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TEMA:

EFFECTIVENESS OF KAHOOT AS A GAMIFICATION TOOL FOR LEARNING
ENGLISH VOCABULARY AMONG BACCALAUREATE SCHOOLERS.

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Abstract

This quasi-experimental study examines the effectiveness of Kahoot as a gamified digital platform for improving English as a Foreign Language (EFL) vocabulary learning among second-year high school students at Unidad Educativa Olmedo in Ecuador. The research addresses persistent challenges in English language instruction in public secondary education, particularly low student motivation, limited classroom engagement, and difficulties in vocabulary retention. The main objective was to determine whether the integration of Kahoot as a gamification-based instructional strategy significantly improves vocabulary acquisition in EFL contexts. A quantitative pretest–posttest design with a control and an experimental group was employed. The sample consisted of 90 students distributed into two intact groups: Group A (control, n = 45) and Group B (experimental, n = 45). Both groups completed a 20-item vocabulary test focusing on adjectives, comparatives, and superlatives before the intervention. Statistical analysis using Student's test confirmed significant differences between groups. The findings suggest that gamified digital tools such as Kahoot enhance vocabulary acquisition and promote more dynamic EFL learning environments.

Keywords: *Gamification, kahoot, vocabulary learning, English as a foreign language (EFL), educational technologies*

Resumen

Este estudio cuasi experimental examina la efectividad de Kahoot como una plataforma digital gamificada para mejorar el aprendizaje de vocabulario en inglés como lengua extranjera (EFL) en estudiantes de segundo año de bachillerato de la Unidad Educativa Olmedo en Ecuador. La investigación aborda desafíos persistentes en la enseñanza del idioma inglés en la educación secundaria pública, particularmente la baja motivación estudiantil, la limitada participación en el aula y las dificultades en la retención del vocabulario. El objetivo principal fue determinar si la integración de Kahoot como una estrategia de enseñanza basada en la gamificación mejora significativamente la adquisición de vocabulario en contextos de EFL. Se empleó un diseño cuantitativo pretest–postest con un grupo de control y un grupo experimental. La muestra estuvo conformada por 90 estudiantes, distribuidos en dos grupos intactos: Grupo A (control, n = 45) y Grupo B (experimental, n = 45). Ambos grupos completaron una prueba de vocabulario de 20 ítems centrada en adjetivos, comparativos y superlativos antes de la intervención. El análisis estadístico mediante la evaluación confirmó diferencias significativas entre los grupos. Los hallazgos sugieren que las herramientas digitales gamificadas como Kahoot favorecen la adquisición de vocabulario y promueven entornos de aprendizaje de EFL más dinámicos.

Palabras clave: *Gamificación, Kahoot, aprendizaje de vocabulario, inglés como lengua extranjera (EFL), tecnologías educativas,*

INTRODUCTION

In recent decades, the teaching of English as a Foreign Language (EFL) has undergone significant transformations driven by the incorporation of Information and Communication Technologies (ICT) into educational processes. Globalization, digital access, and contemporary academic and labor demands have made English proficiency a key competence for social and professional integration. However, in various educational contexts, particularly in Latin American public institutions, structural difficulties persist, including traditional methodologies, low student motivation, and limitations in vocabulary development, a fundamental component of communicative competence.

Vocabulary constitutes the foundation of foreign language learning, as without an adequate lexical repertoire it becomes difficult to develop reading comprehension, written production, oral expression, and listening skills. Lexical acquisition involves not only memorizing words but also understanding their contextual use, pronunciation, meaning, and pragmatic application. Nevertheless, several studies have shown that traditional approaches focused on mechanical repetition and direct translation tend to generate demotivation and low long-term retention (Rahayu et al., 2023). This issue becomes more evident among upper secondary students, who require dynamic methodologies aligned with their digital environment and learning styles.

In response to these challenges, gamification has emerged as an innovative pedagogical strategy that incorporates game elements such as scoring systems, competition, immediate feedback, and rewards into formal educational contexts. Gamification aims to transform the learning experience into a more interactive, participatory, and meaningful process. Research has demonstrated that gamified tools increase both intrinsic and extrinsic motivation, enhance classroom participation, and improve academic performance.

