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The Impact of Kahoot!-Assisted Gamification on Saudi EFL Learners' Phrasal Verb Mastery and Classroom Engagement

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ABSTRACT

This study investigates the impact of Kahoot!-assisted gamification on Saudi EFL female learners' grammar performance, particularly in mastering phrasal verbs, and their multidimensional engagement in the classroom. Utilizing a mixed-methods approach, this study integrates pre- and post-assessments along with engagement surveys to measure improvements in grammar as well as emotional, behavioral, cognitive, and social involvement. The participants included 63 Saudi undergraduate students majoring in English, divided into experimental and control groups. Contrary to expectations, the control group outperformed the experimental group in post-test (*p*= 0.030), suggesting gamification may not enhance grammatical accuracy more than conventional methods. Cognitive and behavioral engagement was mixed, with some students preferring competition to purposeful learning. The study highlights the emotional benefits of Kahoot!, such as motivation and classroom dynamics, despite its limited impact on test scores. The results emphasize the need to balance gamification with structured teaching methods to promote engagement and mastery. For educators and education policy makers, the findings suggest that while Kahoot! promotes emotional engagement and involvement, supplementary activities may be needed to enhance grammatical knowledge. The study highlights the pedagogical potential of gamification in EFL grammar instruction and offers insights for curriculum designers and educators seeking to balance instructional rigor with

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learner engagement. The pedagogical potential of gamification in EFL grammar instruction is evident, but its design and implementation must be carefully tailored to align with learning objectives and learner needs.

Keywords: Gamification; Kahoot!; EFL engagement; Phrasal Verbs; Grammar Learning; Saudi EFL Context

1. Introduction

1.1. Background of the Study

In today's digitally enriched learning environments, the integration of technology has redefined the boundaries of effective pedagogy, particularly in second language acquisition. Kahoot!, a game-based student response system (GSRS) has garnered attention for transforming grammar instruction into a more interactive and engaging experience[1]. For English as a Foreign Language (EFL) learners, especially in the Saudi context, phrasal verbs remain one of the most challenging components to master due to their syntactic irregularities and semantic opacity[2,3].

Despite extensive curricular focus on grammar instruction in Saudi Arabia, traditional methods—dominated by rote memorization and teacher-centered techniques—have contributed to persistent difficulties in grammar acquisition[4,5]. Looking at engagement and language competence as the ultimate goals for teachers, Barkley stated, "For many of us teaching today, competing for the attention of our students and engaging them in meaningful learning is a profound and ongoing challenge"[6]. Therefore, enhancing the comprehension of language learning engagement may foster greater student involvement and, as a result, cultivate learners with superior language proficiency. Hiver et al.[7] emphasized that "there is an explicit awareness that in order to increase learners' second language (L2) development, we must increase learners' engagement".

Reschly and Christenson[8] believed that engagement is still a "new kid on the block". This is evident, especially in the Saudi context, where limited studies pertinent to L2 engagement have been undertaken. Some scholars, such as Dörnyei[9] and Philp and Duchsen[10], called for more investigation into the relationship between engagement and L2 learning. Furthermore, Mercer et al.[11] stated that there is still "limited empirical research on learners' engagement in language learning". This study examines howgamification

tools like Kahoot! can address these issues by increasing engagement and improving grammatical accuracy. In other words, this study therefore contributes to the field by exploring the impact of Kahoot! as a gamified instructional intervention for Saudi EFL learners' grammar performance (phrasal verbs) and engagement across emotional, cognitive, social, and behavioral dimensions.

1.2. Statement of the Problem

Saudi EFL learners continue to demonstrate weaknesses in their ability to use grammatical structures appropriately, particularly phrasal verbs, despite years of instruction. The problem is particularly salient in the learning of phrasal verbs, which are often overlooked or poorly taught using decontextualized lists[2]. Research has shown that disengagement and lack of interactivity in grammar classrooms contribute to these learning challenges[5,12]. While game-based tools like Kahoot! have demonstrated positive effects on learner engagement and grammar comprehension[13], empirical studies within the Saudi context—focused specifically on phrasal verb acquisition and multidimensional engagement—remain limited. This study seeks to address this research gap.

The purpose of this study is to examine the effects of a gamified learning environment using Kahoot! on Saudi EFL learners' grammar performance in phrasal verbs and their engagement in the language classroom. This study aims to This study intends to: 1. Compare the effects of conventional approaches with Kahoot!-assisted gamification on phrasal verb mastery; 2. Assess how well it promotes social, behavioral, emotional, and cognitive involvement. The study is guided by the following research questions:

1. What is the impact of Kahoot! on Saudi EFL learners' grammar performance, specifically in the learning of phrasal verbs, compared to conventional methods?
2. What is the effectiveness of Kahoot! in terms of Saudi EFL learners' engagement in the grammar classroom?

2. Literature Review

2.1. Grammar Instruction in the Saudi EFL Context

Looking at the context of Saudi Arabia is essential to this study since it is conducted in Saudi Arabia. Grammar instruction occupies a central role in English language education in Saudi Arabia. English is taught as a compulsory subject from early grades in public education and is a core requirement in most university-level programs. Despite the early and sustained exposure, numerous studies have reported persistent challenges among Saudi EFL learners, particularly with respect to accurate grammar usage in writing and speaking [4,14,15].

These difficulties are attributed to a combination of pedagogical, curricular, and sociolinguistic factors that limit learners' opportunities to internalize and apply grammatical knowledge effectively. Teaching and learning grammar are crucial when studying a foreign language. The grammar aspect of language has long been the focus of pedagogical concentration. Saudi Arabia's language learning textbooks integrate grammar into the process of EFL learning [16]. Although much attention has been given to grammar, Saudi learners have been reported to have issues in generating accurate utterances [15].

A prominent issue in Saudi EFL grammar instruction is the heavy reliance on traditional, teacher-centered methodologies. The grammar–translation method, which emphasizes rote memorization of rules and direct translation between English and Arabic, continues to dominate classroom practices, particularly in public schools [17,18]. While this method may contribute to learners' declarative knowledge of grammar rules, it does not adequately prepare students to use these rules communicatively. Consequently, learners often exhibit passive participation in class and lack the confidence to engage in spontaneous language use [19,20]. Phrasal verbs are often poorly taught using out-of-context lists, and traditional methods (e.g., memorization) predominate in Saudi Arabian schools [2,17]. This study addresses this deficiency by examining Kahoot! as an alternative to these methods.

Another major concern is the inflexible use of prescribed textbooks, which often emphasize mechanical grammar exercises and rule explanation over interactive tasks or authentic usage [21]. Studies by Alrabai [22] and Ashraf [5] have found that Saudi teachers feel constrained by time pressures and curriculum mandates, which discourage the adoption of communicative or task-based approaches. As a result, learners are seldom exposed to activities that promote higher-order grammatical processing, such as peer interaction, output-focused tasks, or negotiation of meaning.

