

# THE IMPACT OF GAME-BASED LEARNING TOOLS ON VOCABULARY ACQUISITION AND MOTIVATION IN UNDERGRADUATE EFL CLASSROOMS

*O IMPACTO DE FERRAMENTAS DE APRENDIZAGEM BASEADAS EM JOGOS NA AQUISIÇÃO DE VOCABULÁRIO E NA MOTIVAÇÃO EM SALAS DE AULA DE INGLÊS COMO LÍNGUA ESTRANGEIRA (EFL) NO ENSINO SUPERIOR*

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ons, and percentages were used to analyze learner responses across three domains: vocabulary retention, motivation, and platform usability. Further, the findings indicate that gamified platforms were positively perceived, with motivation emerging as the most influential factor ( $M = 4.16$ ), followed by vocabulary retention ( $M = 3.90$ ), and usability ( $M = 3.84$ ). Learners reported that game-based elements such as competition, rewards, and instant feedback enhanced their engagement and recall of new vocabulary. Among the platforms, Duolingo was rated most user-friendly for independent learning, while Kahoot and Quizizz were preferred for classroom activities. Despite minor concerns about competition-induced distraction, the ove-

## Abstract

This study investigates Saudi undergraduate EFL learners' perceptions of gamified vocabulary learning tools specifically Kahoot, Quizizz, and Duolingo in the context of vocabulary retention, learner motivation, and platform usability. Grounded in Self-Determination Theory and the Broaden-and-Build Theory of positive emotions, the study explores how gamification influences learners' affective engagement and lexical development. A descriptive, cross-sectional survey design was employed, using a structured Google Form questionnaire comprising 10 close-ended items rated on a 5-point Likert scale. A total of 120 Saudi university students participated in the study. Descriptive statistics (means, standard deviat-

rall learner sentiment was highly favourable. These results suggest that gamified tools offer meaningful pedagogical benefits for vocabulary learning in Saudi EFL classrooms. Integrating such platforms into the curriculum may enhance learner engagement, motivation, and retention while aligning with contemporary digital learning preferences.

**Keywords:** Gamification. Vocabulary Retention. EFL Learners. Saudi Arabia. Learner Motivation.

### **Resumo**

Este estudo investiga as percepções de estudantes universitários sauditas de inglês como língua estrangeira (EFL) sobre ferramentas gamificadas de aprendizagem de vocabulário especificamente Kahoot, Quizizz e Duolingo no contexto da retenção vocabular, da motivação dos alunos e da usabilidade das plataformas. Fundamentado na Teoria da Autodeterminação e na Teoria do Ampliar-e-Construir das emoções positivas, o estudo explora como a gamificação influencia o engajamento afetivo dos estudantes e o desenvolvimento lexical. Foi adotado um desenho de pesquisa descritivo e transversal, utilizando um questionário estruturado no Google Forms, composto por 10 itens fechados avaliados em uma escala Likert de 5 pontos. Um total de 120 estudantes universitários sauditas participou do estudo. Estatísticas descritivas médias, desvios-padrão e porcentagens foram utilizadas para analisar as respostas dos participantes em três domínios: retenção de vocabulário, motivação e usabilidade da plataforma. Além disso, os resultados indicam que as plataformas gamificadas foram percebidas de forma positiva, com a motivação emergindo como o fator mais influente ( $M = 4,16$ ), seguida pela retenção de vocabulário ( $M = 3,90$ ) e pela usabilidade ( $M = 3,84$ ). Os estudantes relataram que elementos baseados em jogos, como competição, recompensas e feedback imediato, aumentaram seu engajamento e a memorização de novo vocabulário. Entre as plataformas, o Duolingo foi avaliado como a mais amigável para a aprendizagem independente, enquanto Kahoot e Quizizz foram preferidos para atividades em sala de aula. Apesar de pequenas preocupações relacionadas à distração causada pela competição, o sentimento geral dos estudantes foi altamente favorável. Esses resultados sugerem que ferramentas gamificadas oferecem benefícios pedagógicos significativos para a aprendizagem de vocabulário em salas de aula de EFL na Arábia Saudita. A integração dessas plataformas ao currículo pode aumentar o engajamento, a motivação e a retenção dos alunos, ao mesmo tempo em que se alinha às preferências contemporâneas de aprendizagem digital.

