In recent years, job candidates are currently required not only professional knowledge and skills but also English specifically implemented in particular occupations. Since then English for specific purposes (ESP) is the latest trend which has exponentially developed. The majority of universities have deployed diverse ESP courses in order to help learners address communicative needs as well as practices of particular professions. Ho Chi Minh City University of Transport has also provided interesting ESP courses supposed to assist engineering and technology students in their future careers. Not only inspired by the need to enable the learners of these courses to increase their knowledge of terminology in their fields but also integrating technology in language teaching and learning, this paper aims to suggest Quizlet a mobile and web-based study application as a tool to facilitate specialized vocabulary acquisition for learners of English for engineering and technology as well as for those who are learners of English for specific purposes in general. Thanks to Quizlet, both teachers and students will take full advantages from this innovative method that is probably proliferating their new learning and teaching experiences. Although the merits outweigh in this sphere, it is obvious that Quizlet should not be compulsory, but combined with other strategies to eventually give fruitful assistance to meet learners’ increasing demands on the verge of the industrial revolution 4.0.

**KEYWORDS**
ESL, specialized vocabulary acquisition, Quizlet, integrating technology.

1. **INTRODUCTION**

In order to develop learners' communicative competence in English, it is noticeable that vocabulary is really a key factor, which was somehow neglected and underrated in language learning and teaching for a number of years. Since ESP has become a new trend, learners' demands are highly increased to focus on developing communicative competence in various practices of particular professions and occupations. There is a variety of ESP courses ranging from English for waiters, English for tourism, or English for business to English for technology, English for engineering, or English for science that are currently implementing all over the world; however, it is clear that specialized vocabulary; in other words, terminology is very pivotal but also challenging in the domain of teaching and learning. Hence, this paper aims to raise learners' awareness of the importance of terminology in their specific fields but also introduce them one of the innovative tools to support their learning.

The difficulties which students are likely to encounter from specialized vocabulary learning are varied and widespread. First of all, learners definitely have difficulties interacting new vocabulary of a particular area of study or professional use, meaning that these are mostly low frequency words and not encountered very often by the learners of general English. In addition, the learners have less opportunities to practice and use these words regularly if they are only students at classroom. Other than that, these words are required to be linked to the context in the specific fields which may require more efforts to be mastered. Also, the learners are coming across troubles such as deciding which words worth learning, finding learning specialized vocabulary complicated and boring. Another problem can be recognized is that how to organize and arrange vocabulary systematically when every single person will adapt in different ways.

However, it is widely supposed that how to remember words properly and how to choose appropriate techniques for words memorizing seem to be two significant problems that should be concerned for vocabulary learners.

Although there are numerous traditional methods ongoing assisting both instructors and learners facilitate their language learning and teaching, technology integration has always played an integral part in language acquisition. It is widely believed that cutting-edge technology makes language learning and teaching easier and more convenient than in the past decades, and obviously English vocabulary learning and teaching also take full advantages from this. One interesting method of learning vocabulary is by incorporating mobile and web-based technology into the classroom, well-known as Computer Assisted Language Learning, Mobile Assisted Language Learning or Smartphone Assisted Language Learning, henceforth CALL, MALL, or SPALL. The use of technology in the classroom is really beneficial in a way that create good environment to enhance students’ motivation, interests and engagement in their vocabulary learning as well as enables teachers to interact with alternatives of new teaching method [1]. Additionally, technology helps learners’ learning interesting and interactive and stimulates their motivation, social interactions, and engagement [2]. The other outcome of these advanced technology is that learners’ reinforcement and persistence in English vocabulary acquisition are also highly affirmed. Furthermore, the use of these applications enables teachers and learners to work in innovative ways which change learners’ attitudes and make them become self-learners, those who are more self-confident and autonomous in their learning process [3].