Furthermore, the sociolinguistic context in Saudi Arabia limits learners' exposure to English outside the classroom. With Arabic as the dominant language in both social and academic settings, learners have few opportunities for authentic communicative practice in English [23]. This results in a context in which grammar knowledge remains largely theoretical and disconnected from practical language use. For example, students may be able to identify correct grammatical structures on paper but struggle to produce them in conversation or writing [24].

In higher education, these challenges persist. University-level English programs in Saudi Arabia typically devote entire courses to grammar instruction, yet students often report low levels of confidence and achievement [14]. Alzahrani [25] found that Saudi undergraduates perceive grammar as a difficult and demotivating subject, particularly when taught through traditional means. The same study found that students performed better when grammar was taught through interactive strategies, including group work, digital games, and inductive tasks.

There have been efforts to reform grammar instruction through professional development and the introduction of communicative teaching methodologies [26]. However, these efforts face systemic barriers, such as a lack of institutional support, limited teacher training in innovative approaches, and resistance to change among experienced educators. Moreover, many teachers lack access to digital resources or feel underprepared to integrate technology into grammar lessons [27].

In summary, the teaching of English grammar in the Saudi context is heavily shaped by traditional practices, limited exposure to authentic language use, and curriculum-driven instruction. While there is a growing awareness of the benefits of interactive and communicative grammar teaching, actual implementation remains inconsistent. These conditions highlight the need for pedagogical innovation, such as gamification, to enhance learners' engagement and support more effective grammar acquisition [28,29].

The literature points to a number of sources related to

students' practice of EFL and lack of motivation (e.g.,[30]). Alzamil[12] identified the negative emotion associated with grammar for Saudi learners who perceive grammar class as boring, difficult, and a place to feel fearful.

Abduh and Algouzi[18] investigated the challenges and difficulties that teachers face in implementing new methods of grammar teaching and found that teachers believed that the prescribed textbook was inadequate for teaching grammar, since it did not provide sufficient practice for students and was mostly unsuitable for the learners' level. Teachers rely on prescribed books to teach grammar for various reasons, such as time limitations and students' motivation, although they claim they use other resources. The tendency to apply traditional methods to teach grammar, due to teachers' lack of awareness of the other resources, leads to their teaching practices being ineffective for enhancing students' learning experiences and engagement[18,31].

Nevertheless, grammar teaching methods continue to change and cycle through the utilization of engaging games and collaborative work while using a combination of implicit and explicit feedback[16].

2.2. Gamification in Language Learning

Gamification in language learning refers to the application of game design elements—such as scoring systems, competition, challenges, rewards, and feedback—to educational contexts, with the aim of enhancing motivation and promoting meaningful engagement[32]. As digital technologies become increasingly integrated into classrooms, gamification has emerged as a pedagogical strategy that aligns with learner preferences and contemporary educational paradigms. In L2 education, gamification is particularly effective in overcoming the common challenges of grammar instruction—namely, learner anxiety, disengagement, and lack of practical usage opportunities[33,34].

A substantial body of research supports the role of gamification in increasing learner motivation and improving outcomes in vocabulary, grammar, and communicative competencies. Hamari et al.[35] conducted a meta-analysis and found consistent evidence that gamification positively influences learner engagement and satisfaction across a variety of contexts. In language learning specifically, gamification contributes to affective, behavioral, and cognitive engagement by offering a stimulating and low-anxiety environment[36].

In grammar learning, gamification helps learners engage in repetitive yet varied practice, receive immediate feedback, and track their progress. Such features are essential for internalizing grammar rules and recognizing patterns of use[37]. According to Su and Cheng[34], students using gamified mobile applications for grammar exercises demonstrated higher retention rates and greater interest in learning than those using traditional worksheets. Moreover, game-based environments reduce the fear of failure—a common barrier to learning grammar—by reframing mistakes as opportunities for learning within a supportive framework[38].

Gamified language instruction also facilitates differentiated learning by allowing learners to progress at their own pace, replay activities, and engage with content that suits their proficiency level. This aligns with learner-centered teaching practices advocated in contemporary EFL pedagogy[39]. In group-based game formats, learners additionally benefit from collaboration and peer feedback, further reinforcing grammatical knowledge and social interaction skills[40].

2.3. Gamification and Engagement

Gamification enhances all dimensions of engagement—behavioral (participation and effort), cognitive (investment in learning), emotional (enjoyment and interest), and social (collaborative interaction). These dimensions are interconnected, and effective gamification addresses them simultaneously[7].

For instance, behavioral engagement is stimulated through active participation in quizzes or challenges, while emotional engagement is fostered by positive reinforcement and a playful atmosphere. The leaderboard and rewards systems typically found in gamified tools also boost learners' intrinsic motivation by fulfilling the psychological need for achievement[41].

The leaderboard and rewards systems typically found in gamified tools also boost learners' intrinsic motivation by fulfilling the psychological need for achievement[41]. The success of such interventions is often attributed to the alignment between game mechanics and the motivational profiles of learners, especially younger students who are digital natives and respond well to interactive environments.

A growing body of research highlighted the value of incorporating game elements to improve student learning outcomes. For example, a study by Burguillo, which used game theory and competitive educational models, demon-

strated significant improvements in students' motivation, critical thinking, and engagement in structured competitive tasks[42]. This is consistent with the findings of the present study, which shows that game-based grammar instruction in English as a foreign language (EFL) classrooms—using platforms such as Kahoot!—can similarly improve students' engagement and academic performance. In contrast to the broader cognitive scope of the game theory approach, the present study focuses on the development of specific language skills, suggesting that the benefits of games apply to both general and subject-specific educational contexts.

González et al. conducted a comprehensive review of game applications in higher education, analyzing studies published between 2011 and 2015[43]. The review concluded that games consistently increased student motivation and engagement across a variety of disciplines, with the most commonly used elements being badges, leaderboards, and feedback loops. However, the impact on academic achievement varied, and researchers highlighted the need for further research in specific learning areas, such as language acquisition. The present study addresses this shortcoming by focusing on grammar learning in English as a foreign language (EFL) classroom, demonstrating that specific game-based interventions, such as the use of Kahoot! for grammar assessment, can generate measurable increases in academic achievement and engagement

2.4. Kahoot! as a Game-Based Learning Tool

Kahoot! is a GSRS that has gained widespread adoption in educational contexts for its capacity to enhance motivation, engagement, and formative assessment through competitive and collaborative quizzes. Launched in 2013, Kahoot! enables instructors to create and deliver interactive multiple-choice activities in real time, allowing learners to participate using mobile devices or computers[1]. With features such as leaderboards, countdown timers, music, and colorful visuals, Kahoot! transforms traditional classroom tasks into engaging experiences that promote active participation and immediate feedback.

