Improving Applied Business Administration Students' Reading Comprehension and Vocabulary Acquisition by Using Quizlet

[1]Hindri Febri Ana Sari, [2]Arthur Reinaldo Tanihatu, [*3]Hedyan Putra
[1,2,3]Politeknik Negeri Ambon
Kota Ambon, Indonesia
febfebri08@gmail.com, arthurtanihatu@yahoo.com,
hedyanputra@gmail.com

Abstract. This study investigates the integration of Quizlet as a digital tool to enhance English reading comprehension and vocabulary acquisition among second-semester Applied Business Administration students at Politeknik Negeri Ambon. The study addresses the urgent need to support ESP students who often struggle with discipline-specific reading due to limited academic vocabulary and low engagement, particularly in vocational higher education contexts. Using a mixed-methods design, data were collected from 45 students through pre-tests and post-tests, classroom observations, reflective journals, interviews, and Quizlet usage logs. Over eight instructional sessions, students engaged with Business Administration reading texts supported by Quizlet activities, including flashcards, games, and cumulative quizzes. Quantitative data were analyzed using paired-samples t-tests and effect size calculations to examine learning gains, while qualitative data were analyzed thematically to explore patterns of engagement and learner perceptions. The findings revealed significant improvements in vocabulary retention (+22.5) and reading comprehension (+23.2), with strong effect sizes. Weekly accuracy rates increased from 61% to 86%, and student engagement rose markedly, with active participation improving from 55% to 91%. Reflective data indicated a positive shift in students' attitudes toward reading, from perceiving it as monotonous to viewing it as useful and engaging. These results highlight the pedagogical significance of integrating Quizlet as a supportive tool for fostering vocabulary development, reading comprehension, and learner engagement in ESP instruction.

Keywords: Gamified Learning, Learner Engagement, Quizlet, Reading Comprehension, Vocabulary Acquisition

Introduction

Reading remains a cornerstone of academic development, not merely as a basic literacy skill but as a complex cognitive process that underpins higher-order thinking, disciplinary knowledge acquisition, and professional communication (Cartwright & Duke, 2019; Goldenberg, 2020). For students in Applied Business Administration, English reading competence is particularly crucial given the necessity to interpret theoretical frameworks, case studies, and empirical reports in English. However, research consistently highlights that university students, especially those for whom English is an additional language, often struggle with academic reading due to insufficient vocabulary, ineffective strategy use, and low engagement (Dixon, Thomson, & Fricke, 2020; Eriksson, 2023). Such challenges make it urgent to identify pedagogical strategies that integrate vocabulary growth, motivation, and comprehension in ways that resonate with learners' academic needs.

Vocabulary knowledge is a decisive predictor of reading comprehension and academic success. Scholars emphasize that both vocabulary breadth and depth shape learners' ability to decode texts, derive meaning, and critically engage with content (Kieffer & Christodoulou, 2019; Kotzer, Kirby, & Heggie, 2021; Lawrence et al., 2021). Yet in many tertiary EFL contexts, vocabulary instruction continues to rely heavily on rote memorization practices that prioritize short-term recall over meaningful integration into reading tasks. Although such approaches may yield immediate test gains, they have been widely criticized for failing to support long-term retention, autonomous learning, and the transfer of lexical knowledge to authentic academic reading contexts (Cheema, 2018; Hebbecker, Förster, & Souvignier, 2019). As a result, students often accumulate isolated word knowledge without developing the ability to apply vocabulary strategically when comprehending discipline-specific texts, leaving a persistent gap between vocabulary learning and reading comprehension development. This unresolved shortcoming has prompted growing attention to technology-enhanced learning tools that can systematically link vocabulary practice with engagement, self-directed learning, and contextualized use. Among these tools, Quizlet has emerged as one of the most widely researched and implemented platforms in second language learning.

Empirical findings on Quizlet's effectiveness in vocabulary development are generally consistent. Ho and Kawaguchi (2021) show its significant impact on receptive vocabulary acquisition, while Nguyen et al. (2022) highlight its role in enhancing autonomous learning. Similarly, Chaikovska and Zbaravska (2020) confirm its usefulness in preparing undergraduates for English proficiency exams, and Mykytka (2023) documents gains in vocabulary retention through Quizlet-based practice. Earlier studies, such as Dizon (2016) and Özer, Koçoğlu, and Zeynep (2017), further demonstrate Quizlet's positive influence on academic vocabulary learning among university students. Together, this body of work suggests that Quizlet is not merely a digital flashcard tool but a platform capable of linking memorization with contextualized learning, thereby aligning vocabulary growth with broader reading outcomes.

