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The Impact of Using Virtual Vocabulary Learning Applications on Enhancing Law Students' Lexical Competence at the Tertiary Level

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Abstract

Technological advancements have transformed foreign language learning and teaching practices in the 21st century. Correspondingly, numerous online applications have arisen to meet the needs of English learners, one of which is Quizlet, a virtual vocabulary learning initiative. Having seen the growing popularity of Quizlet, the researcher investigated its effectiveness in developing 60 law students' lexical competence within 12 weeks in the spring semester of the 2023-2024 academic year at a private university in Iraq. The participants were chosen via convenience sampling to represent the control and experimental groups. Control group students' vocabulary lessons were based on a paper-based format through coursebooks and worksheets; however, experimental group students' lessons were enriched with Quizlet to learn legal terminology through flashcards, games, tests, and self-study folders in an Academic English course. Vocabulary exams, questionnaires, and interviews were used to collect data using mixed methods research design principles. Quantitative data were analyzed by SPSS via descriptive statistics or independent samples t-test, respectively; however, qualitative data gathered by interviews were categorized under specific themes through content analysis using MAXQDA. The findings revealed that Quizlet-enriched instruction paid off with higher vocabulary exam marks, satisfaction, and motivation rates. On the other hand, control group students did not progress noticeably. The findings of this study can offer specific implications for educators interested in integrating technological tools into vocabulary lessons.

Keywords: English learners, foreign language learning, legal terminology, lexical competence, Quizlet, private university in Iraq, tertiary level, vocabulary learning

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Introduction

The significance of the English language in today's global context cannot be overstated. In other words, its prominence is stark in various domains, including education, business, science, technology, and diplomacy, where it functions as a lingua franca to bridge the language gaps among nationals whose native languages differ. Thus, over 1.5 billion people use English to communicate natively or as a second language (Decorte et al., 2024; Ly, 2023). Besides, over 750 million people are trying to absorb the principles of English so they can speak it fluently as a foreigner (Zoghlami, 2023). Additionally, English is the official language in 75 countries, accounting for 39 % of the global population (Heinzmann et al., 2024). Considering those facts, stakeholders in the education sector pay the utmost attention to sharpening learners' English at all stages. In addition, English is the most popular language in language learning apps, educational videos on YouTube, and school learning management systems. Subsequently, English plays an integral role in college admission exams and standardized language tests. After that, English holds significant importance in the business world for several reasons, so commanding English precisely is standard in many job adverts. Its importance lies in conducting international trade, expanding networks, receiving fresh news, and training colleagues so that the companies' revenues may increase accordingly (Yucedal et al., 2022). Next, English matters considerably in science because English materials exceed all other languages on websites, which include articles, books, videos, magazines, and encyclopedias. Moreover, English has an irreplaceable place in technology as well. To illustrate, being a part of a global team, coding, assembling, and problem-solving can be put into practice easily when English serves as a lingua franca among people (Wright, 2016). Similarly, diplomats or leaders can communicate with their counterparts in English to save time and keep privacy. As evident, English's influence has been recognized in many fields.

Technological advancements have made the intrusion of technological tools in English classes possible. They have been employed in education to fulfill several functions. For example, Zoom, Google Meet, and Webex meetings cover online courses, conduct exams, assign homework, and welcome submissions (Mekheimer, 2024). Thus, the steps of digital transformation are felt deeply, thereby promoting collaboration and communication incessantly. Furthermore, Kahoot, Quiziz, Google Forms, and Microsoft Forms are used to create engaging exams that allow students to answer questions remotely (Ebadi et al., 2023). It is worth mentioning that they are user-friendly and can be used flexibly with any device through QR codes or links. After that, Miro, Listium, and Padlet capture learners' attention, allowing them to write on a virtual board and activate peer learning instantly (Tella & Garzon, 2022). Online writing platforms can foster students' curiosity because they exchange their ideas and shape their style by analyzing their friends' works. Afterward, Wheebox, Socrative, and Zip Grade applications are versatile to conduct standardized tests on paper or online and get immediate feedback, which includes precise statistical analysis to come to reliable interpretations and make necessary adjustments for the betterment of education before it is too late (Kim, 2020). Next, Memrise, Rosetta Stone, and Duolingo are complete sets to learn English online through texts, videos, and gamified quizzes (Abubakr Abdulrahman et al., 2022; Issa, 2024). It can be concluded that technological tools have many roles in English, such as customizing lessons and addressing specific needs wisely.