In the specific field of English language teaching, digital platforms such as Kahoot have gained relevance as interactive instructional resources. Kahoot allows teachers to design real-time dynamic quizzes that promote healthy competition and immediate feedback. Recent studies highlight that the use of Kahoot significantly enhances vocabulary acquisition in secondary education students, showing statistical improvements in post-intervention assessments (Murtasiah et al., 2025). These findings suggest that integrating digital tools can strengthen cognitive processes associated with memory and lexical retention.

Systematic reviews have also confirmed that Kahoot, as a gamified learning tool, contributes to vocabulary development by increasing academic engagement and student participation (Maemanah & Shofiana, 2025). The platform's interactive and playful nature stimulates sustained attention, reduces evaluation anxiety, and fosters a collaborative classroom environment.

From the students' perspective, perceptions of Kahoot are predominantly positive. Research conducted in secondary education contexts indicates that students consider it motivating, engaging, and conducive to learning, especially in vocabulary review and consolidation activities (Rahmadani et al., 2022). Immediate feedback allows learners to identify errors and reinforce concepts instantly, improving self-confidence and classroom participation.

In Latin American contexts, particularly in public institutions, Kahoot has shown encouraging results in terms of motivation and classroom dynamism. Studies conducted in Ecuador indicate that implementing this tool strengthens teacher–student interaction and increases interest in English language learning (Puetate Medina et al., 2024). However, these studies also emphasize that the impact of ICT depends on factors such as connectivity, access to electronic devices, and teacher training in innovative methodologies.

Despite international evidence supporting gamification in English teaching, research specifically focused on the impact of Kahoot on vocabulary development among Ecuadorian public high school students remains limited. This research gap is relevant given the challenges faced by the Ecuadorian educational system regarding English learning quality and student performance in national and international assessments.

Therefore, this study aims to analyze the effectiveness of Kahoot as a gamification tool to foster English vocabulary learning among second year high school students at Unidad Educativa Olmedo in Ecuador. Through a quantitative approach based on pretest and posttest measurement, this research seeks to determine the impact of this tool on academic performance, motivation, and vocabulary acquisition.

Theoretical framework

1. English as a Foreign Language (EFL) Teaching

The learning of English as a Foreign Language (EFL) constitutes a priority in contemporary educational systems due to its relevance in academic, technological, and professional contexts. In Latin American countries, particularly in Ecuador, English language teaching faces structural challenges related to traditional methodologies, limited communicative practice, and insufficient technological resources. These factors directly affect the levels of linguistic competence achieved by secondary school students.

From a pedagogical perspective, the communicative approach has been widely adopted to promote the functional use of the language; however, its effectiveness depends on the adequate development of linguistic components, including vocabulary. A lack of lexical mastery limits students' ability to comprehend texts, express ideas, and engage in meaningful oral interactions.

The second language acquisition theory proposed by Stephen Krashen represents one of the most influential conceptual frameworks in EFL teaching. Krashen (1982) distinguishes between “learning” and “acquisition,” arguing that acquisition occurs naturally when learners are exposed to comprehensible input in a low-anxiety environment. According to his Affective Filter Hypothesis, factors such as motivation, self-confidence, and anxiety levels directly influence the language acquisition process.

From this perspective, tools such as Kahoot may contribute to lowering the affective filter by creating a dynamic, interactive, and less intimidating environment than traditional assessments. The platform's immediate feedback and playful nature may facilitate vocabulary internalization by providing comprehensible input within a motivating context.

Several studies have indicated that low performance in English within school settings is associated with methodologies centered on isolated word memorization, lacking contextualization and meaningful interaction (Rahayu et al., 2023). Consequently, there is a need to incorporate innovative strategies that strengthen lexical learning in a dynamic and contextualized manner.

2. Vocabulary as a Fundamental Axis of Language Learning

Vocabulary is considered one of the fundamental pillars in foreign language acquisition. Lexical competence involves not only knowing the meaning of a word but also understanding its pronunciation, grammatical usage, collocations, and pragmatic context. Without sufficient lexical repertoire, the development of skills such as reading, writing, listening, and speaking is significantly limited. Recent research has demonstrated that vocabulary learning improves when active strategies and meaningful repetition are employed within interactive contexts (Murtasiah et al., 2025). Lexical retention is closely linked to frequency of exposure, active participation, and immediate feedback.