Beyond vocabulary acquisition, Quizlet's gamified features have been associated with increased learner engagement and motivation. Waluyo and Bucol

(2021) demonstrate that gamification benefits low-proficiency learners in particular, while Mauidloh, Anam, and Widyastuti (2024) show that Quizlet gamification positively correlates with reading comprehension through enhanced engagement. These findings echo broader evidence that motivation and enjoyment predict higher reading achievement (Cheema, 2018; Hebbecker et al., 2019). Additional studies reinforce Quizlet's motivational dimension, showing its ability to sustain learners' interest and foster positive attitudes toward vocabulary learning (Setiawan & Wiedarti, 2020; Anjaniputra & Salsabila, 2018; Azman, 2018). Taken together, these findings highlight the tool's potential not only to enhance lexical development but also to create the affective conditions necessary for more effective reading practices.

Despite this promise, the literature also underscores key limitations. Nguyen and Le (2022, 2023) reveal that Quizlet's effectiveness depends on contextual factors such as the learning environment (classroom vs. self-study) and individual learner differences. Bueno-Alastuey and Nemeth (2020) caution that digital tools, while beneficial, cannot substitute for the complex cognitive processes required for deep reading comprehension. This point resonates with reading research emphasizing that comprehension involves executive functioning, metacognitive regulation, and critical analysis, not merely vocabulary recognition (Duke & Cartwright, 2021; Barber, Cartwright, Hancock, & Klauda, 2021; Roomy, 2022). Thus, while evidence strongly supports Quizlet's role in vocabulary acquisition, its integration into reading pedagogy—particularly in fostering higher-order comprehension—remains an underexplored frontier.

Another notable gap concerns the disjunction between vocabulary and reading research. Although scholars acknowledge that vocabulary growth and comprehension are closely intertwined (Goldenberg, 2020; Share, 2021), studies on Quizlet often isolate vocabulary gains from broader reading outcomes. This separation is especially problematic in discipline-specific contexts such as Business Administration, where learners must simultaneously master technical terminology and interpret complex, multimodal texts. Research into academic reading among non-native students reveals that such tasks are often perceived as laborious and cognitively overwhelming (Eriksson, 2023; Stoller & Nguyen, 2020). Without pedagogical approaches that explicitly connect vocabulary practice with authentic reading tasks, Business Administration students risk acquiring lexical knowledge without being able to deploy it effectively in comprehension.

Furthermore, reading motivation and strategy use have been shown to be critical mediators of comprehension. Li and Gan (2022) establish that self-regulated reading strategies and intrinsic motivation predict reading performance, while Hidayati, Inderawati, and Loeneto (2020) confirmed that critical reading and critical thinking skills significantly influence comprehension outcomes. Gustanti and Ayu (2021) also highlight the role of cognitive reading strategies in predicting English proficiency. While Quizlet has been linked to increased motivation, little research has explored how this motivational boost translates into sustained improvements in reading comprehension within discipline-specific contexts. Most existing studies remain confined to general English or exam

preparation, leaving a gap in understanding how Quizlet can be strategically leveraged in academic fields requiring advanced reading skills.

In light of these gaps, our study situates itself at the intersection of vocabulary acquisition, reading pedagogy, and digital learning. By focusing on Business Administration students, who face distinct challenges in mastering English academic texts, we aim to investigate how Quizlet can be integrated not only as a vocabulary tool but also as a catalyst for improved reading comprehension. Prior research has provided evidence of Quizlet's vocabulary benefits (Dizon, 2016; Ho & Kawaguchi, 2021; Mykytka, 2023) and motivational effects (Waluyo & Bucol, 2021; Setiawan & Wiedarti, 2020; Mauidloh et al., 2024), but few studies have examined how these outcomes converge in discipline-specific reading contexts. Addressing this gap, our study contributes to the literature by exploring the extent to which Quizlet can serve as a bridge between vocabulary learning, reading motivation, and comprehension development in English-medium Business Administration education.