Innovations in digital technologies regarding CALL and MALL have substantially changed the nature of vocabulary teaching in English classes. Correspondingly, there has been

a considerable rise in the number of vocabulary apps on Google Play, Apple or Amazon App Store. Brainscape, Anki, and Drops are commonly used to learn English through flashcards and related quizzes. In this regard, Quizlet stands out from others for its distinguishing qualities for learners. It has increased in popularity since its advent in 2005 as a multinational American company (Shi & Tsai, 2024). Its active users have surpassed 50 million from over 130 countries. Although Quizlet has been acknowledged as an efficient tool in English classes, its influence spans math, science, and history. It has over 500 million user-generated audio-enriched flashcards, which can be turned into word games and live quizzes with different questions, such as open-ended, multiple-choice, and true-false (Aprilani, 2021). It has two versions to welcome users in a costless or paid format according to their needs. Additionally, its adoption of AI technologies was realized earlier than its rivals in the market (Ebadi et al., 2023). It is convenient to use individually or race with other teams as a group. Moreover, its user-friendly interface tracks students' progress with a click, reducing teachers' workload sharply. Vocabulary learning is a fundamental aspect of personal and professional development that influences people's lives in various ways. For instance, a rich vocabulary breadth encourages the speakers to express their ideas more persuasively in communicative acts (Basöz & Erten, 2019). Additionally, figuring out words in context increases the comprehension rate of the readers, thereby affecting their reading scores positively. After that, writing performance can be significantly enhanced when relevant words for the topic are internalized. Moreover, commanding words can decrease hesitation in speaking tasks so that learners can speak more fluently and confidently (Feng & Webb, 2020). Similarly, critical thinking can be fostered more effectively when learners know certain words and use them more eloquently to defend their ideas in debates or essays. Furthermore, the cognitive development of learners who can articulate their ideas more creatively with the power of novel words is overt because they can enhance their memory in agility. It is also expected that learners can transfer this knowledge to their social, personal, and professional lives, which will increase the significance of learning novel words (Wong & Samudra, 2021). Considering the untapped potential of vocabulary, linguists and educators have proposed several theories to sharpen learners' English systematically. Explicit, implicit, constructivist, and behaviorist learning theories have left a lasting impression on learners and teachers because they simplify vocabulary learning through direct or indirect exposure to construct meaning and practice the words regularly (Hao et al., 2021). It seems that vocabulary learning has been implemented with traditional and modern theories so learners can reap the benefits through various reflections.

Expressing oneself is the primary goal in language learning and teaching so that speaking and writing competency can be gradually enhanced. Nonetheless, a growing number of students have difficulty in completing such tasks successfully. When their ideas are investigated thoroughly, it has been observed that insufficient vocabulary knowledge is one of the main reasons that hinder writing creatively and speaking fluently. Apart from traditional vocabulary teaching techniques, gamified vocabulary learning has gained increasing popularity because technology-enhanced tools have infinite potential to capture students' attention (Chkotua & Bingol, 2018; Tran et al., 2018). Thus, it is expected to bridge the gap between student's current vocabulary knowledge and desired vocabulary breadth based on their levels. The findings of this study may shed light on using appropriate technological tools in education to increase the vocabulary power of students at the tertiary level in Iraq. Accordingly, this study can be regarded

as the guideline to set the framework for technology-integrated vocabulary instruction at educational institutions in Iraq.