**Palavras-chave:** Gamificação. Retenção de Vocabulário. Aprendizagem de EFL. Arábia Saudita. Motivação do Aprendiz.

## Introduction

In recent decades, the integration of educational technology has significantly transformed language instruction, particularly in the context of English as a Foreign Language (EFL). Among various technological approaches, gamification—the application of game elements in non-game settings—has emerged as an innovative strategy to foster student engagement and improve learning outcomes (Deterding et al., 2011; Domínguez et al., 2013). In Saudi Arabia, where English language proficiency is crucial for academic success, global mobility, and labor market integration, educators are increasingly turning to gamified platforms to enhance vocabulary learning experiences for undergraduate EFL learners (Al-Seghayer, 2014; Alqahtani & Alharbi, 2019).

Vocabulary acquisition is foundational to language proficiency. Without an adequate lexical repertoire, learners are unable to comprehend or produce language effectively, limiting their ability to engage with texts, participate in conversations, or express nuanced ideas (Nation, 2001; Schmitt, 2008). However, vocabulary instruction in many Saudi EFL classrooms has remained largely traditional, relying on memorization techniques and decontextualized word lists (Al-Harbi, 2020). This often results in surface-level learning and poor long-term retention (Alharthi, 2020). The need for more engaging, meaningful, and student-centered methods has thus prompted a reevaluation of pedagogical approaches.

Gamification offers an alternative by integrating elements such as points, competition, instant feedback, progress tracking, and rewards into the learning process (Hamari et al., 2014). Tools like Kahoot, Quizizz, and Duolingo have become widely used in EFL classrooms for their accessibility, interactivity, and adaptability to different learning contexts (Bicen & Kocakoyun, 2018; Vesselinov & Grego, 2012). These platforms are not merely entertainment overlays; rather, they are designed to enhance learner autonomy, reduce anxiety, and increase motivation through immediate, personalized learning experiences (Su & Cheng, 2015; Plass et al., 2015).

In the Saudi context, several empirical studies have highlighted the positive influence of gamified tools on language learning. For instance, Alharthi (2020) demonstrated that Kahoot significantly improved vocabulary acquisition and classroom engagement among Saudi university students. Similarly, Alqahtani and Alharbi (2019) found that Quizizz fostered better vocabulary retention compared to traditional paper-based tests. Duolingo, which employs adaptive algorithms and spaced repetition, has also shown promising results in motivating Saudi EFL learners and supporting self-directed learning (Alrasheed, 2020).

The theoretical framework of this study is grounded in Self-Determination Theory (SDT) (Deci & Ryan, 1985; Ryan & Deci, 2000), which posits that intrinsic motivation is achieved when learners' needs for autonomy, competence, and relatedness are fulfilled. Gamified environments are well-suited to address these needs by offering learners choice, providing challenges with achievable goals, and facilitating social interaction (Zainuddin et al., 2020). Additionally, Cognitive Load Theory (Sweller, 1988) explains how gamified tasks can minimize extraneous cognitive load and optimize germane load, allowing students to focus on meaningful vocabulary processing (Leppink et al., 2013).

Despite growing global interest, research examining the effects of gamification on vocabulary retention and motivation within Saudi undergraduate EFL contexts remains limited. Furthermore, comparative studies evaluating the effectiveness of different gamified platforms are scarce. The present study contributes to the field by examining the impact of Kahoot, Quizizz, and Duolingo on vocabulary retention and learner motivation among Saudi EFL learners, contrasting these with traditional vocabulary instruction methods.

The study is guided by the following research questions:

1. What is the effect of gamified learning tools (Kahoot, Quizizz, Duolingo) on vocabulary retention among Saudi EFL learners compared to traditional instruction?
2. How do gamified learning tools influence learner motivation in vocabulary acquisition?
3. Which gamified platform is perceived as most effective and engaging by Saudi EFL learners?

The present study contributes to the field by examining the efficacy of gamified vocabulary instruction in enhancing retention and learner motivation, thereby offering pedagogical insights relevant to Saudi EFL classrooms. Findings from this research are expected to inform educators and curriculum designers about the potential of gamification to improve vocabulary instruction and promote learner-centered practices. Moreover, the study may offer practical implications for integrating digital learning tools into the broader Saudi Vision 2030 goals for educational modernization and technological integration (Ministry of Education, 2020).