From the observation and interviews with learners throughout three
years of experience teaching ESP courses, there is no doubt that all students have received lucrative opportunities to enhance vocabulary in their specific fields thanks to the assistance from technology. It is true that students are extremely satisfied with the integration technology in their learning process. Not only supported by dictionary, but they also allow themselves interact with different premium functions like word games or practiced exercises from enormous online vocabulary building apps. One of the growing realizationsof CALL recently is Quizlet, a new sophisticated tool especially designed for learning vocabulary. This building app comes with an array of features that not only assists teachers in their class activities organization and management but also allows students experience an innovative method to increase their vocabulary learning.

2. LITERATURE REVIEW

2.1 English For Specific Purposes Definition of English For Specific Purposes

English for Specific Purposes (ESP) is a term often contrary to the term English as a Second Language (ESL). Both terms are fallen under the larger classification of English Language Teaching (ELT), and the major difference between ESP and ESL to be found is the purpose for learning English. The concept of ESP has been initiated and available since 1960s; however, the definitions of ESP are diverse, both simple and watertight which is complicated to produce. Back beyond the first date, there are numerous ways that researchers define ESP. Initially, the purpose of ESP can be seen as a training; in other words, the learners will be provided with specific skills and knowledge to be applied to tackle problems. Follow this direction, ESP is defined as “an essential training operation which seeks to provide learners with a restricted competence to enable them to cope with certain clearly defined purposes, which the ESP course is designed to meet” [4]. ESP is viewed as an approach to language learning, primarily based on the specific purposes and needs of a learner [5]. Meanwhile, ESP is related to specific disciplines which are designed for adult learners at a tertiary education or in a professional work situation [6]. Many researchers are also of the same opinion that ESP helps English learners to communicate properly not only for daily competence but also for various practices of specific careers. ESP addresses the communicative needs and different activities of particular professions and occupations in society [7]. Simultaneously, ESP is a term referring to teaching and studying English for specific professions in the walks of life and there are always reasons why English is learned [8].

2.2 The Role and Types of Specialized Vocabulary

Most language learners are aware that vocabulary acquisition is a core component of language proficiency. Notwithstanding that vocabulary has a great contribution to the fluency in communication, this scope has been underestimated and neglected for a number of years. Paul Nation illustrates how learners should cope with specialized vocabulary by uttering “It is wise to direct vocabulary learning to more specialized areas when learners have mastered the 2000-3000 words providing about 80 percent of the frequency vocabulary likely to be encountered” [9]. Nonetheless, it is believed that teachers of English who has no basic background knowledge of the specific field will suffer more challenges in their teaching of ESP courses. Therefore, technical vocabulary is not that of priority in teaching ESP, but “core vocabulary” and semi-vocabulary will play an important role in lending a hand to make students understand specialized contexts.

In fact, core vocabulary widely known as ‘common core’, refers to the 2000-3000 words providing about 80 percent of the frequency vocabulary likely to be encountered and used by English learners whereas semi-technical vocabulary with its characteristics has become more frequently used, just followed by “core vocabulary” [13]. Other than that, technical vocabulary occurred in a specific domain or with much greater frequency in that field than other fields will also assist people working in these areas in terms of clarifying every circumstances of particular professions. Additionally, "technical vocabulary" is one kind of specialized vocabulary and these technical words will be usually influenced by factors affecting the use of all vocabulary in general [9]. Hence, learners should be well-prepared by language teachers to cope with the large numbers of technical vocabulary which occur in specialized contexts. A researcher is also of the opinion that language teachers who direct ESP courses should get proficient with the core vocabulary of the specific field and design curriculum that mingle both English language and content of the particular area [14]. Nonetheless, it is believed that teachers of English who has no basic background knowledge of the specific field will suffer more challenges in their teaching of ESP courses. Therefore, technical vocabulary is not that of priority in teaching ESP, but “core vocabulary” and semi-vocabulary will play an important role in lending a hand to make students understand specialized contexts.

