlet could help them to learn vocabulary autonomously. This means that students did not need to rely on the assistance of parents or teachers when learning vocabulary via Quizlet. Nguyen et al. (2021) also found that students were able to use Quizlet to learn vocabulary autonomously.

V. Conclusion

The study has reached some conclusions that bilingual students in this study perceived Quizlet as a useful, enjoyable, easy, and convenient tool for English vocabulary language learning, and they believed in the effectiveness of Quizlet-based English language learning. From such conclusions, pedagogical implications are drawn. Firstly, it is found that Quizlet is effective in vocabulary learning, so teachers should make use of Quizlet for vocabulary teaching and learning. Teachers should encourage students to use Quizlet to learn, review and self-assess their vocabulary. Besides, Quizlet can offer a convenient and independent learning experience; therefore, teachers should facilitate their students' Quizlet-based vocabulary learning and help them to be familiar with the different modes with which they can use Quizlet at their convenience. Secondly, students should be trained how to use Quizlet effectively as Quizlet has different useful features for vocabulary learning. As students are encouraged to use Quizlet, they should be regularly checked and monitored to make sure that they can use Quizlet effectively. Thirdly, Quizlet is proved to be effective for English vocabulary learning, so it is advised for academic administrators to allocate budget to buy full accounts for Quizlet in order to use full features in Quizlet.

This study still indicates some limitations. This study collected quantitative data through questionnaires to collect students' perceptions of Quizlet-based English language learning. Additionally, the sample size of the research was small, so the generalisation may not be gained. Therefore, it is recommended that further research should employ the pre-test post-test and interview to examine the effects of Quizlet-based English vocabulary learning.

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Thao Quoc Tran is currently a lecturer of English language at the Faculty of English language, Ho Chi Minh City University of Technology (HUTECH University), Vietnam. His research areas are discourse analysis, English language skills, teacher professional development and instructional design model.

Vy Lan T. Nguyen is currently a teacher of English language at UK academy, Ba Ria, Vietnam. She is interested in doing research on the use of technology in ELT and English language skills.