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| **RESEARCH ARTICLE**

Using Quizlet Application to Improve Academic Vocabulary Learning in Turkish Preparatory Schools

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| **ABSTRACT**

This study examined the influence of Quizlet, an internet-based tool, on the acquisition of academic vocabulary by English as a Foreign Language (EFL) students in Turkish preparatory schools. The objective of this study was to evaluate the measurable effect on vocabulary development utilizing Quizlet. The sample consisted of 40 university students at an intermediate level who were enrolled in a preparatory program at a foundation university in Turkey. The data collected during the spring semester of the 2024-2025 academic year. The study used a quasi-experimental research approach to assess the statistical effects of Quizlet on students' vocabulary achievement. The data collection methods utilized in this study included a pre-test and post-test for both the control and experimental groups. The collected data determined whether Quizlet is an advantageous tool for increasing English vocabulary acquisition in EFL settings. The findings indicated that while both groups showed improvement, only the experimental group demonstrated statistically significant gains in vocabulary knowledge. The results reveal that using game elements motivates learners to study vocabulary and outlines practical strategies for teachers introducing digital tools in EFL classes.

1. Introduction

In the dynamic landscape of contemporary education, the integration of technology has become paramount in fostering effective and engaging learning environments. One such digital tool that has gained increasing attention in English Language Teaching (ELT) is the Quizlet application. Quizlet is a versatile and user-friendly platform offering various study modes such as digital flashcards, quizzes, and games that support vocabulary learning. By incorporating gamification, Quizlet provides a stimulating environment that appeals to the preferences of digital-native learners. Previous studies have emphasized the benefits of gamified vocabulary instruction. For instance, Kingsley and Grabner-Hagen (2018) discovered that gamified learning of vocabulary encourages learners to stay involved and to remember new words.

Academic vocabulary proficiency is a critical component of language acquisition and plays a decisive role in students' academic success and communication in English as a Foreign Language (EFL) settings. As Moeller et al. (2009) affirm, vocabulary knowledge underpins comprehension of both spoken and written language, making it essential for academic achievement. Despite the acknowledged importance of vocabulary instruction and the growing integration of technology in classrooms, there remains a research gap regarding the specific impact of digital tools like Quizlet on academic vocabulary development in Turkish preparatory school contexts. This study addresses that gap by investigating the effectiveness of Quizlet through a quasi-experimental design, analyzing both learning outcomes and students' perceptions.

The significance of this research lies in its potential to inform pedagogical practices in technology-enhanced vocabulary instruction. By examining Quizlet's role in academic vocabulary development among Turkish EFL learners, the study aims to offer empirical evidence to guide educators, curriculum designers, and policymakers. Additionally, the investigation into students' attitudes and experiences with Quizlet contributes a learner-centered perspective, offering practical insights into its usability and acceptance. As such, this research aspires to support the optimization of vocabulary learning strategies in Turkish preparatory schools and contribute to the broader conversation around digital innovation in ELT.

2. Literature Review
2.1 Technology Integration in Language Learning
The integration of technology into English language teaching (ELT) has become a fundamental necessity in the 21st century, especially for meeting the needs of digital-native learners who are accustomed to interactive and personalized learning environments (Başar & Şahin, 2022; Prensky, 2001). Research consistently shows that when applied purposefully, technology enriches language instruction by facilitating access to authentic materials, supporting different learning styles, and enhancing the development of language skills (Syathroh et al., 2021; Kumar, Shet, & Parwez, 2022). Tools ranging from computers to mobile applications and online platforms have contributed to shifting instruction from teacher-centered to learner-centered models, aligning with pedagogical frameworks like CALL, MALL, and TELL (Al-Kadi, 2018; Rintaningrum, 2023). However, effective integration is not without challenges, including a lack of digital infrastructure, insufficient teacher training, and the risk of using technology without clear pedagogical alignment (Rintaningrum, 2023; Syathroh et al., 2021). Despite these barriers, studies emphasize that technology, when implemented with a well-structured plan, can significantly improve learner engagement, autonomy, and communicative competence in ELT contexts (Kumar et al., 2022).