Method
Research Design and Procedures

The research design employed a mixed-methods approach, combining quantitative and qualitative data collection. Mixed methods were selected to ensure triangulation, as combining test-based evidence with qualitative insights allows for richer interpretations of pedagogical interventions (Barber, Cartwright, Hancock, & Klauda, 2021; Duke & Cartwright, 2021). Quantitative data focused on measurable gains in vocabulary and reading comprehension through pre-tests and post-tests, while qualitative evidence was obtained from classroom observations, reflective journals, and semi-structured interviews. This approach is in line with earlier studies on gamified learning tools, where the combination of statistical data and learner narratives provided comprehensive insights into learning processes (Waluyo & Bucol, 2021; Mauidloh, Anam, & Widyastuti, 2024).

The intervention was conducted over eight weekly sessions, each lasting 90 minutes. Quizlet was systematically integrated into the reading curriculum, with a focus on discipline-specific materials relevant to Applied Business Administration. The procedure began with a diagnostic test of vocabulary and reading comprehension, followed by treatments in which students engaged with texts on office administration, customer service, and business correspondence. Quizlet features such as flashcards, matching games, and timed quizzes were embedded into pre-reading, while in-class discussions encouraged metacognitive strategy use, such as predicting content and identifying key terms. Similar procedures have been documented to improve reading engagement and lexical retention in ESP contexts (Ho & Kawaguchi, 2021; Chaikovska & Zbaravska, 2020).

To preserve ecological validity, teaching practices followed the structure of standard ESP lessons, with the sole distinction being the systematic use of Quizlet as a supporting tool. Students were also encouraged to practice independently outside the classroom, a practice known to foster autonomous learning and sustained lexical gains (Nguyen et al., 2022; Anjaniputra & Salsabila, 2018). Teacher observations and Quizlet usage analytics were used to

capture engagement and learning behavior across different contexts, ensuring that both classroom and self-study practices were represented in the data.

Participants and Context

The study was carried out at the Department of Applied Business Administration, Politeknik Negeri Ambon, Indonesia. The participants consisted of 45 second-semester students, divided into two intact classes: 19 male and 26 female students. Their ages ranged from 18 to 20 years. Although most participants reported having studied English since junior or senior high school, a few indicated that their exposure started in elementary school. Despite this relatively long exposure, their proficiency remained at the beginner level, with an average comprehension rate of around 80% on basic reading assessments. This is consistent with previous findings that prolonged exposure does not always guarantee advanced proficiency when instruction lacks systematic input and strategy training (Stoller & Nguyen, 2020; Dixon, Thomson, & Fricke, 2020). The students displayed varied learning experiences: while some engaged in memorization strategies, others attempted communicative practices, though with limited confidence.

Data Collection

Data collection employed multiple instruments: (1) pre- and post-tests measuring vocabulary retention and reading comprehension, (2) classroom observations to capture interaction patterns, (3) reflective journals to document students' perceptions, (4) semi-structured interviews for deeper inquiry, and (5) Quizlet usage logs to track study behaviors. This multimodal collection is aligned with prior studies stressing the value of combining performance-based and perception-based data in evaluating digital learning interventions (Nguyen & Le, 2022; Bueno-Alastuey & Nemeth, 2020).

Table 1. Data Collection Technique

Session	Topic (Business Administration Reading)	Example Reading Material	Quizlet Integration
1	Introduction to Office Administration	"Roles and Functions of an Office Administrator"	Vocabulary flashcards (roles, duties)
2	Business Correspondence	"Structure of a Formal Business Letter"	Matching activities for key terms
3	Customer Service	"Handling Complaints in Business Communication"	Quizlet Live team game
4	Business Meetings	"Agenda and Minutes of Meetings"	True/false vocabulary checks
5	Report Writing	"Components of a Business Report"	Timed quiz for terminology
6	Marketing Basics	"Introduction to Marketing and Promotion"	Fill-in-the-blank practice
7	Financial Administration	"Basic Terms in Business Finance"	Adaptive flashcard repetition

8	Human Resource Management	"Job Descriptions and Employee Evaluation"	Cumulative review game

Data Analysis

Data analysis combined quantitative and qualitative strands. For the quantitative dimension, paired-samples t-tests were applied to compare pre- and post-test results, with effect sizes calculated to determine the strength of the intervention. This analytic method follows the approach of earlier Quizlet-related studies that examined lexical retention across treatment phases (Nguyen & Le, 2023; Mykytka, 2023). Descriptive statistics were also reported, including mean scores and standard deviations. In addition, Quizlet logs were analyzed to assess frequency of use, accuracy rates, and time-on-task, since digital usage metrics have been shown to correlate with lexical and reading outcomes (Dizon, 2016; Özer, Koçoğlu, & Zeynep, 2017).