Literature Review

Vocabulary knowledge is an essential building block of language learning through which chains are connected to speak sensibly, write elaboratively, comprehend the texts accurately, and precisely grasp details in listening tasks. In this regard, it fulfills a complementary role so that learners' English can be more satisfactory. Its significance in language learning has been acknowledged in English classes, so educators have sought ways to expand learners' word power by integrating technology. Thus, the benefits of educational technology can be reaped in vocabulary learning and the teaching process, which can be challenging for many learners because knowing a word necessitates sharpening spelling, pronunciation, and meaning collaboratively. Accordingly, Quizlet has received considerable attention in EFL, ESL, and ESP settings because it offers flashcards and various types of tests in a team or individual mode to accommodate learners' specific needs since its commencement in 2005. Once literature has been scanned thoroughly, many studies have found a positive correlation between Quizlet and various dimensions, such as vocabulary retention (Pham, 2022), reading (Ho & Kawaguchi, 2021), speaking (Wang et al., 2021), autonomous learning (Nguyen & Chu, 2024), self-efficacy (Ebadi et al., 2023), motivation (Setiawan & Wiedarti, 2020). Additionally, its role in sharpening the knowledge of formulaic sequences, such as idioms, collocation, and phrasal verbs, has been acknowledged (Pintado, 2021; Solhi Andarab, 2019). To name a few, Sevigny et al. (2024) completed a comprehensive study to measure the effectiveness of Quizlet on university students in Japan, where experimental group students increased their performance in recalling high-frequency vocabulary and using them appropriately in fill-in-the-blank activities. Similarly, Bayaksud et al. (2024) found that Quizlet is a promising tool for enhancing students' vocabulary retention for high school students in Malaysia as well. After that, Siswandi et al. (2024) pointed out that students' engagement and motivation levels increased considerably after exposure to Quizlet-enriched instruction, so students' overall linguistic skills were positively affected. Besides, Nguyen and Chu (2024) stressed that Quizlet fostered self-study because it is a complete set to discipline students and track their progress with a user-friendly interface by choosing intervals. Subsequently, Wiwin and Widiati's (2022) study revealed that Quizlet promoted digital literacy to take advantage of educational technology in English classes so learners could delve into many connected tools to enhance their vocabulary knowledge substantially. Another notable study was carried out in Thailand on low- low-proficiency students by Waluyo and Bucol (2021), whose studies unearthed that students could seize the opportunity by increasing their enthusiasm to learn novel words and apply them to academic settings according to their needs through Quizlet-integrated curriculum. Furthermore, Tran et al. (2018) realized the connection between Quizlet and fostering 21st-century skills such as collaboration, communication, responsibility, and leadership in their ground-breaking study. Some noteworthy studies mainly focused on pinpointing the correlation between Quizlet and teaching terminology for some fields. For instance, Wright (2016) channeled students' energy into revising technical terms and taking relevant quizzes in a business communication course at a university in Japan, where students enhanced their vocabulary capacity substantially. Similarly, Chaikovska et al. (2022) acknowledged that using Quizlet could foster students' learning in terms of vocabulary size and test-taking skills at the tertiary level in

Ukraine. After that, Hsu and Chao (2024) found that Quizlet can expand Tai students' word power in technical terms in a military college.

Some notable studies were done in Iraq, where the current research was undertaken. To name a few, Majeed and Mahdi's (2021) study showed that university students could benefit from Quizlet-based instruction in English classes regarding expanded vocabulary and increased fluency. Additionally, Yucedal et al.'s (2024) study revealed that online vocabulary learning apps paved the way for raising standards in English classes, thereby elevating students' overall proficiency at the tertiary level. Likewise, Alkhateeb's (2024) study revealed that Quizlet prepared the students for formative assessments, so students' English grades increased considerably in wide-scale tests for university admissions. Complementing other studies, Ono's (2016) study revealed that Quizlet-enriched blended learning could develop students' vocabulary breadth regarding medical terminologies. Considering all studies, it can be concluded that Quizlet has far-fetched effects in teaching English to students regardless of their fields and majors.

Research Aim and Research Questions

A gap in the literature has been noticed in the Iraq context about the impact of vocabulary learning tools, particularly Quizlet, on expanding students' word power in Academic English courses at the tertiary level, although Quizlet-focused studies are numerous globally. To address this gap, the present study has investigated the influence of Quizlet on increasing students' vocabulary knowledge in an Academic English course integrated into the curriculum to teach English terminology to students majoring in law. Accordingly, the given questions below were formulated to be addressed thoroughly:

1) How effectively is Quizlet increasing students' vocabulary grades in an Academic English course?

2) What are students' thoughts about Quizlet enriched instruction in general?

Method

The current study's design was an explanatory sequential mixed method, which required the researcher to collect quantitative and qualitative data, thereby getting an accurate picture of students' differences between two timespans, namely pre-test and post-test. Explanatory sequential mixed methods are designs in which researchers gather quantitative data in the initial phase and complement them with qualitative data in the subsequent stage (Serafini & Reid, 2023). Thus, triangulation can be ensured by comparing each data set with the others to determine whether they complement each other harmoniously. Its convenience and overt benefits prompted the researcher to conduct the study under the explanatory sequential mixed method design heading.