2.2 Digital Tools and Vocabulary Learning
Vocabulary instruction has undergone a significant transformation through the use of digital tools, which have made learning more dynamic, interactive, and personalized. Rather than relying solely on repetitive memorization techniques, learners today benefit from applications that offer multimodal input—visual, auditory, and contextual—designed to improve both retention and motivation (Robin & Aziz, 2022; Babazade, 2024). Grounded in dual coding and multimedia learning theories, such tools enhance learners' engagement with vocabulary in meaningful ways. Apriliani (2021) observed that students found vocabulary study more enjoyable and less stressful when using digital platforms like Quizlet, while Mavropoulos (2021) showed that learners using online tools retained vocabulary more effectively than those using print-based methods.

Among these innovations, gamified digital tools have shown particular promise in motivating learners and improving retention. A systematic review by Vnucko and Klimova (2023) emphasized the potential of digital game-based learning to foster emotional engagement and deeper processing of vocabulary. Waluyo and Leal (2021) reported statistically significant gains in low-proficiency students' academic vocabulary after using Quizlet over a two-cycle intervention. Similarly, Jata Robin and Aziz (2022) highlighted how digital resources foster learner autonomy and active participation in hybrid or online settings. However, researchers have also pointed to challenges, such as inconsistent access to technology and varying levels of digital literacy (Babazade, 2024). Despite these limitations, digital tools remain a powerful means of enriching vocabulary instruction when aligned with pedagogical goals.

2.3 The Use of Quizlet in ELT
Quizlet has emerged as a popular digital tool for vocabulary instruction within English Language Teaching (ELT) due to its user-friendly interface, multimodal learning features, and accessibility across devices. The platform offers various study modes such as flashcards, tests, spelling, and gamified activities, making it suitable for diverse learner preferences and encouraging learner autonomy (Anjaniputra & Salsabila, 2018; Aksel, 2021). Research has shown that Quizlet fosters engagement and motivation, particularly among tertiary-level learners. Aksel (2021) found that Turkish preparatory students perceived Quizlet as both effective and enjoyable for vocabulary learning, while Okkan and Aydın (2020) noted that its gamified features can lower learners' anxiety and improve self-efficacy.

Empirical studies also support the tool's effectiveness in enhancing vocabulary retention. For instance, Barr (2016) and Chaikovska and Zbaravska (2020) reported statistically significant gains in vocabulary test scores among students using Quizlet compared to control groups. Platzer (2020) emphasized that while recognition-based tasks like "Match" were widely used, recall-based modes such as "Write" and "Spell" had greater impact on long-term vocabulary development. Nevertheless, some challenges persist, such as limited use of higher-order tasks and potential overreliance on mobile-based learning, which may hinder deeper cognitive engagement (Platzer, 2020). Despite these limitations, Quizlet remains a valuable tool in ELT, especially when implemented with pedagogical intention and balanced instructional design.

3. Methodology

The primary purpose of this study is to comprehensively investigate the effectiveness of the Quizlet application as a facilitator of academic vocabulary learning within the context of Turkish preparatory schools, utilizing a quasi-experimental research design with pre-tests and post-tests. This study is guided by the following research question: Does the integration of the Quizlet application significantly impact the learning of academic vocabulary among students in Turkish preparatory schools?

3.1 Participants

The current study includes a total of 40 students, including 15 males and 25 females, all of whom are at the intermediate level. They are assigned to B1-level classes according to the results of the placement exam conducted by the school's testing unit at the start of the academic year. The experimental group consists of 24 students, with 18 females and 6 males.
The control group, on the other hand, has 16 students, with 7 females and 9 males. The students' age spanned from 18 to 21 years old.

3.2 Instrumentation

The study utilized Quizlet, a widely used mobile application that enables learners to review content through various learning aids and games. A carefully prepared pre-test and post-test quiz were created and conducted to assess the initial and final academic vocabulary proficiency of the participants after the intervention. The pre-test determined the beginning level of vocabulary competency, while the post-test measured vocabulary gains following the Quizlet intervention.

3.3 Data Collection and Analysis

Two pre-intermediate classes have been chosen for the investigation through convenience sampling. One class served as the experimental group and the other as the control group, taught by the researcher. Both groups followed the same syllabus and covered the same academic vocabulary items during a five-week period.
A pre-test, developed by the researcher, was administered to both groups to assess prior vocabulary knowledge. Following the pre-test, the experimental group received training on how to use Quizlet application and completed vocabulary activities using its features including flashcards, multiple-choice tasks, written input exercises and games integrated into regular classroom instruction. Quizlet tasks focused on key vocabulary items from the coursebook and were supported with images and interactive elements to enhance engagement. However, the control group received regular instruction without the use of digital tools.
At the end of the intervention, a post-test was administered to both groups. This test consisted of 30 items including multiple-choice, fill-in-the-blank, and matching questions, aiming to measure vocabulary gains. The participants' scores were analyzed employing descriptive statistics to compare performance and determine the impact of the Quizlet-based intervention.