The qualitative data were analyzed thematically. Observation notes were coded for patterns of student engagement, collaboration, and classroom interaction. Student journals were reviewed inductively to identify recurring themes regarding motivation, challenges, and perceived benefits of Quizlet use. Interviews were transcribed and coded using NVivo to cross-check findings with journal entries and observational data. This approach is consistent with previous research on reading motivation and engagement, where triangulated data provided richer insights into learner development (Cheema, 2018; Jang & Protacio, 2020).

Finally, the quantitative and qualitative findings were integrated through convergent parallel analysis, which facilitated cross-validation between measurable outcomes and lived experiences. Improvements in test scores were interpreted in light of students' reflections about confidence and strategy use, while Quizlet usage patterns were compared with interview narratives on motivation and persistence. This integrative method ensures not only statistical validity but also pedagogical relevance, an approach strongly recommended in reading and technology-enhanced learning research (Duke & Cartwright, 2021; Li & Gan, 2022)

Validity and Reliability of Instrument

To ensure the validity and reliability of the findings, multiple procedures were implemented throughout the study. Validity was ensured through a combination of content, construct, and triangulation validity. Content validity was achieved by aligning all test items with the Applied Business Administration reading curriculum and by consulting two experts in English for Specific Purposes (ESP) to evaluate item appropriateness, language level, and domain relevance. Construct validity was maintained by measuring both vocabulary and comprehension as interconnected constructs, in line with established models of reading (Cartwright & Duke, 2019; Lawrence et al., 2021).

Triangulation was a key component of methodological validity. The study combined quantitative measures (pre- and post-tests, Quizlet logs) and qualitative data (observations, journals, and interviews) to cross-check results and reinforce interpretive depth. Convergent parallel analysis ensured that patterns observed in test improvements were supported by evidence from student perceptions and engagement behavior. Member checking was also conducted by sharing

preliminary interpretations with participants, allowing them to confirm or clarify the accuracy of transcribed statements.

Meanwhile, reliability was established through several measures. The pre-test and post-test instruments for vocabulary and reading comprehension were piloted with a group of similar proficiency students (n=50) from a different class to assess internal consistency. The Cronbach's alpha coefficients were 0.87 for the vocabulary test and 0.84 for the reading comprehension test, both indicating high reliability. In addition, test–retest consistency was maintained through equivalent test forms, ensuring that differences in performance reflected learning gains rather than test familiarity. For qualitative data, inter-rater reliability was secured by having two independent coders analyze observation notes, interview transcripts, and reflective journals. The intercoder agreement reached 0.91, confirming a high level of coding consistency across categories.

Research Findings
Improvement in Vocabulary and Reading Comprehension

The implementation of Quizlet in the Business Administration English reading classes yielded substantial improvement in both vocabulary mastery and reading comprehension. Before the intervention, students' performance reflected their beginner-level proficiency, with many struggling to decode and comprehend texts related to their field. Following eight sessions of Quizlet-supported learning, the average scores in both skill areas improved significantly: vocabulary retention increased by 22.5 points and reading comprehension by 23.2 points. These gains illustrate that technology-mediated vocabulary learning not only enhances lexical knowledge but also directly supports comprehension processes, particularly when the texts are discipline-specific and contextually relevant (Ho & Kawaguchi, 2021; Mauidloh, Anam, & Widyastuti, 2024).