Participants

The study population consisted of all junior and senior students majoring in law at a private university in Erbil, Iraq, in the 2023- 2024 academic year. They were chosen on purpose because they received academic English courses to sharpen their word powers in legal terminology, which were two hours per week spanning two semesters. 60 students out of 120 were chosen by adopting the principles of the convenience sampling method. When their demographic qualities were examined, it was observed that the number of male students (n=33) was higher than their female friends (n=27). Additionally, their ages ranged from 18 to 26. The university offers English Medium instruction in all departments except law, which allows code-switching in specific courses. Students

are accepted to the law department according to their scores in university entrance exams run by the Ministry of Education. Students take placement exams to pinpoint their levels and are categorized to accommodate their needs appropriately. After measuring their levels, first- and second-year students receive General English courses. In contrast, junior and senior students must take Academic English to meet the needs of the 21st century in courts with bilingual services.

Data Collection

The researcher employed a well-reputed test to measure students' levels fairly and assign them to classes to represent the control and experimental groups. More specifically, the Oxford Placement Test (OPT hereafter) was integrated into the study to determine students' overall proficiency in English in terms of macro and micro-skills. Of particular attention is that OPT was piloted on other students, culminating in a .95 Cronbach Alpha Index, so it was sufficient to meet the reliability criteria successfully. Having completed the placement test and piloting, students were ready to undergo the treatment period.

Vocabulary exams were formed according to the essential words covered in the Career Paths- Law coursebook units, which Express Publishing released. The chosen words are illustrated below in Table One:

Table 1. *Essential Words of Each Unit*

Units	*Words*
1	complaint, plaintiff, defendant, attorney, paralegal, jury, judge, crime, civil, wrongdoing
2	dispute, settle, appeal, lawsuit, proof, client, trial, promotion, compensation, case
3	database, digest, reference, encyclopedia, case annotations, document, conviction, offender, dismissed, gather
4	legislation policy, statute, pertain, precedent, state law, constitutional law, precedent, obey, sue
5	intake memo, fee agreement, retainer agreement, demand package, correspondence, medical records, police report, pre-litigation, folder, enclose, agenda
6	bankruptcy, claim, review, court of appeal, supreme court, discretionary, objection, tax court, reserved, likelihood

According to Table One, crucial words important for being knowledgeable in law are extracted from the book. Subsequently, those words are turned into flashcards for use in various Quizlet forms. Students' pre-test and post-test vocabulary questions are formed according to the covered words. Several questions were created, encompassing multiple-choice, fill-in-the-blank, matching, and true-false. It is worth noting that ELT experts checked all questions to ensure content and face validity, so students took the tests in an error-free format. Afterward, questions were piloted on other students whose levels were close to participants. The result of the pilot study revealed that the Cronbach Alpha index was .95, which was high enough to meet the reliability criteria.

The questionnaire consisted of 8 items created based on a five-point Likert scale to understand Quizlet-enriched vocabulary instruction better. The questionnaire items were modified in line with the recommendations of Aprilani (2021), who developed a questionnaire scale to assess students' satisfaction levels via technological tools. It is important to note that in the pilot study, validity and reliability figures were adequate to meet the criteria, thereby scientifically conducting the study.

The interview was also subjected to a strict procedure to guarantee optimal quality. The researcher exclusively formulated the questions. Subsequently, six English specialists with more than 10 years of experience started and concluded a meticulous evaluation procedure. Their ideas were noted, and necessary modifications were made based on their insightful comments. Once potential hindrances were removed, the interviews were directed to the participants.

The data collection process was initiated and finalized in the spring of 2023-2024 when students were exposed to Quizlet-enriched instruction within 12 weeks. More specifically, both groups tried to expand their vocabulary powers with the standard course book; however, the experimental group students' lessons were enriched with various exercises on Quizlet. To name a few, they tried to grasp the meaning with flashcards, played some vocabulary games, completed tasks solely or as a group, took multiple-choice quizzes, and matched photos with definitions. The lecturer monitored students' performance every week and shared the reports with students so that students could plan their schedules for the upcoming weeks. On the other hand, the control group students tried to learn the words using worksheets. Their lessons were not flipped from traditional to online means. Of particular attention is that the researcher received the approval form from the university scientific committee after thoroughly emphasizing objectives, goals, and ethical considerations. In addition, consent forms were signed by students voluntarily. Some students hesitated to join the study, so they were removed and replaced with other volunteers.