2.3 Quizlet - A Prevaling Application of Call

Quizlet is an online learning tool created in 2005 and released to the public in January 2007 by Andrew Sutherland to assist learners in different subjects, and especially in vocabulary development with more than 50 million active users with over 300 million user-generated flashcard sets [15]. This mobile and web-based study application is recommended as a simple and user-friendly learning tool which is available for Android and iOS, and enables users to access anytime and anywhere via Internet. On the one hand, all the study sets in Quizlet can be created, classified according to units, topics or sub-topics by teachers. Furthermore, learners not only can contribute to study sets made by the teachers but also set up their own vocabulary sets for their own learning. Both teachers and learners are simultaneously allowed to manage their teaching and learning process. This application enhances learning vocabulary by means

![Figure 1: A proposed model illustrating three categories of vocabulary](image)
of flashcard which use a diversity of game-like learning tools; however, unlike paper-based flashcards, users can insert both sounds and pictures correspondingly to the terms and definitions which allow learners improve both vocabulary and pronunciation by implementing auditory and visual techniques. The game-like tools in Quizlet comprise two main categories:

### 2.3.1 Study section (Learn, Flashcards, Write, Spell, and Test)

#### Table 2: Quizlet learning modes of study section

| Learning modes | Description |
|----------------|-------------|
| Flashcards     | This mode allows users to get familiar with words in the sets by using digital flashcards that can be flipped over by only one mouse click or tabs on screens on the card which shows definition or image to explain the term. This mode also enables learners to control their learning progress on the numbers of cards to be learned. |
| Learn          | As its name implies, this mode provides users opportunities to comprehend all the terms in the sets by learning words and their meaning through multiple choice and writing questions. It also gives learners feedbacks and error corrections. |
| Write          | In this mode, learners are required to write the definitions for the terms or the pictures shown. In case the learner has no answer yet for the question, there will be a prompt which supports them recall the term. |
| Spell          | Learners will listen to audio cues and prompts given and then simultaneously are required to type what they hear. This mode also provides the repetition through different practiced rounds. |
| Test           | This mode is initially designed for testing purposes, entailing four different types of questions: written, multiple choice, matching and True-False. All questions are based on the sets learned and reviewed through different modes before. Learners can check their progress via their scores and the correct answers for the mistakes they make are also provided. |

#### 2.3.2 Play section (Match, Gravity, and Live)

#### Table 3: Quizlet learning modes of play section

| Learning modes | Description |
|----------------|-------------|
| Match          | A game in which learners are asked to match terms to their definitions by dragging corresponding items onto each other to make them disappear on the screen. |
| Gravity        | Also a game which shows an asteroid with words on it (terms or definitions or random choices), then users have to type the answer for the clues given as fast as possible to keep the asteroid away from hitting the earth. This mode also allows learners to choose game levels and provides correction for the mistaken responses. |
| Live           | This is an online collaborative activity where groups of students are set up and each group competes to choose the correct answer to become the winner. |

### 2.4 Previous Studies

Many researches have been conducted to measure significant roles of Quizlet in vocabulary development. For example, there was a research that measured the success of digital-flashcard on Quizlet with low-level, first year student in Tamagawa University. This study indicated that learners implementing Quizlet had better performance than non-users on tests with gap-fill cards. Additionally, these researchers also believe that Quizlet provided users an effective tool to study independently in their vocabulary learning and this promising trend may proliferate learners’ active vocabulary, their confidence, and their enjoyment studying and using vocabulary [16]. A study was also conducted to measure the impact of Quizlet on vocabulary development with low-level learners of English at Prince Sattam Bin Abdulaziz University. It is revealed in the results that students found Quizlet effective, especially in learning definitions, synonyms and pronunciation [17]. Similarly, Quizlet application was deployed on 830 low-level students and the results showed that the students have indicated a resounding approval of applying Quizlet for vocabulary learning [18]. Another research was also carried out on the implementation of Quizlet in learning vocabulary at the tertiary level. Quizlet indicates advantages in terms of learners’ performance, engagement, autonomy, interests, and motivation. Students assume that Quizlet can provide enjoyable learning, generate their autonomy, and increase their persistence and engagement in the vocabulary learning process [19]. Though many studies conducted to measure actual effects of Quizlet application on vocabulary learning in different levels of general English, not many researchers have paid attention to the case of specific vocabulary. A case study of learning and teaching Business English Vocabulary was carried out at UEH by applying Quizlet. It is noted in the results of this case is that students consider Quizlet essential, beneficial for vocabulary acquisition beyond the traditional ways of teaching, Quizlet creates sufficient method for vocabulary practice which improves pronunciation, autonomy and self-study skills for learners[20].