Table 2. Pre-test and Post-test Results in Vocabulary Retention and Reading Comprehension

Skill Area	Pre-test Mean (SD)	Post-test Mean (SD)	Gain	Effect Size (d)
Vocabulary Retention	56.4 (8.7)	78.9 (7.3)	+22.5	0.95
Reading Comprehension	58.2 (9.1)	81.4 (6.8)	+23.2	1.02

A critical examination of Table 2 indicates that Quizlet facilitated not only measurable improvement but also meaningful learning, as reflected by the strong effect sizes in both domains. While vocabulary retention improved markedly, the nearly parallel gains in reading comprehension suggest a reciprocal relationship between lexical knowledge and comprehension processes, echoing the findings of Lawrence et al. (2021) and Kotzer, Kirby, & Heggie (2021) on the crucial role of academic vocabulary in understanding texts. However, it is also important to note that despite these gains, the post-test mean scores did not reach near-native proficiency levels, implying that while Quizlet is effective in accelerating progress, sustained reading practice and the integration of higher-order comprehension strategies are still necessary (Goldenberg, 2020; Barber et al., 2021).

Session-by-Session Progress

Weekly performance tracked through Quizlet-based quizzes demonstrated a clear trajectory of growth across the eight instructional sessions. At the outset, students' average accuracy was relatively low, reflecting their limited vocabulary base and lack of familiarity with discipline-specific texts. However, as the sessions progressed, accuracy rates consistently improved, reaching levels above 85% by the final two meetings. This pattern underscores the potential of structured, gamified repetition to foster steady learning gains, particularly in contexts where learners begin with a relatively low baseline of proficiency (Waluyo & Bucol, 2021; Chaikovska & Zbaravska, 2020).
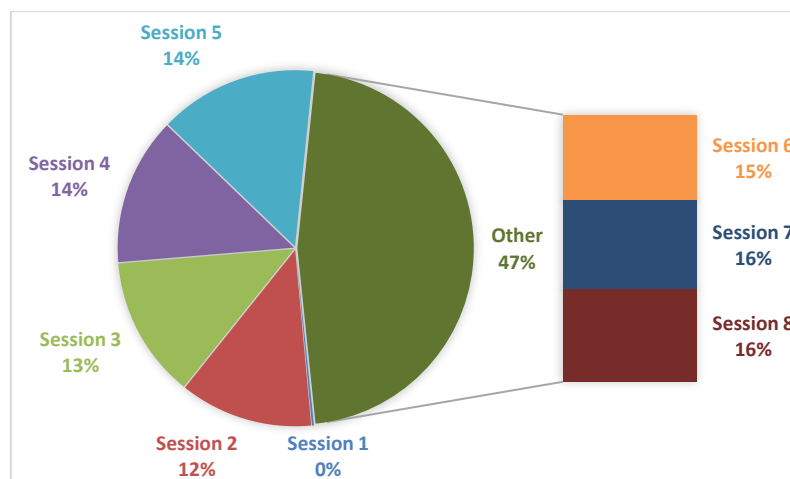
Figure 1. Accuracy Rates Across Eight Sessions

Figure 1 illustrates a steady and cumulative trajectory of improvement, reflecting how spaced exposure and systematic reinforcement strengthened both vocabulary retention and reading comprehension. The upward trend suggests that students not only retained previously introduced terms but also became increasingly adept at applying them in context, a progression that aligns with the principle of incremental vocabulary learning (Nguyen & Le, 2023; Mykytka, 2023). Notably, the acceleration observed from sessions 5 to 8 indicates that once learners developed a foundational lexical base, their ability to comprehend texts improved more rapidly. Yet, the relatively modest initial scores highlight that early sessions were crucial in establishing engagement and familiarization, emphasizing the importance of consistent scaffolding in the early phases of technology-mediated instruction (Anjaniputra & Salsabila, 2018; Dizon, 2016).

Student Engagement and Motivation

The integration of Quizlet into Business Administration reading classes significantly influenced students' level of engagement and motivation over time. At the beginning of the intervention, active participation was limited, with only a small group of students consistently involved. However, as sessions advanced, engagement became more evenly distributed, with almost all students actively participating by the final sessions. Observational data, reinforced by Quizlet usage logs, show that learners not only became more involved during class activities but also gradually extended their learning beyond the classroom

through self-study. Such a transformation highlights the role of gamified learning in creating a more stimulating and participatory classroom environment (Setiawan & Wiedarti, 2020; Waluyo & Bucol, 2021).