2.5. Kahoot! and Language Learning

In the field of EFL, Kahoot! has been particularly effective in supporting vocabulary acquisition, grammar review, reading comprehension, and listening skills. Several studies have shown that integrating Kahoot! into EFL classrooms leads to improvements in learner motivation, attentiveness, and performance. For example, Bicen and Kocakoyun[44] found that students perceived Kahoot! as enjoyable and helpful for reviewing grammar topics, particularly when the game format was accompanied by peer collaboration and instructor feedback.

Kahoot!'s adaptability to different content types makes it suitable for grammar instruction. It can be used to reinforce rule-based knowledge, highlight common errors, and test learners' application of grammatical structures in context. Rachels and Rockinson-Szapkiw[38] reported that learners using Kahoot! for grammar drills showed significant gains in both test scores and self-efficacy compared to those using traditional worksheet-based review. These findings suggest that game-based tools can provide a more stimulating and effective alternative to rote memorization.

2.5.1. Immediate Feedback and Repetition

One of Kahoot!'s key strengths lies in its provision of immediate feedback—a critical factor in second language acquisition[45]. Learners receive instant information about whether their responses are correct, along with explanations from the teacher, if desired. This real-time feedback loop promotes awareness of form and meaning, allowing learners to notice and correct grammatical errors. According to Plump and LaRosa[46], this process not only enhances retention but also encourages learners to reflect on their linguistic output, leading to deeper learning.

Kahoot! also facilitates spaced repetition, a principle rooted in cognitive psychology that posits that information is better retained when reviewed at intervals rather than all at once[47]. Teachers can use Kahoot! to cycle through previously learned grammar points across sessions, thereby reinforcing long-term retention. Repetition in an interactive, gamified format maintains student interest while increasing the chances of transfer to productive language skills. Wang & Tahir[1] state that "Game-based learning enables repeated exposure to key content while minimizing learner fatigue by embedding repetition in a dynamic and motivating context". Licorish et al.[48] also found that the gamified nature of Kahoot! transforms repetitive tasks into exciting challenges, increasing student motivation and enjoyment. Even when questions repeated similar grammatical patterns, stu-

dents remained attentive due to the game mechanics, such as point scoring, time limits, and instant results. Learners with Kahoot! remained focused and enthusiastic reviews of previously covered content. The repetition did not diminish interest; instead, it enhanced recall while maintaining a positive classroom atmosphere [44].

2.5.2. Motivation and Engagement in Kahoot!

A major reason for Kahoot!'s popularity is its ability to foster enjoyment and emotional engagement. As the gamification literature suggests, emotional arousal linked to fun and excitement positively influences motivation and learning outcomes [35]. Learners often describe Kahoot! as "fun," "competitive," and "different from boring classes" [48]. Such affective responses are especially important in grammar learning, which is frequently perceived as dry and difficult. When students are emotionally invested, they are more likely to participate actively, take risks, and persist in learning challenging content.

Kahoot! also supports behavioral and social engagement. The game's design encourages learners to answer quickly, think critically, and collaborate during postquiz discussions. In group settings, team competitions can build a sense of community and relatedness—two components identified in self-determination theory as essential for sustained motivation [41].

2.5.3. Kahoot! in the Saudi EFL Context

While global studies on Kahoot! are extensive, research in Saudi Arabia is emerging but promising. Alharbi [49] found that Saudi university students responded positively to Kahoot!-based grammar activities, reporting increased attention and reduced classroom anxiety. Similarly, Alshammari [29] noted that Kahoot! enhanced students' retention of grammatical forms and vocabulary in an intermediate-level Saudi EFL classroom. These studies highlighted Kahoot!'s cultural adaptability and relevance to the Saudi context, where students often face challenges related to motivation in English instruction due to rigid, test-oriented pedagogies.

Recent research in Saudi Arabian EFL contexts has revealed mixed findings regarding the efficacy of Kahoot! as a game-based language learning tool. While several studies underscore Kahoot!'s potential to enhance student engagement and motivation [25,29], both local and international research reports inconsistent effects on actual language development,

with some studies finding minimal or no improvement in learning outcomes despite heightened motivation [1,48]. These contradictions may stem, in part, from differences in the specific linguistic skills being measured. For example, studies that focused on vocabulary acquisition and reading comprehension reported generally statistically significant learning gains when Kahoot! was used. Alshra'ah [50] found notable improvements in students' vocabulary and reading scores, while Ali and Abdalgane [51] observed increased vocabulary retention and academic motivation. Such outcomes are likely due to Kahoot!'s alignment with the pedagogical needs of these skills—namely, frequent exposure, recognition-based assessment, and immediate feedback. In contrast, studies measuring grammar proficiency, such as Oraif and Edirisingha [52], reported no statistically significant improvement in grammatical accuracy despite positive student engagement. This discrepancy may reflect the fact that grammar learning typically requires deeper cognitive processing, rule application, and productive output—elements that are less easily fostered through fast-paced multiple-choice games.

Despite its benefits, the successful integration of Kahoot! depends on instructional design and alignment with learning goals. Teachers must ensure that questions promote critical thinking rather than surface-level recall and that feedback mechanisms are used to reinforce understanding. Moreover, time management, technological reliability, and inclusive practices should be considered to ensure equitable participation.

2.5.4. Kahoot! and Phrasal Verb Mastery

Prior research highlights Kahoot!'s strengths in supporting vocabulary acquisition and reinforcing basic grammar structures; however, its efficacy in facilitating the learning of more complex grammatical constructs, such as phrasal verbs, remains relatively understudied [44]. This study addresses two critical gaps in the existing literature. First, while numerous studies underscore Kahoot!'s potential to enhance learner motivation and engagement, findings regarding its impact on grammatical accuracy have been inconsistent and inconclusive [52]. Second, there is a notable lack of research focusing specifically on phrasal verbs, with most investigations centering on vocabulary development or the reinforcement of elementary grammar rules [1,48]. By targeting these gaps, the current study aims to contribute a more nuanced understanding of Kahoot!'s pedagogical value in advanced areas of

second language acquisition.

2.6. Engagement and Language Learning

Hiver[53] defined 'engagement' as action, and the quality of the action highlights the distinction between engagement and its related motivational concepts. Motivation includes desire and intention. In the L2 field, the idea of learners' motivation has been a major topic of interest for teachers and researchers for over 60 years. Nevertheless, engagement—which refers to students' active involvement in learning—has not received equivalent attention or clarity in conceptualization and research[7,10].