Data Analysis

Descriptive statistics were used to analyze quantitative data from vocabulary exams or questionnaires. SPSS 29 measured students' vocabulary learning performance and attitudes towards Quizlet using relevant tools. The former was measured by activating independent samples t-test, whereas the latter was used to obtain mean scores and standard deviation. Kaur et al. (2018) state that descriptive statistics help researchers to portray the figures more meaningfully by forging the relationships between variables. Later, the researcher analyzed the interviews via content analysis, so themes were created to come to more reliable interpretations about the influence of Quizlet. According to Serafini and Reid (2023), content analysis offers a wide range of options for researchers to compile, classify, and analyze qualitative data practically. The content analysis process consists of four distinct stages: meticulous examination of the transcribed data, allocation of codes, categorization of data, and transformation of categories into themes.

Findings

Findings of the Quantitative Analysis

Vocabulary exams, the questionnaire, and the interview comprised quantitative data regarding pre-test and post-test figures. They were analyzed using descriptive and content analysis principles, so statistical measurements were integrated to address the research questions with quantitative data.

The Analysis of the Vocabulary Exams

Vocabulary exams were created based on the official supplementary materials of Career Path, which were specifically designed to teach technical terms for certain professions by Express Publishing. More specifically, six units were covered, which included legal terms, concepts, resources, preliminary, and court structure. Ten essential words for each unit were extracted, and pre-test and post-test questions were created accordingly. The researcher created all questions in collaboration with colleagues at the same university. Later, ELT experts examined all questions

and composed the report to increase the intelligibility of the items for the participants. Upon the completion of exams, the precise descriptions are clearly illustrated in Table Two.

Table 2. *T-test Results for Independent Groups Performed for Pre-test Scores*

Group	*N*	Mean	*SD*	*df*	*t*	*p*
Experimental	30	57.50	6.917	58	.161	.873
Control	30	57.17	8.972	58		

Table Two shows that a significant difference was not observed in pre-test scores in each group, with a .873 p-value higher than 0.05. This was also confirmed by the mean scores of 57.50 and 57.17, respectively. Post-test scores are given in Table Three.

Table 3. *T-test Results for Independent Groups Performed for Post-test Scores*

Group	*N*	Mean	*SD*	*df*	*t*	*p*
Experimental	30	71	15.669	58	3.266	.002
Control	30	59.17	12.183	58		

As depicted in Table Three, a substantial difference was recorded in post-test scores with a .002 p-value, less than 0.05. The same difference was also figured out in mean scores, 59.17 for the control and 71 for the experimental groups. In other words, control group students increased their average by two points, whereas it was approximately 15 points in the experimental group. These results revealed that experimental group students whose curriculum was enriched with Quizlet increased their vocabulary marks more substantially than control group students.

The Analysis of the Questionnaires

The questionnaires were also designed to measure whether students' opinions differed before and after the study. Table Four visualizes the statistical analysis.

Table 4. *Combination of Pre-Test and Post-Test Questionnaire Results*

No	Item	*Min*	*Max*	*Mean*	*SD*	Variance
1	Flashcards are useful to increase word power through Quizlet	4	5	4.83	.379	.144
2	Speller mode is beneficial for writing words accurately.	3	5	4.66	.546	.299
3	Scatter mode is useful for finding the correct definition of the word through gamified tests.	3	5	4.80	.610	.372
4	Gravity mode is engaging in finding the definition by racing time.	2	5	4.66	.884	.782
5	Long-term learning mode helps me to refine my knowledge through repetition.	2	5	4.63	.850	.723
6	API function is user-friendly for creating flashcards or tests to be shared with my friends.	2	5	4.70	.915	.838
7	The flexibility to do activities individually and collaboratively is intriguing.	4	5	4.60	.498	.248
8	Quizlet expands my vocabulary breadth in general.	4	5	4.96	.182	.033