### 3. Methodology and Findings

#### 3.1 Methodology

#### 3.1.1 Study Setting and Participants

The study took place during the first semester at HCMC University of Transport in Viet Nam with 37 students of information technology at their third year, those who fulfilled two General English courses before the course of English for Information Technology. The participants studied English for Information Technology during 15 weeks with 15 units in the course book in total. Nevertheless the 15-week course, the research lasted during 8 weeks from 27 September to 15 November (Unit 3 to Unit 10 - English for Information Technology – Career Path Publisher). These students coming from two classes and were named Control group (CN16B) with 19 students (8 female and 11 male) who had no special treatment, in other words, no precise method for vocabulary learning applied. Meanwhile, the remaining group served as Experimental group (CN16A) with 18 students (7 female and 11 male), meaning that these students deployed Quizlet as the treatment.

#### 3.1.2 Research Method & Procedures

This study is a quantitative research which analyses the relations between the control group (without any treatment) and the experimental group which used Quizlet as the treatment. The method investigations implemented in this research was experiment procedure and questionnaire. In terms of experiment process, both control and experimental groups were asked to do Pre-test, a specific vocabulary test of Information Technology, source of the test definitely included in the textbook. This test aimed to know how much these IT students from two groups got familiar with terminology of their major in English. Over the past 8 weeks, while students in Control group used any methods that they found appropriate for themselves to master the terminology in 8 units, students in the remaining group were directed to use Quizlet as a supportive tool for their specialized vocabulary development. After 8 weeks, two groups were required to take part in a Post-test in which the learning progress of specific vocabulary were precisely measured. Furthermore, this test also aimed to evaluate if Quizlet had any actual influence on students’ performance. Not only indicated how much learners of Information technology satisfied from the benefits provided by Quizlet, a questionnaire were also designed to know students' reflection on the use of Quizlet in general.
3.2 Data Analysis and Findings

It can be seen from the results of the post-test that students in the experimental group made a better progress in English for Information Technology vocabulary performance than those in the control group. In terms of the effectiveness of Quizlet on terminology development, the results also indicated that this mobile and web-based learning tool has significant influences on learners when they are able to expand their specialized vocabulary. Additionally, the questionnaire carried out to measure students’ reflection on the usages of Quizlet. With the first group of questions, including 3 questions to check general opinions of the student about Quizlet. Through question 1, it is noticeable that more than three quarters of students surveyed (78%) used diverse methods to study vocabulary before using Quizlet, which means that Quizlet was not popular among students in the first place. Meanwhile, question 2 serves as a means to know the favourite online device that students preferred using Quizlet most and smartphone was always the best choice with nearly 85%. Regarding to the frequency of Quizlet outside the classroom, 50% of students used Quizlet around 20 to 40 minutes while the time students spending on Quizlet more than 40 minutes and less than 20 minutes accounted for 22% and 28% respectively. In the second group of questions which surveyed the students’ reflection on the teacher’s application of Quizlet, 100% of students showed their interest and engagement in using Quizlet and these students also agreed that Quizlet’s interface is clear, friendly-use and easy for learners to manipulate. Majority of students (83%) recognized the benefits of using Quizlet in learning specific vocabulary. It is worth noting that these students could remember the words longer, more quickly and easily and Quizlet is also useful to help students store vocabulary. This group of questions also predicted student’ plan of using Quizlet with 77.7% of those who intended to study English vocabulary with Quizlet in the future. However, 35.5% were unsure or disagreed to apply Quizlet for other subjects.

4. DISCUSSION AND PRACTICAL IMPLICATIONS

Quizlet has been noticed to have diverse virtues for both teachers and students when this application is really beneficial in terms of a supplementary tool inside and outside classrooms. With respect to instructors, they are able to design and make study sets to assist and facilitate students’ specialized vocabulary acquisition. Teachers are usually time-consuming reviewing and examining students’ vocabulary learning progress. Thanks to Quizlet, teachers are enable themselves to reduce time in the classroom for vocabulary retention and then in turn increase students’ time and chance for other activities and skills to be accomplished and improved. On top of that, Quizlet with different functions which help teachers keep up to date with students’ activities on Quizlet and monitor their learning progress sufficiently. Class learning progress will be clearly shown through each unit in the study set to indicate who has completed assignment or who needs more encouragement for their study. This tracking function also pinpoints which terms or concepts the students are struggling with most so that teachers may provide further review in need.