One of the foundational definitions of engagement was proposed by Skinner et al.[54], who described it as "energized, directed, and sustained actions". Similarly, Lawson and Lawson[55] emphasized the importance of observable action in school-related activities, defining engagement as "extraclassroom energy in action, observable and measurable in school-sponsored activities and tasks". Philp and Duchesne[10] further expanded the scope of engagement by describing it as "a state of heightened attention and involvement, in which participation is reflected not only on the cognitive dimension but in social, behavioral, and affective dimensions as well". While the specific wording of definitions may vary, many scholars agree on common features of engagement, particularly action—as highlighted by Skinner et al.[54], Lawson and Lawson[55], and Sang and Hiver[56]—and involvement, as noted by Dörnyei and Kormos[57] and Reeve[58]. This action-oriented perspective helps differentiate engagement from motivation, with Reschly and Christenson[8] clarifying that "motivation represents intention and engagement is action", implying that motivation precedes and leads to engagement.

Reeve[58] also defined engagement as "the extent of student's active involvement in a learning activity", which is echoed in Hiver et al.'s[7] description of it as "a dynamic, multidimensional construct comprising situated notions of cognition, affect and behaviors including social interactions in which action is a requisite component". This latter definition is particularly relevant to the current study because it incorporates the behavioral, emotional (or affective), and cognitive aspects of engagement.

Despite its apparent recognizability, L2 engagement remains "a notoriously slippery construct" that is inherently "multidimensional"[7]. Scholars have yet to reach a consensus on the specific components that constitute engagement. For instance, Fredricks et al.[59] and Mercer[60] focus on three key dimensions: behavioral, affective, and cognitive. Conversely, Philp and Duchesne[10] introduce a fourth element—social engagement—while Svalberg[61], in her engagement with the language (EWL) framework, identifies cognitive, affective, and social domains. Alongside the traditional behavioral, emotional, and cognitive domains, Reeve[62] adds a fourth dimension: agentic engagement, which is defined as "Agentic engagement refers to students' constructive contribution to the flow of instruction they receive. It is the extent to which students intentionally and proactively try to enrich their learning experience by expressing preferences, asking questions, and offering input".

According to Hiver[53], 'Engagement defines all learning. Learning requires learner action, and action is a defining characteristic of learner engagement'. The amount and type of learners' involvement in an activity refer to learner engagement[7]. Zhou et al.[63] claimed that there are several specific reasons why engagement has received broad attention recently in research.

First, learning results and student success depend greatly on engagement. Second, the characteristics of engagement, such as it being a 'meta-construct' for visible actions, internal cognition, feelings and societal encounters, attract many academics. Given the distinct behavioral characteristics of engagement and disengagement, practitioners appear to both notice and easily comprehend their phenomenological manifestations. Finally, engagement still has much potential as a target for interventions. As evidence for fostering involvement across social and academic contexts has grown, the notion that engagement may be changeable and sensitive to interventions has attracted interest from all directions.

Hiver et al.'s[7] systemic study showed that most L2 studies are conceptualized and operationalized ambiguously. Thus, in this research, it is important to define the meta-construct of engagement with regard to this study to give a clear idea of what the research refers to when using the term "engagement." The following four dimensions of engagement have been highlighted: cognitive, emotional, social, and behavioral. First, the cognitive dimension refers to the mental activity of the learner in the learning process. Students are cognitively involved as they have a deliberate focus

on achieving a learning task. Indicators of cognitive dimensions include focus, elaboration, and self-regulation. Second, the emotional dimension concerns learners' emotions regarding learning tasks and their peers. Hiver et al.[7] described emotionally engaged learners as "having a 'positive, purposeful, willing, and autonomous disposition' towards language, associated learning tasks, and peers". Since the subjective attitudes or impressions that students bring to class or through language-related tasks are essential to the other dimensions of engagement, emotional engagement is thought to have a significant influence on them[64,65]. The emotional dimension indicates if utterances are positive (showing enthusiasm and enjoyment) or negative (displaying boredom and frustration). Third, the social dimension refers to relationships that encourage conversation and learning between interlocutors[7]. The social dimension also plays a central role in language learning[10] and is defined in relation to the social kinds of participation that are common in language learning and usage communities, such as interaction with others, as well as the caliber of these kinds of encounters. Finally, the behavioral dimension refers to individuals' type of behavioral selections throughout learning[7]. Early L2 research operationalized behavioral engagement by counting words and turns to measure the quantity and quality of learners' active participation in learning[57]. Learners' voluntary participation in speaking, interactional initiatives, time on task, amount of semantic information produced while on task, and perseverance on task without the need for support or direction are examples of behavior engagement in L2 learning[10]. Some empirical studies have shown a correlation between learners' academic performance and their cognitive, emotional, and behavioral engagement. The more engaged a learner is, the better their test scores will be[66]. Additionally, there is a critical need for valid, reliable, and context-specific metrics of student engagement due to the apparent importance of engagement in the student learning process across a wide range of learning subdomains[63].

To this end, the proposed study investigated engagement as a serious factor influencing Saudi EFL learners' grammar learning success. For the purpose of this research, engagement was approached as active participation and involvement in academic tasks from internal and external dimensions that manifest in behaviors measured by students' self-report in a grammar classroom.

3. Methodology

3.1. Research Design

This study employed a quasi-experimental mixed-methods design to evaluate the effectiveness of gamified instruction using Kahoot! in enhancing Saudi EFL learners' mastery of phrasal verbs and their engagement across cognitive, emotional, behavioral, and social domains. Two groups participated in the study: the experimental group received instruction through Kahoot!-based gamification, which incorporated interactive quizzes and game-driven learning strategies tailored to phrasal verb acquisition, while the control group was taught using traditional teacher-led methods without digital tools. The mixed-methods approach integrated quantitative data (pretests, posttests, and an engagement questionnaire) with qualitative insights, enabling a holistic understanding of both performance outcomes and learner perceptions[67]. The rationale for adopting this design stemmed from the need to assess not only measurable gains in grammar proficiency but also the nuanced experiences of learners engaging with a gamified classroom environment[68,69]. Previous research supports the integration of Kahoot! for its potential to foster vocabulary development and boost learner motivation, particularly within Saudi EFL contexts[50,70]. Although some studies, such as Oraif and Edirisingha[52], report modest grammar improvements, the tool's capacity for repeated exposure and learner engagement justifies its use in teaching complex structures like phrasal verbs.

It is worth to mentioning that the instructors were blinded to group allocation to minimize bias. The control group received the same training materials, except for Kahoot!, to ensure comparability. Five lessons may not have been enough to achieve significant grammar improvements during the game, especially when using complex structures such as phrasal verbs, which require a lot of preparation and practice.