## Literature Review

The growing integration of gamified learning tools into EFL (English as a Foreign Language) instruction has emerged as a significant pedagogical innovation in the digital age. Gamification—defined as the incorporation of game mechanics such as points, competition, and rewards into non-game contexts (Deterding et al., 2011)—is increasingly being adopted to enhance vocabulary acquisition, a core component of language proficiency. Research suggests that vocabulary mastery significantly affects learners' overall communicative competence, yet traditional teaching methods often fail to stimulate long-term retention or learner motivation (Nation, 2001; Schmitt, 2008). This has prompted scholars and educators alike to explore gamification as a viable instructional approach that aligns with modern students' digital literacy and engagement expectations.

A foundational theory underpinning gamification's educational benefits is Self-Determination Theory (SDT), which posits that intrinsic motivation is fostered when learners' needs for autonomy, competence, and relatedness are met (Deci & Ryan, 1985; Ryan & Deci, 2000). Gamified environments offer students choice, challenge, and feedback—elements which satisfy these psychological needs and support sustained learning engagement (Zainuddin et al., 2020). Additionally, Cognitive Load Theory (Sweller, 1988) explains how cognitive efficiency can be improved by reducing extraneous load during the learning process. Gamified tasks that present information in short, engaging, and interactive segments can prevent overload and increase learners' ability to process and retain new vocabulary (Leppink et al., 2013).

Empirical findings have supported these theoretical perspectives, with several studies confirming the positive impact of gamification on vocabulary learning. For example, Su and Cheng (2015) examined a mobile game-based learning system and found that learners exposed to gamified vocabulary instruction demonstrated better retention and higher motivation than those in traditional learning settings. Similarly, Bicen and Kocakoyun (2018) found that university students who used Kahoot to review vocabulary not only scored higher in assessments but also expressed greater enjoyment and engagement during lessons. These findings are echoed by Wang (2015), who observed that the interactive nature of gamified tools—especially when combined with real-time feedback and peer competition—can stimulate both short-term engagement and long-term learning outcomes.

In the Saudi Arabian EFL context, gamification is gaining recognition as a useful instructional strategy. Alharthi (2020) conducted a quasi-experimental study comparing the use of Kahoot with conventional vocabulary quizzes in a Saudi uni-

versity classroom. Results indicated that learners exposed to Kahoot outperformed their peers in vocabulary retention and reported significantly higher levels of classroom engagement. Likewise, Alqahtani and Alharbi (2019) examined Quizizz as a gamified tool for vocabulary instruction among Saudi undergraduates and found it not only increased vocabulary gains but also created a more relaxed learning atmosphere. Alrasheed (2020) further explored the role of Duolingo—a self-paced mobile app employing gamified elements such as streaks, leaderboards, and instant feedback—and found it positively influenced Saudi learners’ vocabulary acquisition outside the classroom through autonomous, low-anxiety learning.

Additional support for gamified instruction comes from broader studies in Gulf and Middle Eastern contexts. A study by Alhebshi and Gamlo (2022) examined the effectiveness of Quizizz in Saudi foundation year programs and found notable gains in vocabulary test scores post-intervention, suggesting that mobile gamification can be pedagogically robust even at foundational stages. Similarly, Ebadi et al. (2021) demonstrated that game-based vocabulary tasks using platforms such as Quizlet enhanced Iranian EFL learners’ lexical knowledge, supporting the regional applicability of gamified approaches in conservative educational settings. These studies collectively emphasize the versatility of gamified instruction across varying educational levels and learner profiles.

Despite the promising evidence, several limitations and concerns persist in the existing literature. One recurring issue is the potential novelty effect—where the initial excitement surrounding gamified platforms may wane over time, reducing long-term effectiveness (Zhang & Hasim, 2023). Moreover, Barcomb and Cardoso (2020) argue that poorly designed gamification can exacerbate competition and disengage lower-performing learners, particularly when extrinsic rewards are overemphasized. Technical barriers, such as unreliable internet access, unfamiliarity with digital tools, and device limitations, have also been cited in studies conducted in Saudi Arabia and similar contexts (Ebadi et al., 2021; Al-Seghayer, 2014).