4. Results & Discussion

The descriptive statistics and t-test results for the pre- and post-tests of both the experimental and control groups are presented in Table 1.

	Experimental Group (n=24) X̄ ± Sd. (Min / Max)	Control Group (n=16) X̄ ± Sd. (Min / Max)	(p)ᵃ
Pre-Test	15,54 ± 4,57 (5 / 25)	16,93 ± 6,42 (6 / 27)	0,427
Post-Test	21,21 ± 3,52 (14 / 27)	19,62 ± 5,66 (10 / 28)	0,282
Difference (Post-Pre Test)	5,67 ± 4,31 (-3 / 13)	2,69 ± 5,38 (-4 / 16)	0,060
(p)ᵇ	0,001*	0,065	

*p<0.05; ᵃIndependent Samples T-Test and ᵇPaired Samples T-Test are used.
Mean (X̄), standard deviation (Sd), minimum (Min) and maximum (Max) are reported.

Data analysis was conducted using SPSS 28.0. Since the data were normally distributed as found by the Shapiro-Wilk test, parametric analyses were used. For the comparison between control and experimental groups, an Independent Samples T-Test was used and for within-group changes, a Paired Samples T-Test was used. The standard value of p was set to $p < .05$.

The vocabulary levels in the experimental group (M = 15.54, SD = 4.57) and the control group (M = 16.93, SD = 6.42) did not differ significantly before the study began (p = .427). At the end of the five-week period, both groups showed some improvement, but only the experimental group improved significantly (p = .001), going from 15.54 to 21.21. The results are consistent with numerous earlier studies that praised Quizlet for its effectiveness in teaching vocabulary. For instance, according to Platzer (2020), Quizlet activities that require learners to recall materials by typing increased their chances of keeping vocabulary in memory, mainly if they tried writing or spelling tasks. In addition, Sanosi (2018) discovered that using Quizlet for a month led to significantly better vocabulary results for the students involved. This evidence supports the belief that learning vocabulary through Quizlet can help students improve.

However, the change in the control group was not considered statistically different (p = .065). The group that experimented reported a mean score (M = 5.67, SD = 4.31) higher than the control group (M = 2.69, SD = 5.38), but this was not statistically significant (p = .060). Although the change in the experimental group (5.67±4.31 points) was greater than the control group (2.69±5.38 points), this difference was not significant (p>0.05). These findings demonstrated only a mild difference between your two groups which matches Aksel's (2021) note that the experimental groups don't always show enough improvement for the results to be statistically significant. This could be because of instructional time, how much students are given freedom to learn or how frequently they use digital tools. Both Barr (2016) and Sanosi (2018) pointed out that using Quizlet in a planned and repeated way matters most for good results.

5. Conclusion

The purpose of this study was to examine how Quizlet improved Turkish preparatory school students' academic vocabulary learning skills. It was found that both groups got better at vocabulary, but only the experimental group who learned with Quizlet showed significant differences within their own group. According to the comparison between groups, the Quizlet group did slightly better than the control group but this difference was not statistically significant. Previous studies have also shown that Quizlet and similar tools are helpful for learning when used regularly and with engagement. On the whole, these results suggest that digital resources make it easier to remember vocabulary and make the study process more appealing for students, no matter how small the results may be. These outcomes confirm the relevance of the article's title "Using Quizlet Application to Improve Academic Vocabulary Learning in Turkish Preparatory Schools" as the findings provide empirical support that Quizlet contributes positively to vocabulary development, particularly in digitally enriched environments.

Based on my observation in the classroom, students showed notably higher enthusiasm and engagement when using Quizlet compared to the regular lesson flow. In addition, aspects such as timed games and leaderboards motivated learners to be more involved and pay more attention. Although these benefits cannot always be detected by looking at test results, they played a positive role in the learning environment. However, because we did not track how much time each student spent using Quizlet outside of class, it was not always clear how involved they were. Because of this variation, we should consider further research to study the link between how much people use language and their ability to learn new words. However, integrating Quizlet and other digital tools can be helpful in the language classroom when they are implemented correctly.

Conflicts of Interest: The authors declare no conflict of interest.
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