The items in the questionnaire sought specific implications of Quizlet-enriched instruction on students' vocabulary expansion in Academic English classes in Table Four. To begin with, Item One, designed to forge the possible connection between using flashcards and empowering word

power, revealed that students' vocabulary breadth increased significantly with a 4.83 mean score. It hints that flashcards are beneficial in absorbing fundamental words related to law-focused terminology. Subsequently, Item Two was related to the correlation between activating the spelling function of Quizlet and writing the words accurately. In this respect, the mean score of 4.66 unearthed that they noticed Quizlet's positive effects in writing the words precisely without being trapped by grave spelling mistakes. Furthermore, Item Three showed that activating gamified activities through scatter mode helped the students find the proper definition of the word more instantly by considering the mean score of 4.80, which was quite noticeable. It can be inferred that gamified drills matter to increase students' satisfaction and engagement rates. After that, Item Four analysis revealed that time-lapse-based exercises through Gravity mode increased students' motivation to match words with definitions within the given period by considering the mean score of 4.66. Next, Item Five sought the answers to whether Quizlet significantly impacted students' vocabulary knowledge in the long run. It revealed that repetition through guided activities yielded better results in comprehending and using the words practically, with a 4.63 mean score. This figure shows that well-established guidance spanning the whole semester matters if the ultimate goal is enriching their vocabulary knowledge. Students' opinions about the API feature of Quizlet were investigated thoroughly in Item Six, which unearthed that the freedom to customize items and share with friends was highly appreciated, with a 4.70 mean score. It confirms that learners value the importance of forming some files individually and disseminating them through Quizlet. Quizlet's flexibility in taking activities alone or with group members was evident according to the mean score of 4.60 in Item Seven. It is safe to conclude that granting freedom and flexibility under the teacher's guidance offers excellent potential to capture learners' attention and precisely accommodate their needs. The final item was integrated into the questionnaire to receive students' overall opinions about Quizlet's role in enhancing vocabulary capacity, culminating positively with a 4.96 mean score. Considering all items in the questionnaire, it can be postulated that Quizlet has far-fetching effects on students' vocabulary performance without leaving any room for doubts.

Findings of the Qualitative Analysis

Semi-structured interviews were formed to reflect students' opinions on Quizlet-based vocabulary instruction. Accordingly, the following questions were directed:

Description of Content Analysis Through Interview

Participants' opinions were categorized under several themes to emphasize Quizlet-enriched instruction's positive and negative aspects. Table Five visualizes positive reflections, whereas Table Six illustrates some drawbacks.

Table 5. *Positive aspects of Quizlet*

No	Theme	Frequency	%
1	Fun and engaging	24	80
2	Interactive	27	90
3	Memory-oriented	22	73.3
4	Visually stimulating	25	83.3
5	Transparent	24	80
6	Up to date	30	100
7	Sustainable	29	96.6
8	Relevant	22	73.3

Once students' ideas in the interview were analyzed thoroughly, several positive themes emerged to be highlighted in Table Five. Firstly, they asserted that having fun and engaging activities (f=24, 80 %) is one of the essential advantages of Quizlet-oriented vocabulary instruction. It seems that getting pleasure enhances students' continuous engagement in learning words. In the second place, constant communication between classmates and teachers was appreciated by the great majority of students (f=27, 90 %). It can be postulated that pair work activities and peer learning motivate students to join activities more ambitiously. Subsequently, sharpening memory with guided practices increased students' enthusiasm considerably (f=22, 73.3 %). It can be concluded that investing in memory enhancement endeavors receives compliments from the students because they observe the positive influence on them in the short and long run. In addition to others, combining definitions with catchy images was favored by most students (f=25, 83 %). They posited that visual images and concise definitions complement each other excellently. Another central theme that deserves special attention is the contribution to transparency (f=24, 80 %), thanks to the flexibility to monitor students' progress via activity records. It allowed the teacher to weigh the pros and cons and make necessary modifications to enhance their performance in vocabulary classes. Next, the content was updated in line with the units, substantially increasing students' motivation, which could be noticed starkly (f=30, 100 %). It reveals that all students prefer up-to-date content. Furthermore, creating and editing the flashcards online raised students' awareness (f=29, 96.6 %) to behave more environmentally. Sustainability is an intensely debated topic at educational institutions, raising students' alertness during treatment. The final theme was integrating relevant items into Quizlet tests, supported by approximately three-quarters of the students (f=22, 73.3 %). Considering all themes, it is safe to conclude that Quizlet has received many student compliments. Some drawbacks of Quizlet are visualized in Table Six.