Moreover, systematic reviews indicate that the integration of digital tools can enhance cognitive processes associated with long-term memory, particularly when learning is presented in a dynamic and participatory format (Maemanah & Shofiana, 2025). In this regard, technology does not replace the teacher; rather, it complements pedagogical practice through interactive resources that stimulate attention and motivation.

3. Gamification in Education

Gamification is defined as the incorporation of game elements into non-game contexts, such as education, with the aim of increasing participants' motivation and engagement. Its main characteristics include point systems, levels, rewards, immediate feedback, and healthy competition. In the educational field, gamification has demonstrated positive effects on both intrinsic and extrinsic student motivation. By integrating game dynamics into the classroom, a more interactive and participatory environment is created, fostering meaningful learning. Various studies have shown that students demonstrate greater willingness to participate when activities include playful and technological components (Rahmadani et al., 2022).

Game-based learning theory suggests that playful elements enhance attention, memory, and active participation. Contemporary research indicates that gamified environments increase students' cognitive and emotional engagement (Deterding et al., 2011). Furthermore, gamification contributes to reducing anxiety associated with traditional assessment, transforming errors into learning opportunities. Immediate feedback allows knowledge reinforcement and real-time concept correction, thereby facilitating learning consolidation.

4. Kahoot as a Gamified Learning Tool

Kahoot is an interactive digital platform that enables the design of quizzes, surveys, and assessment activities in a competitive format. Its structure based on multiple choice questions, timers, and real-time ranking transforms the assessment process into a dynamic experience. Empirical research

has demonstrated that the implementation of Kahoot in English classes produces significant improvements in vocabulary acquisition (Murtasiah et al., 2025). Likewise, recent studies indicate that the use of this tool strengthens active participation and increases interest in language learning (Puetate Medina et al., 2024).

From the students' perspective, Kahoot is perceived as a motivating tool that facilitates content comprehension and improves classroom interaction (Rahmadani et al., 2022). The combination of healthy competition, immediate feedback, and visual dynamism helps maintain attention and enhance lexical retention. In the EFL context, integrating platforms such as Kahoot allows formative assessment to be transformed into an interactive experience in which errors become part of the learning process. This dynamic promotes meaningful vocabulary repetition and improves lexical retention. Additionally, academic reviews indicate that Kahoot is particularly effective during the consolidation and review phase of vocabulary learning, as it enables reinforcement of previously taught concepts in an engaging manner (Maemanah & Shofiana, 2025).

5. ICT and Education in the Ecuadorian Context

The integration of Information and Communication Technologies (ICT) into the Ecuadorian educational system has been promoted as a strategy to improve educational quality and reduce learning gaps. However, its implementation presents challenges related to technological infrastructure, connectivity, and teacher training. The use of gamification, interactive games, collaborative writing activities, and online assessment tools has become an essential component of the contemporary teaching–learning process (Intriago, 2024).

In public institutions, the use of digital tools such as Kahoot represents an opportunity to modernize pedagogical practices and adapt them to the characteristics of current students, who belong to a digital generation accustomed to the constant use of electronic devices. Studies conducted in Ecuador indicate that the incorporation of gamified tools enhances student motivation and strengthens classroom interaction (Puetate Medina et al., 2024). Nevertheless, the importance of a planned and pedagogically grounded implementation of these tools is also emphasized to ensure their effectiveness.

METHODOLOGY

This study followed a quasi-experimental design with a control group and an experimental group using a pretest–posttest measurement scheme. The sample consisted of 90 second-year high school students distributed into two intact groups: Group A (control, $n = 45$) and Group B (experimental, $n = 45$). During the first phase, a 20-item vocabulary pretest focusing on adjectives, comparatives, and superlatives was administered in traditional format to both groups in order to determine their initial lexical knowledge.

Pretest results showed low performance in both groups. The control group obtained 330 correct answers out of 900 possible responses (36.6%), with a mean score of 7.33/20. The experimental

group achieved 390 correct answers (43.3%), with a mean score of 8.66/20. These findings indicate that both groups started from a relatively similar and limited vocabulary level.