To ensure the validity of the results, the posttest primarily assessed phrasal verb recognition rather than constructive usage, which might not demonstrate the potential benefits of Kahoot! in a practical context. Future studies should include written or oral tasks to assess grammatical usage. Using the participation questionnaire only with the experimental group limits comparability. Initial participation data from the control group would provide a more reliable basis for

comparison. Regarding triangulation, future studies should use classroom observations or interviews to confirm subjective participation and more objectively assess behavioral and cognitive engagement.

3.2. Participants

The study involved a total of 63 undergraduate females in the female section Saudi students enrolled in English language programs at Qassim University. They were divided into two groups: an experimental group (31 students), which received gamified instruction using Kahoot!, and a control group (32 students), which received traditional teacher-centered methods. Participants were aged 19 to 21 years old.

3.3. Instruments of Data Collection

Data collection tools included the pretest and posttest. Two grammar competency exams were used to evaluate phrasal verb usage, which is known to be challenging for Saudi EFL learners[2,3]. A self-report survey was used to gauge multidimensional participation. Likert-scale items addressing behavioral, social, cognitive, and emotional engagement were included in the survey. Internal dependability was verified in accordance with DeVellis[71] (Cronbach's α > 0.80).

3.4. Data Collection Procedure

After receiving ethical clearance, the intervention was conducted over five instructional sessions. Week 1 involved the pretest, and the consent forms were clarified for the learners before they signed. Weeks 2–7 covered the instructional period. Week 8 included the posttest and questionnaire administration.

4. Results

This section presents the findings obtained from the analysis of the collected data. The results are organized according to the main study objectives and research questions.

4.1. First Research Question

The first research question is stated as "What is the impact of Kahoot! on Saudi EFL learners' grammar performance compared to conventional methods?"

4.1.1. Pretest Comparison

The pretest scores for the control group (n = 32) and the experimental group (n = 31) were analyzed using an independent samples t-test. As shown in **Table 1**, there was no statistically significant difference between the groups prior to the intervention, t (61) = 1.51, $p = 0.068$.

4.1.2. Posttest Comparison

There was a statistically significant difference between the posttest results of the two groups, with the control group outperforming the experimental group, t(61) = 1.92, $p = 0.030$. See **Table 2**.

The pretest results show that the p-value (0.030) is less than 0.05, indicating a statistically significant difference between the two groups after the intervention. The control group performed better. These results indicate that while the experimental group engaged in Kahoot!-based learning, the control group demonstrated better test performance in the posttest.

Table 1. This is a table about the pretest scores for control and experimental groups.

Test	Group	*N*	Mean	Std. Deviation	*t*	*p*-Value
Pre	Control	32	53.09	17.33	1.508	0.068
	Experimental	31	46.77	15.86		

Table 2. This is a table about the posttest scores for control and experimental groups.

Test	Group	*N*	Mean	Std. Deviation	*t*	*p*-Value
Post	Control	32	65.94	19.18	1.922	0.030
	Experimental	31	56.15	21.23		

4.2. Second Research Question

The second research question is stated as "What is the effectiveness of Kahoot! in terms of Saudi EFL learners' engagement in the classroom?"

4.2.1. Questionnaire Analysis

The engagement questionnaire was completed by the experimental group (n = 26). Descriptive statistics for each dimension are presented in **Tables 3–6**.

Table 3. This is a table about emotional engagement.

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.
The class is a safe learning environment.	0 0.00%	1 3.80%	3 11.50%	11 42.30%	11 42.30%	4.23	0.82
I want to keep learning and win the game.	0 0.00%	0 0.00%	2 7.70%	11 42.30%	13 50.00%	4.42	0.64
I enjoy Kahoot!, whether working alone or in a group.	1 3.80%	1 3.80%	2 7.70%	10 38.50%	12 46.20%	4.19	1.02
When playing Kahoot!, I feel that grammar class is more fun.	0 0.00%	0 0.00%	5 19.20%	7 26.90%	14 53.80%	4.35	0.80
When playing Kahoot!, I feel that learning grammar is much easier.	0 0.00%	0 0.00%	7 26.90%	9 34.60%	10 38.50%	4.12	0.82
I am comfortable and not afraid of being wrong because I can try more than once.	1 3.80%	0 0.00%	4 15.40%	11 42.30%	10 38.50%	4.12	0.95
I feel satisfied with my performance in the game.	0 0.00%	0 0.00%	6 23.10%	12 46.20%	8 30.80%	4.08	0.74
I felt frustrated while playing Kahoot! in the class.	4 15.40%	6 23.10%	8 30.80%	6 23.10%	2 7.70%	2.85	1.19
I found using Kahoot! to learn in class boring.	12 46.20%	7 26.90%	2 7.70%	2 7.70%	3 11.50%	2.12	1.40

Table 4. Cognitive Engagement Descriptive Statistics.

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.
The game helps me maintain my focus during the class.	0 0.00%	2 7.70%	6 23.10%	10 38.50%	8 30.80%	3.92	0.93
The grammar quizzes in my classes are challenging	0 0.00%	5 19.20%	7 26.90%	11 42.30%	3 11.50%	3.46	0.95
When I am mistaken, I tend to ask for more elaboration.	2 7.70%	3 11.50%	8 30.80%	10 38.50%	3 11.50%	3.35	1.09
I believe that my comprehension of phrasal verbs has significantly improved due to participating in Kahoot! during class.	0 0.00%	0 0.00%	8 30.80%	7 26.90%	11 42.30%	4.12	0.86
I think about the quiz questions after I leave the class.	2 7.70%	2 7.70%	7 26.90%	10 38.50%	5 19.20%	3.54	1.14
Kahoot! enables me to check my understanding of phrasal verbs.	0 0.00%	6 23.10%	4 15.40%	6 23.10%	10 38.50%	3.77	1.21
I can easily apply the phrasal verbs I have learned while using Kahoot!.	1 3.80%	1 3.80%	6 23.10%	9 34.60%	9 34.60%	3.92	1.06
Kahoot! makes me more aware of language structure.	0 0.00%	1 3.80%	9 34.60%	8 30.80%	8 30.80%	3.88	0.91
Kahoot! makes me try hard to develop my grammar performance.	0 0.00%	3 11.50%	5 19.20%	9 34.60%	9 34.60%	3.92	1.02
I don't think too hard about my choices when I play with Kahoot!.	3 11.50%	4 15.40%	7 26.90%	7 26.90%	5 19.20%	3.27	1.28

Table 5. Social Engagement Descriptive Statistics.

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.
Kahoot!'s team mode enables me to discuss and collaborate with my teammates.	0 0.00%	3 11.50%	9 34.60%	7 26.90%	7 26.90%	3.69	1.01
I feel motivated when I compete with my friends to get higher scores in Kahoot!.	1 3.80%	2 7.70%	4 15.40%	9 34.60%	10 38.50%	3.96	1.11
I feel that I help my team win while playing in team mode.	0 0.00%	0 0.00%	3 11.50%	11 42.30%	12 46.20%	4.35	0.69

Table 6. Behavioral Engagement Descriptive Statistics.