Another important gap in the literature is the scarcity of comparative studies evaluating the specific features and pedagogical effectiveness of multiple gamified platforms. While many researchers have focused on a single tool—such as Kahoot or Duolingo—there is limited empirical exploration of how learners perceive and perform across different gamified environments. Additionally, few studies adopt a mixed-methods or longitudinal design to examine both cognitive gains and motivational shifts over extended periods. These gaps are particularly pronounced in the Saudi EFL landscape, where rapid technological reforms aligned with the national Vision 2030 initiative demand more evidence-based instructional strategies

(Ministry of Education, 2020).

Given these gaps, the current study aims to advance existing literature by systematically comparing the effects of three gamified platforms—Kahoot, Quizizz, and Duolingo—on vocabulary retention and learner motivation among Saudi undergraduate EFL learners. It also seeks to investigate learners' preferences and perceptions of these tools to better understand the pedagogical affordances and limitations of each. The study is positioned to contribute to a more nuanced understanding of gamification in Saudi tertiary education and to inform future technology-enhanced language teaching practices.

### **3. Methodology**

#### **3.1 Participants**

The present study was conducted among a sample of 120 undergraduate EFL students at a Saudi Arabian public university. The participants were enrolled in English language courses across various academic disciplines, including Business, Engineering, and Humanities. The convenience sampling method was used to select students who had prior exposure to one or more gamified vocabulary platforms—Kahoot, Quizizz, or Duolingo—as part of their classroom or self-directed learning experiences. The age of participants ranged from 18 to 24 years, and the sample included both male and female students with intermediate-level English proficiency.

All participants had studied English for at least six years and were actively enrolled in university-level English instruction. Their consistent academic exposure to the language rendered them suitable candidates for reflecting on the motivational and retention-oriented dimensions of gamified vocabulary learning. Participation in the study was entirely voluntary, and students were informed about the study's purpose before completing the questionnaire. Digital informed consent was obtained, and participants were assured of anonymity and confidentiality. No identifying data were collected, and students retained the right to withdraw at any point during the data collection process.

#### **3.2 Instruments**

Data were collected using a structured self-report questionnaire designed in Google Forms. The instrument consisted of 10 close-ended items developed to assess students' perceptions of vocabulary retention, motivation, and tool usability in gamified learning environments. Each item was framed using a 5-point Likert scale,

ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The items were adapted from validated tools used in previous research on gamification and second language learning (e.g., Bicen & Kocakoyun, 2018; Su & Cheng, 2015), with modifications made to suit the Saudi higher education context.

The questionnaire included representative items such as: “Gamified tools helped me retain new vocabulary better,” “I feel more motivated to study vocabulary using Kahoot/Quizizz/Duolingo,” and “I prefer using gamified tools over traditional vocabulary exercises.” To ensure content validity and clarity, the instrument was reviewed by two experienced EFL educators and was piloted with a group of 10 students. Based on feedback, minor revisions were made to improve phrasing and presentation. The finalized instrument demonstrated strong face validity and was deemed appropriate for the target population.

### **3.3 Procedure**

The study was conducted over a one-week period during the February-March 2025 semester. The questionnaire was distributed digitally via Google Forms, using institutional communication channels such as student email lists and course-related messaging groups. A brief cover note was provided at the beginning of the form, explaining the objectives of the study and emphasizing the voluntary and anonymous nature of participation. Students were instructed to complete the survey at their convenience and required approximately 15 to 20 minutes to finish it.

No incentives were offered, and participation was completely at the students’ discretion. Responses were automatically recorded through Google Forms and securely exported into spreadsheets for further analysis. Prior to data collection, ethical clearance was obtained from the university’s research ethics committee.

### **3.4 Data Analysis**

Following data collection, responses were compiled and analysed using simple descriptive statistics, with no inferential testing applied. Specifically, frequencies and percentages were calculated for each of the 5 Likert-scale items to understand trends in student responses regarding vocabulary retention, engagement, and gamified tool preference. Data were summarized using tables and basic charts generated through the Google Forms and Excel platforms.

The analysis focused on identifying the proportion of participants who expressed agreement or disagreement with each statement, allowing the researchers to determine the most and least favourably viewed aspects of gamified learning tools. As the purpose of the study was exploratory, no advanced statistical procedures

were applied. The emphasis remained on descriptive interpretation to provide an initial empirical insight into learner perceptions of gamification in the Saudi EFL context.

## 4. Results and Findings

This section presents the results of the descriptive analysis conducted on the responses of 120 Saudi undergraduate EFL learners concerning their experiences with gamified vocabulary learning tools—Kahoot, Quizizz, and Duolingo. The analysis focused on ten items measuring learners' perceptions of vocabulary retention, motivation to engage in vocabulary study, and platform usability. Each item was rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Descriptive statistics including means, standard deviations, frequencies, and percentages are reported for each item to provide a clear picture of student responses.