Additionally, Quizlet has also provided significant benefits to learners, especially when they can expand their specialized vocabulary by learning and revising when using this cutting-edge application. Furthermore, learners’ motivation and autonomy are enhanced when they are able to make their own study set for other courses later on or simply join in other courses in diverse spectrums. It is noted that Quizlet is one of the successful examples of integration technology that creates a sophisticated and joyful online environment in specific vocabulary development, particularly for engineering and technology students as well as students of other majors in general. However, it is noticeable that QUIZLET should be optional and combined with other strategies to optimize specialized vocabulary acquisition.

Notwithstanding the aforementioned advantages, a number of shortcomings are also revealed. First of all, all study sets are usually time-consuming and required more efforts to design and complete. In addition, study sets with premium contents require registry or payment for more advanced supports. For instances, pictures attached to clarify the definitions or class progress controlling, offline version are always asked for premium package if teachers are eager to superpower their accounts with more high-end features that Quizlet may supply. On the one hand, it is worth noting that most students are satisfied with using Quizlet on smartphone, computer, or tablet due to the remarkable advantages, but on the other hand, students may lose their concentration and focus on their learning with a variety of social distractions surrounded such as adverts, online games, or social networking sites. Furthermore, a small amount of students are noted that they feel confused and have trouble doing real test papers because they have got familiar with online practice or tests on Quizlet. Other than that, students may find the activities on Quizlet boring as they are the same in all the units.

5. CONCLUSION

It is undoubtedly that, Quizlet is considered as a remarkable example of technology integration which has played a vital role in language learning and teaching, especially in specialized vocabulary proliferation. The study has proved Quizlet as a supplementary source to support specialized vocabulary learning and teaching for ESP courses, relevant to engineering, technology or other professional majors as well. Learners have also received significant benefits, especially when they can enlarge their specialized vocabulary thanks to this application. Quizlet creates a good environment for learners which motivates them engage in vocabulary efficiently because most students always find learning vocabulary boring and complicated although they are aware of its importance. This study application also allows learners to enhance their self-learning habit, one of the pivotal factors which has great contribution to the students’ success in terms of vocabulary learning and language acquisition in general. However, there are also some barriers that need to be carefully considered such as time and efforts to be put on every single of study sets or distractions from social network which may make students lose their focus on their learning process. In addition, teachers are also required to upgrade their further registration with special accounts to do the trial on special features that is one of the restrictions for the users worldwide. Other than that, one limitation of Quizlet that is noted that this learning tool with the same features in all units and all study sets can make users somehow feel less interested, especially after a long period of time. Although the merits of Quizlet learning tool outweigh the demerits to some extent, it is noticeable that Quizlet should not be obligatory, but combined with other strategies to maximize specialized vocabulary development.

Since Quizlet is currently recommended as an optional method, learners may not feel like motivated to take part in study sets. Therefore, it is obviously believed that teachers should incorporate diverse methods of teaching to improve lessons more appealing. Although this research try to clarify how Quizlet has impressive influence on specialized vocabulary acquisition, some barriers that need to be taken into consideration such as the size of participants, method investigation. Other than that, further studies are suggested to conduct to examine Quizlet application with other traditional methods to optimize specific vocabulary development by selecting, mingling the outstanding forte of each method. On top of that, students’ achievements have also noticed recently when they are enable to create their own study sets not only for their specific vocabulary list but also for general English vocabulary list. It is also worth noting that they are eager to dependently select various courses on Quizlet resources; hence widen their knowledge about different spheres. It is predicted that more promising studies will be provoked to see beyond virtues noted, whether or not Quizlet enhance learners’ autonomy, motivation and interests.

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