Table 6. *Drawbacks of Quizlet*

No	Theme	Frequency	%
1	Complicated	3	10
2	Time-consuming	4	13.3
3	Technical difficulties	6	20
4	Eye-fatigue	7	23.3

However, this does not necessarily mean that all themes were positive in the interview. To name a few, the students mentioned having various modes of activities in a complicated format (f=3, 10 %), allocating much time to absorb the words (f=4, 13.3 %), encountering technical issues (f=6, 20 %), and suffering from vision-related problems (f=7, 23.3 %).

Apart from content analysis, notable comments of some students are given below to exemplify their genuine points of view:

Learning the basics of legal terminology was so appealing to me. We learned the definitions of the words with balanced exercises. Additionally, I learned how to manage my time wisely because gravity mode urged the learners to find the accurate answer within seconds. Additionally, taking the quizzes conveniently in a single or group mode increased our motivation because we could learn individually and cooperatively. Finally, the API feature trained us to figure out the words and transfer them to long-term memory because repetition yielded better results. (St 8)

I am a visual learner interested in learning words with catchy illustrations. When I was exposed to the instruction to internalize words with relevant images, my chance to remember the definition of the words and use them in context was tripled. Thus, descriptions and images supported each other to command more words. I also applied such methods to other courses to expand my vocabulary knowledge. I searched the dictionary, downloaded a relevant photo, and created flashcards. To cut the long story short, visually stimulating images fostered my learning in terms of vocabulary. (St 16)

I enjoyed having classes through Quizlet in general. However, some drawbacks of Quizlet should be considered. For instance, compiling many words into the platforms is complicated to classify and keep in mind. Additionally, it takes much time to memorize all the words if you are a perfectionist. Afterward, my mobile phone was not new, so I had technical difficulties due to the frozen screens. Finally, I suffer a lot when I look at the screen incessantly because checking the screen many times causes eye fatigue. When such issues are resolved, Quizlet is a promising tool to enhance vocabulary performance and develop language proficiency significantly. (St 28)

Discussion

The primary goal of the present study was to determine the effect of Quizlet application on enhancing law students' vocabulary breadth through vocabulary exams, questionnaires, and interviews. Correspondingly, research questions were formulated to investigate its impact quantitatively and qualitatively. In this respect, quantitative findings documented that Quizlet had far-reaching effects on expanding students' vocabulary breadth. Exam scores revealed that experimental group students whose lessons were enriched with Quizlet outperformed the control group students whose lessons were not different from previous cycles. The noticeable gains of the experimental group can be ascribed to visionary instruction, which allows the students to absorb words using online flashcards and relevant, interactive tests. It can be argued that technology-enriched educational tools have untapped potential to transform English classes so that students' vocabulary enhancement can be ensured. This finding resonates with the study of Ebadi et al. (2023), which hints that using technology in a balanced way yields better results in EFL classes, thereby developing students' vocabulary powers. Likewise, incongruent with Tello and Garzon's (2022) study, vocabulary learning tools such as Quizlet, Kahoot, and Jotform should be promoted more systematically with appropriate training sessions so English teachers can acknowledge the significance of such tools in the way of improving students' numerous skills.

In the second place, questionnaires shed light on essential points to contemplate while addressing the second research question. To name a few, taking advantage of flashcards was appreciated by students dovetailing with the study of Pham (2022), which unearthed that the value of flashcards should not be underestimated in language classes because they permit the students to study systematically and figure out the meaning by repetitive tasks. Spelling-oriented vocabulary teaching exercises captured students' attention because they learned how to spell and comprehend the meaning of the word at the same time. Hao et al. (2021) assert that knowing how to spell the words paves the way for accurate matching because they can have more self-confidence to match the words with definitions. In addition, students favored racing against time because they improved their time management skills and remained alert until they found the correct definition for the given word. This finding aligns with the study of Abubakr Abdulrahman (2022), which showed that timers could increase students' motivation and engagement when they took gamified vocabulary tests. Moreover, developing self-study habits was expressed as one of the positive sides

of Quizlet, which is consistent with the study of Issa (2024), which pointed out that online tools like Quizlet trains students to be lifelong learners because they can group the words and study regularly conveniently. Another important reflection of the questionnaire is about appreciating customized materials on Quizlet. Students underlined that there was a positive link between their increasing enthusiasm and creating their materials to be shared with others. In this regard, Aprilani (2021) postulated that it is not uncommon to notice that students' engagement increases as they have a say in the content of online tools. Furthermore, joining the exercises solely or collaboratively on Quizlet was another triggering point for students to be more active, which aligns with the study of Zoghlami (2023). He attests that each online learning tool should grant the freedom for the users to take quizzes alone or as a group member because it has its advantage, which should not be underestimated.