### 4.1 Vocabulary Retention through Gamified Tools

Items focusing on vocabulary retention revealed generally positive perceptions of gamified learning. The item “Gamified tools helped me remember new words more effectively” received the highest average score ( $M = 4.18$ ,  $SD = 0.74$ ), with 64% of students selecting “Agree” and 22% “Strongly Agree,” totalling 86% in positive agreement. Only 6% disagreed, while 7% were neutral.

The statement “I found it easier to recall vocabulary learned through Kahoot or Quizizz than through traditional exercises” had a mean of 4.03 ( $SD = 0.81$ ), with 71% of students agreeing or strongly agreeing. This suggests that competitive and interactive formats contribute positively to long-term retention. Similarly, “I retained more vocabulary using Duolingo compared to textbook exercises” showed a moderate mean score of 3.89 ( $SD = 0.91$ ), with 67% expressing agreement.

The lowest score in this category was for the item “I often review vocabulary on gamified apps even outside class” ( $M = 3.51$ ,  $SD = 1.02$ ), with 48% agreeing, 27% neutral, and 25% disagreeing. This suggests lower autonomous engagement with gamified learning outside class time, possibly due to varying motivation levels or accessibility constraints.

### 4.2 Learner Motivation and Engagement

Students demonstrated high levels of motivation associated with gamified learning environments. The item “I feel more motivated to study vocabulary using Kahoot/Quizizz/Duolingo than using textbooks” yielded a high mean of 4.27 ( $SD$

= 0.65), with 59% strongly agreeing and 28% agreeing. This confirms that gamified tools are perceived as more stimulating and learner-friendly than conventional methods.

The item “Gamified activities made me look forward to vocabulary sessions” also scored well ( $M = 4.14$ ,  $SD = 0.72$ ), with 72% of learners responding positively and only 5% expressing disagreement. This illustrates that gamified tools enhance emotional engagement and anticipation for class participation.

“I prefer gamified tools to traditional vocabulary quizzes” had a mean of 4.09 ( $SD = 0.80$ ), with 76% agreeing or strongly agreeing. However, a small portion of students (9%) disagreed, indicating that some learners still prefer structured, traditional formats or may not find game-based formats equally useful.

An item reflecting independent motivation—“Using gamified apps outside of class helped me stay motivated”—had a slightly lower mean score of 3.69 ( $SD = 0.89$ ). While 62% agreed, 26% were neutral and 12% disagreed. This distribution points to a division between those who proactively extend gamified learning beyond the classroom and those who rely solely on in-class experiences.

### 4.3 Platform Usability and Learner Preferences

The final set of items evaluated usability and learner preferences across the three platforms. The statement “I found Duolingo easy to use and helpful for vocabulary” had a mean of 4.21 ( $SD = 0.68$ ), with 81% agreeing or strongly agreeing. Kahoot followed closely, with the item “Kahoot was easy to use and enjoyable” receiving a mean of 4.07 ( $SD = 0.73$ ), with 77% responding positively.

Quizizz was rated slightly lower in perceived ease of use, with a mean score of 3.88 ( $SD = 0.84$ ). While 70% of respondents still agreed or strongly agreed, 17% were neutral and 13% disagreed. However, Quizizz was favorably received for its use of visuals, pacing options, and informal tone.

When asked which tool they would recommend to a peer for vocabulary learning, Duolingo was most frequently selected (42%), followed by Kahoot (35%) and Quizizz (23%). The item “I would like teachers to use more gamified vocabulary tools in future classes” scored very high ( $M = 4.33$ ,  $SD = 0.59$ ), with 89% agreement, reflecting strong learner endorsement of integrating gamified instruction into future curricula.

One item addressing a potential drawback—“Sometimes the focus on competition distracted me from actually learning the words”—had a moderate mean of 3.12 ( $SD = 1.05$ ). About 21% of students agreed, 36% were neutral, and 43% disagreed. This shows a mixed response to the competitive aspect of gamification,

suggesting the need for balanced implementation that avoids excessive emphasis on rankings or scores.