During the intervention phase, the control group continued with traditional vocabulary teaching methods, whereas the experimental group worked for eight weeks using Kahoot as a gamified reinforcement tool. The intervention included interactive quizzes, immediate feedback, and competitive dynamics to enhance active participation. After the intervention, the same instrument was administered as a posttest. The control group improved to 455 correct responses (50.5%), with a mean of 10.11/20, reflecting a gain of 2.78 points. In contrast, the experimental group reached 656 correct responses (72.8%), with a mean of 14.57/20, representing an improvement of 5.91 points.

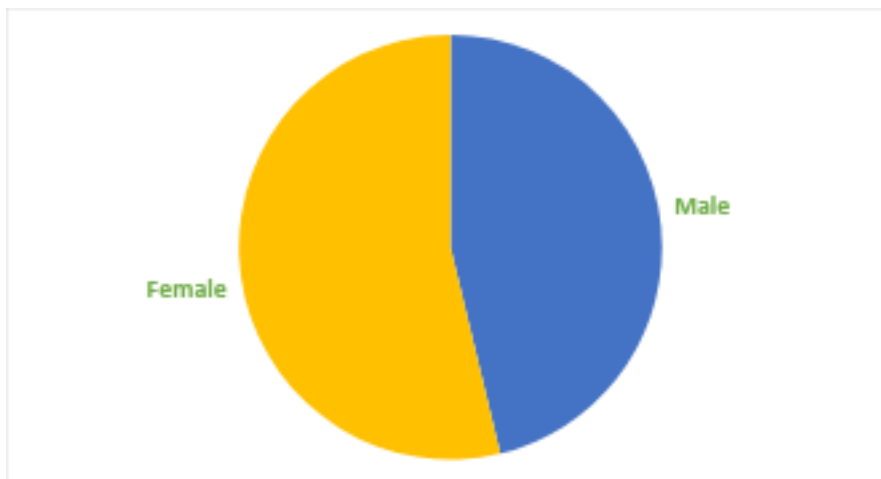
Comparative analysis reveals that although both groups improved, the increase in the experimental group was significantly higher (29.5%) compared to the control group (13.9%). These findings suggest that Kahoot had a substantial pedagogical impact on vocabulary development, particularly in the use of adjectives, comparatives, and superlatives.

The lexical content used in Kahoot was aligned with B2 level descriptors of the Common European Framework of Reference for Languages (CEFR) and Cambridge English Qualifications 2020 specifications. Activities avoided isolated memorization and instead promoted contextualized application of comparative and superlative structures to enhance grammatical accuracy and lexical retention. Participation was voluntary and anonymous, respecting ethical principles of confidentiality and informed consent.

RESULTS

A total of 90 students participated in the study (46% male, 54% female), aged between 16 and 17 years.

Figure 1. Gender of Second-Year High School Students



Source: Own elaboration.

Descriptive statistics indicated similar vocabulary knowledge at baseline, with slightly higher performance in the experimental group ($M = 8.66$) compared to the control group ($M = 7.33$). Posttest

results demonstrated a substantial increase in the experimental group ($M = 14.57$), significantly surpassing the control group ($M = 10.11$).

The estimated standard deviations suggested moderate variability in both groups, while the experimental group exhibited a more pronounced mean increase. Overall, the results demonstrate that Kahoot significantly enhanced vocabulary acquisition in English as a Foreign Language.

Next, we present the results obtained from the selected vocabulary using adjectives, comparatives, and superlatives with second-year high school students from the selected institution.

Table 1. Vocabulary list used during the intervention

Effective	Difficult	Easy	Interesting
Boring	Important	Useful	Different
Fast	Slow	Good	Bad
Big	Small	High	Low
Clear	Simple	Modern	Traditional

Source: Own elaboration based on Cambridge (2020).

These results are presented for both the control group and the experimental group for data verification purposes.

A total of 90 students participated in the study, distributed into a control group ($n = 45$) and an experimental group ($n = 45$). Both groups completed a 20-item vocabulary test before (pretest) and after (posttest) the intervention.