The final instrument was the interview, which was integrated into the study for triangulation data. The findings revealed that all data complemented harmoniously to prove that Quizlet has endless potential to enhance students' vocabulary capacity. To illustrate, its role in sharpening memory was emphasized. This finding was in line with the study of Alkhateeb (2024), who concluded that empowering memory with online learning tools pays off because they are handy, visually stimulating, versatile, and mostly costless. Thus, learners are inclined to use them more frequently. Another fundamental point highlighted in the interview was Quizlet's contribution to sustainability, allowing educators and students to create materials without using paper. In this respect, Hsu and Chao (2024) suggest that online language learning tools are environmentally friendly thanks to the advantages offered by technological tools, so they should be implemented more widely at educational institutions to reduce the number of cleared forests due to producing papers. Apart from being handy, visually stimulating, costless, and environmentally friendly, offering up-to-date content and the transparency to examine students' activity logs and grades were also expressed as positive sides of Quizlet. Wong and Samudra (2021) stated that editing content instantly and examining students' performance at any time just by clicking are pluses of Quizlet because they ensure up-to-date content and convenience for educators and users. On the other hand, some drawbacks of Quizlet were emphasized to notice and take preventive measures to increase the educational benefits of the platforms. To name a few, compiling many flashcards to memorize, feeling obliged to memorize a wide range of words, having frozen screens, and suffering from eye fatigue were cited as opposing points of Quizlet. In this regard, Heinzmann et al. (2024) pointed out that online learning tools have some pros and cons, so educators should stick to the principles of examining them thoroughly before implementation. Thus, the most suitable ones with the least risks can be chosen in cooperation.

Conclusion

This research purported to explore the potential effect of the Quizlet application on law students' vocabulary enhancement at a private university in Iraq. Findings revealed that Quizlet can expand students' capacity to learn more words about legal terminology, which is a prerequisite for defending the rights of plaintiffs or defendants. In other words, students' vocabulary marks elevated considerably after being exposed to the instruction through Quizlet. Conversely, students whose vocabulary lessons were covered according to the coursebook and official worksheets in the paper-based form did not progress substantially. Apart from exam marks, questionnaires and interviews showed that Quizlet has an enormous potential to increase students' motivation and satisfaction rates because they are expressed as visually stimulating, up-to-date, relevant,

transparent, and environmentally friendly, albeit posing some minor problems regarding feeling overwhelmed, consuming much time and suffering from eye-laziness. It can be stated that quantitative data complemented qualitative ones without leaving any room for hesitation.

Based on the findings of the study, some pedagogical implications are given. First, educational institutions that desire to reap the benefits of technology in English classes should equip their classrooms accordingly. Next, authorized bodies can increase the volume of in-service training to implement game-based language learning policies clearly; otherwise, some minor obstacles can disrupt the classroom atmosphere, reduce educational benefits, and deter educators from using them in their classes. Additionally, peer learning is at the heart of current teaching methods, which Quizlet can implement easily. Thus, educators can accommodate students' needs to learn in cooperation and get feedback from their classmates in a constructive mode, all of which boost their motivation considerably. After that, Quizlet's power to engage students with balanced activities should not be ignored so that monotonous and boring classes can be reduced dramatically. Afterward, Quizlet is a promising tool for developing various skills, such as spelling, writing, and pronunciation, supporting other macro and micro-skills in the long run. Thus, this learning cycle can be used to guarantee students' overall proficiency in English.

Regarding the study's limitations, many recommendations are made to inspire scholars to conduct further research about Quizlet. Firstly, the study was confined to measuring the differences between the vocabulary powers of learners, which can be expanded to investigating the role of Quizlet in enhancing other skills. Later, only the law department was included in the study, which can be enriched with other departments. Subsequently, only six book units were converted into Quizlet flashcards covering the whole book. After that, only junior students were participants, which can be increased with freshman, sophomore, and senior students. Finally, a private university was the setting that could be widened to other public and private universities in the region.

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