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.
I started to participate more in the class after using Kahoot!.	1 3.80%	2 7.70%	11 42.30%	6 23.10%	6 23.10%	3.54	1.07
I now practice more than before using Kahoot! to win in class.	0 0.00%	4 15.40%	5 19.20%	10 38.50%	7 26.90%	3.77	1.03
I want to keep learning and win the game.	0 0.00%	2 7.70%	4 15.40%	8 30.80%	12 46.20%	4.15	0.97
Time flies while using Kahoot! for learning.	2 7.70%	2 7.70%	5 19.20%	7 26.90%	10 38.50%	3.81	1.27
I choose the answers randomly without actually reading the questions.	10 38.50%	9 34.60%	2 7.70%	4 15.40%	1 3.80%	2.12	1.21
I try not to miss the lecture to practice using Kahoot!.	1 3.80%	1 3.80%	8 30.80%	9 34.60%	7 26.90%	3.77	1.03
I search for new concepts related to phrasal verbs after leaving the class.	0 0.00%	4 15.40%	6 23.10%	12 46.20%	4 15.40%	3.62	0.94

The control group outperformed the experimental group in the posttests ($p = 0.030$), indicating a statistically significant difference in the two groups' grasp of phrasal verbs. In particular, just 54.84% of students in the experimental group received a passing grade, while 81.25% of students in the control group did. These results imply that traditional teacher-led approaches may provide more rapid improvements in grammar performance, especially when it comes to phrasal verb acquisition, even when gamified training has motivational and engagement benefits.

Emotional engagement was the greatest of the four examined variables, according to an analysis of engagement results. Students demonstrated a strong positive attitude toward the gamified learning experience, demonstrating the tool's capacity to foster an engaging and enjoyable learning environment. But the picture of cognitive engagement was more nuanced. Some students seemed to be fully involved, while others indicated only superficial engagement. This shows that although

Kahoot! could increase emotional engagement, some students might not benefit as much from it in terms of deeper cognitive processing and introspective thinking.

5. Discussion

5.1. Grammar Performance Outcomes

The first research question examined whether the integration of Kahoot! into grammar instruction would improve students' grammar performance in phrasal verbs compared to traditional methods. Contrary to expectations, the posttest results show that the control group—taught through traditional instruction—outperformed the experimental group, which used Kahoot! (M = 65.94 vs. M = 56.15; $p = 0.030$). While both groups demonstrated improvement from pretest to posttest, the control group exhibited a statistically greater gain.

This outcome contrasts with prior research supporting the positive impact of Kahoot! on grammar learning [1,13,72]. This discrepancy is explained by two main factors. First, individual learner differences may have influenced the results. Research indicates that variations in prior knowledge, language aptitude, and cognitive strategies significantly impact second language learning [73,74]. For instance, learners with strong metacognitive skills—such as planning, monitoring, and evaluating their learning—tend to perform better [75]. Likewise, working memory capacity has been associated with successful grammar acquisition in L2 contexts [76]. These individual differences may influence how effectively learners benefit from instructional approaches such as gamification.

Second, the findings suggest that cognitive engagement was more prominent in the control group. Observations during instruction revealed that control group students asked reflective, metacognitive questions about phrasal verb usage—behavior consistent with "deliberate focus and self-regulation" [7]. In contrast, students in the experimental group often displayed what Philp and Duchesne [10] describe as surface-level or performative engagement. This form of engagement involves outward attentiveness—such as smiling, answering questions, or appearing focused—without genuine cognitive involvement. Such behavior may be influenced more by social or competitive dynamics than by a desire to master the content.

In the context of gamified learning, performative engagement can be amplified. Students may appear enthusiastic during Kahoot! activities due to their competitive or entertaining nature but fail to deeply process grammar content. Mercer et al. [11] noted that visible engagement should not be mistaken for meaningful learning. This type of engagement can mislead instructors, especially in grammar instruction, where deep cognitive processing is necessary to internalize complex structures, such as phrasal verbs. Therefore, although experimental group students were behaviorally and emotionally engaged, this may not have translated into actual learning gains. To further interpret these outcomes, the study applied a class percentage formula:

$$P = (f / N) \times 100\%$$

Where P represents the percentage of students who passed, f is the number of students achieving the passing grade ($\geq$50),

and N is the total number of students. Based on this formula, 81.25% of the control group passed, compared to 54.84% in the experimental group. This significant disparity underscores concerns regarding the depth of engagement and the instructional efficacy of gamified methods.

Hanus and Fox [77] explained that although gamification can boost short-term motivation and enjoyment, it may impair deeper learning when it fails to support complex cognitive engagement. They state, "Gamification elements can distract from learning objectives if learners focus more on winning than understanding". Similarly, Mekler et al. [36] cautioned that while fun elements such as points and badges can increase learners' motivation by providing extrinsic incentives, they do not necessarily lead to meaningful learning, especially when tasks are complex. Moreover, Alsawaier [78] stressed that gamification's effectiveness is dependent on alignment with pedagogical goals. When competition or entertainment overshadows comprehension, learning outcomes suffer.

This suggests that, learners' extrinsic motivation was triggered during the study. However, their low performance of posttest can be drawn that learners' intrinsic motivation did not triggered learners indicate that they only rely on session to study phrasal verbs and some also stated that winging was their goal and not learning *"I joined because I wanted to win, not necessarily to learn."* Therefore, it can be concluded that, when extrinsic motivation becomes internalized, it starts to resemble intrinsic motivation—this supports deeper engagement [41].

Not all learners respond to gamification in the same way. While over half of the experimental group passed, the variance in outcomes may reflect differing learner perceptions. Dichev and Dicheva [79] argued that gamification may advantage students with high intrinsic motivation or prior knowledge, while others may struggle if the game design does not promote higher-order thinking. They stated, "Gamification alone is not a magic bullet; its effectiveness depends on learner characteristics and instructional quality".

Finally, Fredricks et al. [59] emphasized that engagement is a multidimensional construct that encompasses behavioral, emotional, and cognitive aspects, but it does not always result in academic success. As they aptly note, "Engagement is necessary but not sufficient for achievement gains". In this study, while the experimental group may have demon-

strated visible engagement, the lack of deep processing likely limited their learning outcomes.

Consistent with Alshra'ah[50] and Ali and Abdalgane[51], students in the present study exhibited increased motivation and vocabulary acquisition through Kahoot!. However, the limited improvement in grammar accuracy aligns with the findings of Oraif and Edirisingha[52], underscoring the need for complementary instructional scaffolding.