Table 2. Descriptive statistics of the vocabulary test

Group	Test	N	Mean	Estimated SD	SE	Min	Max
Control	Pretest	45	7.33	2.19	0.33	3	12
Control	Posttest	45	10.11	2.24	0.33	5	15
Experimental	Pretest	45	8.66	2.21	0.33	4	13
Experimental	Posttest	45	14.57	1.99	0.30	10	19

Note: Statistical data before and after the intervention.

The standard deviation was estimated assuming a binomial distribution of correct responses (20 items per test). The standard error was calculated by dividing the estimated standard deviation by the square root of the sample size. In the pretest, both groups showed relatively similar levels of vocabulary knowledge, although the experimental group presented a slightly higher mean ($M = 8.66$) compared to the control group ($M = 7.33$). The results obtained suggest that the implementation of Kahoot as a gamified learning tool had a significant impact on English vocabulary acquisition as a foreign language.

Although both groups improved their performance, the increase recorded in the experimental group was considerably greater, suggesting that gamification strategies can significantly enhance vocabulary retention and learning. These findings empirically support the effectiveness of active and interactive methodologies in the English teaching learning process.

DISCUSSION

Empirical research suggests that the use of Kahoot can significantly increase students' motivation and participation in foreign language learning. For example, Rahmadani, Saman, and Bahing (2022) reported that students perceive Kahoot as an effective tool for enhancing motivation by providing interactive, competitive, and visually stimulating learning experiences, which facilitate comprehension of English content.

Similarly, quantitative studies conducted in other educational contexts have identified a positive impact of Kahoot on vocabulary mastery. Murtasiah, Riswanto, and Haryanto (2025) observed significant improvements in lexical competence following the implementation of gamified activities using Kahoot, suggesting that this tool can serve as effective support in vocabulary instruction.

Furthermore, the perception that Kahoot makes learning more dynamic aligns with evidence from systematic analyses highlighting how gamified tools promote active student engagement and the internalization of linguistic content. Truong (2025) reported that gamification, especially when incorporating elements such as competition and interaction, increases motivation among English learners in both face-to-face and online learning environments.

Nevertheless, reviewed studies also point out certain limitations and necessary conditions to maximize the effectiveness of Kahoot. For instance, research on perceptions of gamified learning suggests that the acceptability of tools such as Kahoot depends on external factors including technical stability and appropriate pedagogical implementation, which may influence the consistency of results across different student populations. A study in English reading found that although Kahoot increased motivation and participation, factors such as internet connectivity affected its overall impact on academic performance.

From a methodological perspective, data from items related to retention and comprehension (Table 2) show positive means, but relatively lower than those associated with motivation and preference for frequent use. This may suggest that while Kahoot fosters participation and positive attitudes, its impact on specific cognitive aspects such as vocabulary retention may require complementary strategies, such as explicit practice activities or pedagogical approaches focused on contextualized vocabulary use.

Even so, the moderate levels of standard deviation reflect some variability in student perceptions, indicating that not all learners experience the same benefits with equal intensity. This finding is also consistent with previous studies suggesting that the effects of gamification may vary according to students' individual characteristics, learning styles, and educational contexts.

In summary, the results of this study not only align with previous research highlighting the potential of Kahoot to enhance motivation, dynamism, and participation in language learning, but also provide

additional evidence of its application in secondary education contexts in Ecuador. These findings support the view that gamified ICT tools should be considered a relevant pedagogical practice within the English curriculum and suggest the need to integrate such tools complementarily with traditional methods in order to optimize learning outcomes.

CONCLUSION

The results of the study allow us to conclude that the implementation of Kahoot as a gamification tool suggest that Kahoot had a significant impact on English vocabulary learning as a foreign language among second-year high school students. First, although both groups (control and experimental) showed similar levels in the pretest, the posttest results revealed a considerably greater improvement in the experimental group. While the control group increased its mean score from 7.33 to 10.11 points, the experimental group improved from 8.66 to 14.57 points, representing a significantly higher gain. Statistical analysis using the student's t-test confirmed that this difference was statistically significant ($p < .001$), demonstrating that the use of Kahoot positively influenced academic performance.