Table 3. Engagement Indicators Across Three Phases

Indicator	Early Sessions (1–3)	Middle Sessions (4–6)	Final Sessions (7–8)
Avg. % students actively engaged	55%	72%	91%
Avg. Quizlet tasks completed	2.1 per student	3.4 per student	4.8 per student
Avg. self-study outside class	15 min/week	24 min/week	37 min/week

Table 3 demonstrates a consistent upward trajectory in both in-class and out-of-class engagement. The increase in active participation from 55% to 91% across the intervention reflects a shift from passive reception to active involvement, a dynamic that has been identified as a key predictor of reading achievement (Cheema, 2018; Jang & Protacio, 2020). Likewise, the steady growth in the number of Quizlet tasks completed and the time dedicated to self-study suggest that students began to internalize independent learning habits, an outcome often linked with higher lexical retention and reading comprehension (Nguyen et al., 2022; Bueno-Alastuey & Nemeth, 2020). These results indicate that when learners are provided with accessible and motivating digital tools, their willingness to engage with reading activities can expand both in breadth—through classroom participation—and in depth—through sustained self-directed study.

Learner Perceptions of Quizlet in Reading

The perceptions of students regarding the use of Quizlet were collected through both oral and written reflections. These responses, originally expressed in Bahasa Indonesia, were transcribed into English for analysis. Overall, the reflections reveal that Quizlet not only helped students manage vocabulary more effectively but also reshaped their attitudes toward English reading. For instance, Student 7 explained, *"Before, I often felt lost when reading because of many difficult words, but with Quizlet I could quickly recognize the meanings."* In a similar vein, Student 23 reflected, *"I feel I can understand business texts better now because the vocabulary is repeated many times in Quizlet."* Such comments demonstrate how vocabulary mastery served as an essential entry point into improved comprehension, echoing the idea that lexical development is central to successful reading (Lawrence et al., 2021).

Motivational aspects were also strongly emphasized by students. Student 15 admitted, *"I never thought reading could be fun until we played Quizlet Live in class."* This sentiment was echoed by Student 38, who said, *"The games motivated me to compete with my friends and remember the words faster."* Meanwhile, Student 29 pointed out, *"Quizlet made me less afraid of making mistakes because it feels like a game, not like a test."* These perspectives suggest that gamified learning created a safe and engaging environment where students felt encouraged to experiment with language and take risks, which is often absent in more traditional forms of reading instruction (Waluyo & Bucol, 2021; Setiawan & Wiedarti, 2020).

Beyond classroom enjoyment, students expressed appreciation for the flexibility that Quizlet provided for self-directed study. Student 44 explained, *"I can review vocabulary on my phone anytime, even while waiting for public transport."* Student 11 added, *"Outside class, I usually used Quizlet before going to bed, and it really helped me prepare for the next session."* Student 32 reinforced this idea by stating, *"The best part is that I can study at my own pace and repeat the words that I still don't remember."* These reflections underscore how digital tools extended learning beyond the classroom, enabling students to take ownership of their progress and practice independently, a process that research shows is key to sustainable language learning (Nguyen et al., 2022).

Finally, a number of students highlighted changes in their overall perceptions of English reading. Student 5 observed, *"At first, I felt reading English was boring, but now I see it as useful for my future career."* Student 27 summarized this change by noting, *"Quizlet helped me enjoy reading, and I feel more confident when reading longer texts in English."* Such testimonies reveal a shift from apprehension and disinterest to a sense of purpose and confidence, underscoring the affective impact of Quizlet in fostering positive reading identities (Cheema, 2018).

Discussion

The findings of this study indicate notable improvements in students' vocabulary acquisition and reading comprehension following the integration of Quizlet into Business Administration reading instruction. These results are broadly consistent with prior research emphasizing the central role of vocabulary knowledge in supporting academic reading comprehension among EFL learners (Lawrence et al., 2021; Kotzer et al., 2021). The parallel gains observed in both vocabulary and comprehension suggest that increased lexical accessibility may have reduced processing demands during reading, allowing learners to engage more effectively with disciplinary texts (Goldenberg, 2020; Barber et al., 2021).

Nevertheless, caution is required in attributing these improvements solely to the use of Quizlet. Several alternative explanations warrant consideration. First, the intervention introduced a more structured and explicit alignment between vocabulary instruction and reading tasks than students had previously experienced. The consistent use of pre-reading activities, targeted lexical focus, and cumulative review may have independently contributed to comprehension gains, irrespective of the specific digital platform employed. Research in reading pedagogy has demonstrated that structured scaffolding and repeated exposure to domain-specific texts can substantially enhance comprehension outcomes even without technology-mediated support (Duke & Cartwright, 2021; Stoller & Nguyen, 2020). From this perspective, Quizlet may have functioned primarily as an enabling medium rather than the sole driver of learning improvement.