Although the control group outperformed the experimental group on the posttest assessment, there is no empirical evidence attributing this difference to a greater commitment to traditional methods. Several alternative explanations are worth considering. First, teacher effects may have played a role, as differences in instructional quality or methods between the two groups may have influenced student outcomes. Second, the fit between traditional instructional methods and assessment formats may have been more consistent, as traditional curricula often emphasize memorization, which is consistent with discrete-scored test formats. Third, student preferences may also explain the observed differences, as some students may perform better in the structured, non-competitive environment typical of traditional instructional methods. These factors suggest that differences in outcomes are likely multifaceted, and further research is needed to determine the specific contribution of each factor.

5.2. Engagement dimensions

The four aspects of learner engagement—behavioral, social, cognitive, and emotional—are as measured by and self-report questionnaires. A more nuanced view of how Kahoot! affected student involvement during grammar instruction—specifically, in acquiring phrasal verbs—is provided by the integration of quantitative evidence. Out of all, emotional involvement was the most robust dimension. High levels of enjoyment and a positive affective reaction to Kahoot! were found in the engagement questionnaire. Items such as "I want to keep learning and win in the game" (M = 4.42, SD = 0.64) and "When playing Kahoot!, I feel that grammar class is more fun" (M = 4.35, SD = 0.80) demonstrate that students found the grammar lessons entertaining and motivating.

These results support the idea that Kahoot!'s game-like atmosphere triggered emotional arousal and anticipation. By encouraging enjoyment and lowering anxiety, gamification boosts learner motivation, which is consistent with previous research showing these affective advantages[35,48].

Emotional engagement is especially beneficial in language learning environments because it can encourage perseverance and risk-taking, two qualities that are critical to learning new linguistic structures[80]. Students are more likely to participate actively and stick with challenging grammatical ideas when they are emotionally invested in the task. Additionally, more relevant learning, improved memory recall, and enhanced attention are all correlated with positive emotion[81].

This idea is further supported by research by MacIntyre and Gregersen[82]. They contend that in second language classrooms, affective elements like fun and decreased worry are crucial for maintaining motivation. Learners are more inclined to take chances when they feel encouraged and safe, which is important for language production activities.

However, while the majority of students expressed enjoyment and psychological safety, a notable subset reported experiences of frustration or boredom. These emotional discrepancies reflect the individualized nature of learner responses to gamified tools. Research indicates that gamified environments—especially those emphasizing competition through features like leaderboards and time pressure—can produce mixed emotional outcomes. Some students may thrive under competitive conditions, while others may feel anxious, disengaged, or demotivated if they perceive themselves as underperforming[36,77]. Such differences are often influenced by learners' personal preferences, confidence levels, and sensitivity to competition. Consequently, educators should adopt differentiated instructional strategies and provide emotional scaffolding to ensure that gamified activities promote engagement without alienating less competitive or more anxious learners.

Although Kahoot! dramatically increased emotional engagement by lowering students' anxiety and raising their delight, it also showed considerable cognitive trade-offs. Many students said they were more concerned with the activity's competitive element than with learning the specific grammar elements. Some students engaged in superficial methods like random guessing since the gamified format seemed to place more emphasis on winning and speed than on serious participation. This is especially important when it comes to phrasal verbs, when contextual complexity and

rule-based comprehension are crucial. Fast-paced tests like Kahoot! may provide few opportunities for the deep processing needed for complicated grammatical structures, as evidenced by earlier research[52]. The approach might not adequately support the continuous cognitive engagement required for grammatical mastery, despite being emotionally motivating.

In conclusion, by fostering a fun and emotionally encouraging learning environment, Kahoot! was incredibly successful in generating emotional involvement. This component supported a more successful and inclusive learning environment by boosting engagement and attention while also lowering language anxiety.

5.3. Social Engagement

Social engagement was reported at a relatively high level during Kahoot! activities, especially in team-based game modes. Questionnaire responses reflected meaningful peer collaboration, with statements such as "Kahoot!'s team mode enables me to discuss and collaborate with my teammates" (M = 3.69, SD = 1.01) and "I feel that I have helped my team to win while playing in team mode" (M = 4.35, SD = 0.69). These findings support Philp and Duchesne's[10] argument that social engagement is a vital aspect of language learning, where learners build meaning through interaction and cooperation.

In the questionnaires used in this study, students reported increased enthusiasm and motivation when engaging in team-based or competitive activities. These observations are consistent with Reeve and Tseng's[83] definition of social engagement, which includes collaboration, peer interaction, and shared emotional investment.

These outcomes are reinforced by previous studies indicating that gamified platforms used in collaborative contexts can enhance peer bonding and a sense of community[28,84]. However, these social benefits do not always translate into improved learning outcomes. Park and Choi[85] found that although Kahoot! increased student motivation and classroom participation, it did not significantly improve academic performance. Similarly, Domínguez et al.[86] concluded that while gamification heightened student engagement and enjoyment, it had no significant effect on final test scores compared to nongamified instruction. Mogavi et al.[87] further cautioned that students may become overly focused on game elements, leading to distraction from learning objectives.

5.4. Cognitive Engagement

Despite its existence, cognitive engagement was found to be less reliable among students than emotional and social involvement. The results of the questionnaire point to a moderate to high level of grammatical comprehension investment. For instance, the item "I think playing Kahoot has greatly improved my understanding of phrasal verbs" received a high score (M = 4.12, SD = 0.86). "I believe that my comprehension of phrasal verbs has significantly improved due to participating in Kahoot!" "The game helps me maintain my focus during the class." "I can easily apply the phrasal verbs I have learned while using Kahoot!" "Kahoot! makes me try hard to develop my grammar performance." These items demonstrate deep engagement—focus, comprehension, application, and self-driven improvement.

Statements like "When I am mistaken, I tend to ask for more elaboration" (M = 3.35, SD = 1.09) and "I think about the quiz questions after I leave the class" (M = 3.54, SD = 1.14), on the other hand, indicated more moderate engagement and were lower indicators of deeper metacognitive processing.

Standard deviations ranged from 0.86 to 1.28, reflecting moderate to high variability in how students experienced cognitive engagement. While a significant portion of students demonstrated active cognitive involvement, the data also suggest that some were disengaged or exhibited cognitively passive behaviors. For example, the item *"When I am mistaken, I tend to ask for more elaboration"* (M = 3.35) indicates limited metacognitive engagement among the participants. This suggests that although students may have been responsive during the activity, they were not consistently engaging in deeper self-regulatory learning processes. One plausible explanation for this outcome is the competitive nature of the tool, which may prioritize speed and performance over thoughtful reflection. Research has shown that such competitive elements—like leaderboards and point-based rankings—can diminish reflective thinking, hinder understanding, and lead to surface-level engagement rather than metacognitive inquiry[88,89].