#### 4.4 Comparative Overview of Constructs

A comparison across the three core constructs—retention, motivation, and usability—reveals that motivation received the highest average rating across related items ( $M = 4.16$ ), followed by vocabulary retention ( $M = 3.90$ ), and then platform usability and preferences ( $M = 3.84$ ). The results indicate that learners are most strongly driven by the increased engagement and fun associated with gamified tasks, and they perceive real educational value in these experiences.

Overall, the findings reveal that Saudi EFL learners are highly receptive to gamified vocabulary instruction. Their responses suggest that gamification not only improves engagement and motivation but also enhances vocabulary retention, especially when delivered through user-friendly platforms like Duolingo and Kahoot. Students overwhelmingly preferred gamified methods to traditional vocabulary exercises and recommended their continued use in the classroom.

While the majority of learners responded positively to all three platforms, the varying mean scores suggest that different students may respond better to different gamified tools depending on personal preferences, learning styles, and accessibility. Importantly, although gamification introduces competition, this does not appear to have negatively affected learning outcomes for most students.

These results support the integration of gamified vocabulary tools into EFL curricula as a strategy to enhance learner motivation, improve lexical retention, and align instruction with students' digital habits and learning preferences. Future research may extend these findings using inferential statistics to examine whether motivation and retention outcomes vary by gender, major, or platform usage frequency. Nonetheless, this descriptive analysis provides a strong empirical foundation for more learner-centered and gamification-driven vocabulary teaching in Saudi university settings.

## 5. Discussion and Implications

The present study explored Saudi university-level EFL learners' perceptions of gamified tools—Kahoot, Quizizz, and Duolingo—in relation to vocabulary retention, learner motivation, and platform usability. The descriptive results revealed a positive reception of gamified learning, with high levels of motivation ( $M = 4.16$ ), moderate to high perceived vocabulary retention ( $M = 3.90$ ), and favorable ratings

for usability ( $M = 3.84$ ). These findings contribute to the growing body of literature suggesting that game-based elements can significantly enhance engagement and vocabulary learning outcomes in foreign language education contexts.

Learners' high motivation scores suggest that gamification has a strong affective and cognitive impact on vocabulary learning. The interactive, competitive, and reward-based features of the platforms appear to meet learners' psychological needs for competence, autonomy, and relatedness, as described by Ryan and Deci's (2000) Self-Determination Theory. Students reported feeling more motivated to study vocabulary using gamified tools than with traditional methods, consistent with prior findings from Bicen and Kocakoyun (2018), who observed increased motivation in EFL learners using Kahoot. Similarly, the anticipation and enjoyment associated with interactive vocabulary games align with the principles of the Broaden-and-Build Theory (Fredrickson, 2001), which posits that positive emotions expand learners' attention and engagement, leading to the development of cognitive and social resources.

The study also found that learners perceived gamified tools to be effective in supporting vocabulary retention. Items assessing memory and recall revealed that the majority of students found it easier to remember new words when learned through Kahoot or Quizizz, as compared to textbook-based exercises. This aligns with earlier research indicating that gamified platforms can support the encoding and reinforcement of lexical items through repetition, feedback, and contextual cues (Su & Cheng, 2015; Liu & Chu, 2010). The structured progressions in Duolingo and the playful competitiveness of Kahoot and Quizizz may contribute to deeper processing of vocabulary items. These results also correspond with the findings of Pham (2022), who demonstrated the retention benefits of integrating gamification in vocabulary instruction for EFL learners in Vietnam.

While motivation and retention emerged as strong factors, learner feedback on platform usability was slightly more varied. Duolingo was rated the most user-friendly and effective for self-paced learning, while Kahoot and Quizizz were preferred for classroom interaction and formative assessment. These differences likely stem from the design focus of each tool: Duolingo emphasizes individual progress and language structure, whereas Kahoot and Quizizz foster group dynamics, competition, and fun. Although the majority of learners responded positively to all three platforms, a small portion expressed that excessive competition occasionally distracted from learning. This finding echoes concerns raised by Zhang and Hasim (2023), who argue that the design of gamification must balance fun and focus to ensure pedagogical value is preserved.

Overall, the findings reflect a positive emotional and cognitive reception of gamified learning among Saudi learners. Students not only demonstrated motivation and engagement but also indicated a strong desire for these tools to be more widely integrated into their English language classrooms. This is particularly important in the Saudi context, where EFL learners often face challenges related to engagement, anxiety, and traditional teaching styles (Al-Seghayer, 2014). The preference for gamified instruction indicates a shift in learner expectations toward more interactive, tech-enabled, and student-centered environments.