Second, increased time-on-task represents another plausible explanation for the observed gains. Quizlet usage data revealed a steady rise in students' engagement beyond classroom hours, with learners dedicating progressively more time to independent vocabulary practice. Given the well-established relationship between exposure, repetition, and lexical development (Nguyen et al., 2022; Bueno-Alastuey & Nemeth, 2020), it is reasonable to assume that part of the improvement in reading comprehension stemmed from greater overall

contact with language input. Thus, the effectiveness observed in this study may reflect the cumulative impact of sustained practice rather than the inherent superiority of the tool itself.

In addition, the possibility of a *novelty effect* should be carefully acknowledged. The introduction of Quizlet represented a departure from students' previous learning experiences, and early increases in motivation and participation may have been influenced by the excitement associated with using a new technological tool. Educational technology research has consistently warned that short-term gains can be inflated by novelty, particularly during initial stages of implementation (Nguyen & Le, 2022; Bueno-Alastuey & Nemeth, 2020). Although engagement levels rose sharply in the early sessions, the persistence of improvement across later sessions—especially in accuracy rates and self-directed study time—suggests that learning gains were not entirely transient. However, without a delayed post-test or comparison group, it remains difficult to determine the extent to which these gains would be maintained once the novelty diminished.

Qualitative evidence further complicates a purely novelty-based interpretation. Students' reflections gradually shifted from emphasizing enjoyment and game-like features toward highlighting functional benefits such as improved vocabulary recall, greater reading confidence, and clearer understanding of business texts. This progression suggests a transition from affective engagement to perceived instructional value, which is less characteristic of short-lived novelty effects and more indicative of meaningful pedagogical integration (Cheema, 2018; Hebbecker et al., 2019). Still, such perceptions should be interpreted cautiously, as self-reported data may be influenced by social desirability and students' awareness of instructional expectations.

Taken together, the findings suggest that the positive outcomes observed in this study are best understood as the result of an interaction among multiple factors: pedagogical structure, increased exposure and practice, motivational engagement, and the affordances provided by Quizlet as a learning support tool. While the results lend support to the pedagogical potential of Quizlet in ESP reading contexts, they also highlight the need for restraint in making strong causal claims. Rather than positioning Quizlet as a stand-alone solution, the present study underscores the importance of embedding digital tools within a carefully designed instructional framework that integrates vocabulary development, reading strategy support, and opportunities for sustained learner engagement.

Conclusion

This study underscores the pedagogical potential of Quizlet as a dual vehicle for enhancing both vocabulary mastery and reading comprehension in the context of English for Specific Purposes (ESP) among Business Administration students. Beyond measurable language gains, the integration of Quizlet fostered a gradual restructuring of students' affective orientations toward reading, transforming it from a perceived burden into an engaging and purposeful academic activity. By embedding gamification and repetition into the reading process, Quizlet effectively bridged the cognitive and motivational dimensions of language learning, offering a comprehensive model that aligns with current

debates in reading research on the interplay between lexical competence, comprehension, and learner engagement.

Despite its promising outcomes, the present study is not without limitations. The relatively small sample size, confined to a single institution and discipline, may restrict the broader applicability of the findings. Moreover, the reliance on self-reported reflections introduces the potential for subjectivity in assessing motivational gains. Future classroom interventions could benefit from triangulating data with more objective behavioral or physiological indicators of engagement, such as eye-tracking or learning analytics. Pedagogically, the study suggests that instructors should not only adopt digital tools but also ensure that these are systematically integrated into a wider curriculum design that supports both linguistic and affective development.

Building on the insights of this investigation, future research should examine the scalability of Quizlet-based interventions across different academic disciplines and institutional contexts, with a focus on whether disciplinary content influences the effectiveness of gamified reading instruction. Longitudinal designs would also be valuable in exploring whether the motivational and lexical gains observed here translate into sustained improvements in academic reading and writing performance. Additionally, comparative studies between Quizlet and other emerging digital platforms could yield further evidence on which technological affordances most effectively support the intertwined processes of vocabulary acquisition, reading comprehension, and learner motivation.

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