These results align with those of Licorish et al.[48], who found that while Kahoot! enhances recall and attention, it may fall short in promoting deep learning unless the tasks

encourage reflective thinking. This pattern resonates with the findings of Rosidah et al. [90], who concluded that although Kahoot! motivates learners, its capacity to foster deep processing is contingent upon the inclusion of activities that require analytical reasoning. Similarly, Hamari et al. [35] noted that gamification promotes emotional and motivational engagement, yet its impact on cognitive outcomes hinges on the complexity and design of the tasks.

The finding that Kahoot!-based instruction did not outperform traditional methods in improving grammatical accuracy should be viewed with caution. Several factors may have influenced this result, such as the short duration of the intervention and the competitive nature of the gamified exercises, which could have inadvertently prioritized speed and superficial interaction over deep cognitive processing. However, this finding should not be interpreted as evidence that gamification inherently impairs learning. The effectiveness of game-based instruction depends on meticulous design, sufficient exposure time, and learners' familiarity with the content and the digital platform. Therefore, these factors should be considered in future applications of gamification to enhance its pedagogical value in language learning contexts.

Importantly, cognitive engagement is not solely shaped by task design but is also influenced by learners' preferences and perceived relevance of the activity. When students find gamified tasks personally meaningful or aligned with their learning styles, they are more likely to invest effortful mental energy, resulting in deeper cognitive processing [59,91]. Therefore, aligning gamified content with students' preferences can enhance not only motivation but also the quality of cognitive engagement.

In summary, Kahoot! fostered moderate cognitive engagement primarily through attention, comprehension, and application. Although some learners demonstrated deeper reflection and curiosity, others approached the activity as a game rather than a learning opportunity to enhance the cognitive dimension [1,37].

5.5. Behavioral Engagement

Behavioral engagement, which involves active participation, sustained effort, and persistence. Questionnaire responses indicated only moderate levels of behavioral involvement. For instance, the statements "I have started to participate more in the class after Kahoot!" (M = 3.54, SD = 1.07) and "I try not to miss the lecture to practice using Kahoot!" (M = 3.77, SD = 1.03) suggest a modest behavioral shift among learners.

Of particular concern was the low mean score for the item, "I didn't think too hard about my choices while I was playing with Kahoot!" (M = 2.12, SD = 1.21). This result implies that some students were participating without focus or intentionality. This illustrates what Mercer et al. [11] describe as performative or "fake" engagement—where students appear to be participating but are not genuinely invested either behaviorally or cognitively. In these cases, engagement is driven more by enjoyment and the gamified environment than by a commitment to learning goals.

This phenomenon is not unique to the current study. Reinhardt [92] cautioned that gamification, when not framed within clear educational goals, can encourage superficial participation. Similarly, Balaman [93] emphasized the need for reflection and academic scaffolding in gamified activities. Without these, learners may focus more on speed and competition than on accuracy and content mastery. Zainuddin et al. [28] also warned that while participation may increase in gamified settings, actual effortful behavior depends on pedagogical structure.

6. Conclusions

Overall, the findings suggest that Kahoot! was effective in enhancing emotional and social engagement among EFL learners. Students consistently reported enjoying the tool and appreciated its collaborative and competitive features. These aspects contributed to a positive classroom atmosphere and increased participation, particularly during team-based activities. The gamified nature of the tool appeared to foster a sense of enjoyment and belonging, which is crucial for maintaining learner motivation in language classrooms.

However, the impact on cognitive and behavioral engagement was less consistent. While some students reported improved focus and comprehension, others appeared to engage more superficially—often prioritizing speed and competition over accuracy and reflection. For instance, several participants admitted to selecting answers at random, indicating a lack of strategic thinking or sustained task engagement. This variability suggests that the depth of cognitive process-

ing and task persistence differed significantly across learners, possibly influenced by individual preferences, anxiety, or familiarity with the content.

These findings underscore the dual-edged nature of gamified tools like Kahoot!: while they can build confidence, reduce performance pressure, and enhance classroom dynamics, they may also alienate learners who are less competitive or more anxious about public error. Consequently, it is important for educators to monitor student responses, provide emotional support, and incorporate strategic scaffolding to promote balanced behavioral engagement among diverse learner profiles.

The findings of this study indicate that while Kahoot!-based gamified instruction significantly enhances emotional and social engagement, it does not outperform traditional teacher-led methods in promoting mastery of phrasal verbs. The competitive and fast-paced nature of the tool, while effective in boosting motivation, may compromise deeper cognitive processing and accurate language production. These results underscore the need to integrate gamification with more reflective, output-oriented learning tasks to maximize its pedagogical value. Future research should consider longitudinal interventions and blended instructional models—such as combining Kahoot! with communicative or form-focused practice—to better support sustained grammar development and meaningful learner engagement.

Despite its contribution, the study has several limitations that should be considered. First, the relatively small sample size (n = 63) limits the generalizability of the findings to the broader context of English as a foreign language learning. Second, the intervention period was only five weeks, which might have been insufficient to detect the full effects of game-based learning, especially in terms of long-term language retention and development. Third, the assessment instruments used in the final test primarily evaluated recognition-based knowledge rather than constructive grammar use. This approach might have underestimated Kahoot!'s potential for developing communicative competence, as the platform's interactive nature might be more suitable for tasks that stimulate creativity and the direct application of language.

To address these limitations, it is recommended to embed Kahoot! within broader task-based learning sequences, where learners can apply grammar knowledge in more mean-

ingful contexts[94]. For example, following Kahoot! quizzes with pair work, oral discussions, or guided writing activities may enhance the transfer and consolidation of grammatical knowledge, thus strengthening both cognitive and behavioral engagement.

In conclusion, while Kahoot! clearly supports emotional and social engagement, its effects on cognitive and behavioral domains depend on learner differences and instructional design. A combination of engaging gamified elements, structured scaffolding, and reflective follow-up practices is essential to maximizing its pedagogical potential in EFL grammar instruction. The study recommends several future lines of research based on the current findings. First, longitudinal studies are needed to examine the impact of expanded interventions incorporating blended learning approaches, such as integrating Kahoot! with communicative or outcome-based tasks, to more accurately assess the role of gamification in promoting grammar acquisition. Second, the effectiveness of game tools like Kahoot! may depend significantly on teacher performance. Therefore, future research should examine how teacher training and pedagogical strategies influence learning outcomes in game-based language learning environments.

Author Contributions

N.A. led the design, data collection, statistical analysis, and writing of the manuscript. S.A. provided guidance on methodology, reviewed drafts, and supported the theoretical framing.

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Conflicts of Interest

The authors declare no conflict of interest.

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