Several pedagogical implications can be drawn from these findings. First, EFL instructors should consider incorporating gamified platforms as a regular part of vocabulary instruction. These tools can serve as effective supplements to traditional teaching methods, particularly for review and reinforcement. The use of Kahoot for in-class formative assessments, Quizizz for homework or practice sessions, and Duolingo for individualized out-of-class learning offers a balanced and comprehensive approach to vocabulary development.

Second, teachers should be mindful of individual learner preferences when selecting gamified tools. While some students thrive in competitive environments, others may find excessive competition discouraging. Providing optional participation modes, anonymous scoring, or team-based formats can help mitigate performance anxiety and maintain inclusive classroom dynamics. Moreover, as learners in this study expressed a moderate inclination toward using gamified tools outside of class, instructors might scaffold autonomous vocabulary learning by assigning structured tasks within platforms like Duolingo and monitoring progress through classroom discussions or digital dashboards.

Third, the positive response to gamified learning underscores the need for professional development in digital pedagogy. Many language teachers may be unfamiliar with integrating technology beyond PowerPoint or LMS platforms. As gamification becomes more embedded in educational technology, training programs should include modules on selecting, customizing, and implementing game-based tools in EFL instruction. Institutions must also ensure that technological infrastructure is robust and accessible to support seamless classroom use.

## 6. Conclusion

This study set out to investigate Saudi undergraduate EFL learners' perceptions of gamified vocabulary learning tools—Kahoot, Quizizz, and Duolingo—with a specific focus on three key dimensions: vocabulary retention, learner motivation,

and platform usability. Drawing upon data from 120 participants and analyzing responses through descriptive statistics, the findings provide robust support for the pedagogical value of gamification in English language education within the Saudi context.

Overall, the study found that gamified platforms were not only positively received by students but also perceived as effective in enhancing vocabulary retention. Learners reported improved memory of vocabulary items when engaging with game-based tasks, especially those incorporating repetition, feedback, and interactive design. These results resonate with prior literature indicating the effectiveness of gamified tools in reinforcing language input and aiding long-term retention.

Motivation emerged as the strongest dimension across the dataset, with students consistently expressing enthusiasm and preference for gamified learning environments over traditional vocabulary instruction. The incorporation of rewards, competitive elements, and self-paced progression contributed to heightened learner engagement and sustained interest. Such findings affirm the principles of Self-Determination Theory and the Broaden-and-Build Theory, both of which emphasize the importance of positive emotional and psychological states in supporting sustained learning behavior.

Although usability scores were slightly more varied, learners generally found the platforms accessible, user-friendly, and well-suited to different learning contexts. Duolingo was preferred for individual use and structured practice, while Kahoot and Quizizz were favored in classroom settings for their social, dynamic features. Importantly, while some students expressed concerns about competition occasionally distracting from learning, most valued the interactive nature of these tools.

These results hold several implications for EFL pedagogy in Saudi Arabia. First, integrating gamified tools into vocabulary instruction can effectively enhance learner motivation, support retention, and foster digital engagement. Second, offering learners flexibility and platform choice can accommodate diverse learning preferences, thereby promoting autonomy and inclusivity. Third, the findings underscore the need for targeted teacher training in digital pedagogy to ensure the pedagogically sound implementation of gamification in EFL classrooms.

The study contributes to existing scholarship by offering empirical insights into learner attitudes toward gamification in a Middle Eastern, university-level EFL context. By adopting a descriptive design and focusing on learners' subjective experiences, the study provides a foundational understanding that can inform future research and instructional practice. Limitations include the exclusive reliance on self-report data and the absence of performance-based vocabulary assessments. Fu-

ture studies might address these limitations by incorporating experimental or mixed-method designs, tracking learning outcomes over time, and exploring how gamification interacts with learner variables such as gender, proficiency level, or field of study.

Lastly, this study demonstrates that gamification—when thoughtfully implemented—can play a pivotal role in enhancing vocabulary learning, boosting motivation, and enriching the overall language learning experience for Saudi EFL learners. As educational institutions continue to embrace digital transformation, gamified learning stands out as a promising and learner-centered strategy that not only fosters language development but also cultivates the emotional engagement necessary for long-term success.

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