Second, the data suggests that gamification promotes not only vocabulary acquisition but also student motivation and active participation. The interactive dynamics, immediate feedback, and competitive component contributed to creating a more engaging and participatory learning environment compared to the traditional methodology.

Likewise, the magnitude of the improvement observed in the experimental group indicates that gamified digital tools can enhance lexical retention when they are strategically integrated into the pedagogical process. However, the variability reflected in the standard deviations suggests that the impact may differ according to students' individual characteristics; therefore, it is recommended to complement these strategies with other instructional practices.

Finally, this research provides empirical evidence within the context of Ecuadorian public education, demonstrating that the strategic integration of interactive technological tools can contribute to strengthening educational quality in English language teaching. Future research is recommended to further explore the longitudinal impact of gamification and its application to other linguistic competencies.

REFERENCES

- Ausubel, D. P. (1968). *Educational psychology: A cognitive view*. Holt, Rinehart and Winston.
- Cardona, J. (2002). *Metodología de la investigación educativa*. Madrid: La Muralla.
- Cruz, L.-D., Hernández Ramos, J. P., & Hernández Martín, A. (2025). *El uso de la gamificación mediada por las TIC en la enseñanza del inglés como lengua extranjera: una revisión sistemática*. *Revista de Estilos de Aprendizaje*, 18(36). <https://doi.org/10.55777/rea.v18i36.7011>
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. In *Proceedings of the 15th International Academic MindTrek Conference* (pp. 9–15). <https://doi.org/10.1145/2181037.2181040>
- Hernández, R., Fernández, C., & Baptista, P. (2010). *Metodología de la investigación* (5ª ed.). México: McGraw-Hill.
- Intriago Cedeño, J. G. (2024). TICs en la enseñanza del idioma inglés en educación superior en tiempos de pandemia COVID-19. *Skopos*, 15, 135–159. <https://doi.org/10.21071/skopos.v15i>
- León, O. G., & Montero, I. (2003). *Métodos de investigación en psicología y educación* (3ª ed.). Madrid: McGraw-Hill.
- Maemanah, A., & Shofiana, K. L. (2025). Exploring the use of Kahoot: A game-based learning tool in vocabulary to senior high school students: A systematic review. *Jurnal Penelitian Ilmu Pendidikan Indonesia*, 4(2). <https://jpcion.org/index.php/jpi/article/view/419>
- Murtasiah, M., Riswanto, R., & Haryanto, E. (2025). The effectiveness of gamification with Kahoot on English language vocabulary mastery. *TOFEDU: The Future of Education Journal*, 4(7), 3715–3718.
- Puetate Medina, E. E., Castillo Martínez, C. P., & Méndez Ortega, M. G. (2024). Kahoot para la enseñanza del idioma inglés. *Revista Sathiri*. <https://revistasdigitales.upec.edu.ec/index.php/sathiri/article/view/1363>
- Rahmadani, F. G., Saman, T. N., & Bahing, B. (2022). Students' perception of game-based learning using Kahoot! in learning English. *EBONY: Journal of English Language Teaching, Linguistics, and Literature*. <https://e-journal.upr.ac.id/index.php/ebony/article/view/12442>
- Rahayu, T. D., Ailia, N., Junita, F., & Ifana, N. (2023). A literature review: The effectiveness of using Kahoot! to enhance students' vocabulary. *Journal of English Language Teaching of FBS-Unimed*. <https://jurnal.unimed.ac.id/2012/index.php/eltu/article/view/64347>
- Suparmi, & Susanto, A. K. (2025). Students' attitudes on gamification in English reading classes: The use of Kahoot! *Journal of English for Academic and Specific Purposes (JEASP)*.
- Truong, G. (2025). *Gamifying language learning: Unveiling the motivational power of Kahoot in ESL/EFL classrooms*. *International Journal of Social Sciences Humanities Research*, 8(10). <https://doi.org/10.47191/ijsshr/v8-i10-74>

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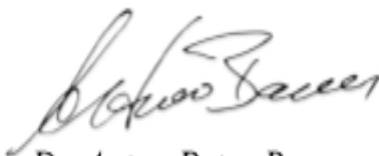
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