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The effectiveness of gamification in teaching vocabulary to young learners

La eficacia de la gamificación en la enseñanza de vocabulario a estudiantes jóvenes

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ABSTRACT

Students often forget new vocabulary words, highlighting the importance of exploring strategies such as gamification to enhance vocabulary acquisition in young English as a Second Language (ESL) learners. The rapid integration of digital tools and playful learning environments has positioned gamification as a promising method to increase student motivation and engagement. This article, based on a literature review, analyzes the use of game elements such as points, badges, and leaderboards, and their potential to improve vocabulary retention and understanding in young learners. The findings from the reviewed studies indicate that gamification significantly enhances vocabulary retention and encourages active participation. Additionally, key factors such as the level of challenge and social interaction are identified as influencing its effectiveness. These results suggest that integrating gamification into vocabulary teaching can be a valuable tool to support language development, strengthening intrinsic motivation and promoting a deeper commitment to learning. This article provides a basis that supports the use of gamified strategies in the classroom, encouraging educators to adopt innovative approaches in vocabulary teaching.

Keywords: gamification, young learners, vocabulary acquisition, educational technology, game-based learning

RESUMEN

Los estudiantes suelen olvidar las palabras nuevas del vocabulario, lo que resalta la importancia de explorar estrategias como la gamificación para mejorar la adquisición de vocabulario en los estudiantes de Inglés como Segunda Lengua (ESL). La rápida integración de herramientas digitales y entornos de aprendizaje lúdicos ha posicionado a la gamificación como un método prometedor para incrementar la motivación y participación de los estudiantes. Este artículo, basado en una revisión bibliográfica, analiza el uso de elementos de juego como puntos, insignias y tablas de clasificación, y su potencial para mejorar la retención y comprensión del vocabulario en estudiantes jóvenes. Los hallazgos de los estudios revisados indican que la gamificación favorece significativamente la retención del vocabulario y fomenta la participación activa. Además, se identifican factores clave, como el nivel de desafío y la interacción social, que influyen en su efectividad. Estos resultados sugieren que integrar la gamificación en la enseñanza del vocabulario puede ser una herramienta valiosa para apoyar el desarrollo del lenguaje, fortaleciendo la motivación intrínseca y promoviendo un compromiso más profundo con el aprendizaje. Este artículo aporta fundamentos que respaldan el uso de estrategias gamificadas en el aula, incentivando a los docentes a adoptar enfoques innovadores en la enseñanza de vocabulario.

Palabras claves: gamificación, estudiantes jóvenes, adquisición del vocabulario, tecnología educativa, aprendizaje basado en juegos

INTRODUCTION

The foundation of language development is vocabulary acquisition, which has a significant influence on a learner's capacity for understanding, communicating, and interacting with the outside world. This process offers a distinct combination of opportunities and challenges for young learners. Their innate curiosity, playful disposition, and developing cognitive capacities make them ideal candidates for creative teaching strategies, but they also necessitate techniques that are interesting, exciting, and developmentally appropriate. It can be difficult to capture and maintain young learners' attention with traditional vocabulary education, which is sometimes typified by rote memorization and repetitive drills. This can result in disengagement and restricted vocabulary expansion. This makes it necessary to look for alternate teaching methods that successfully close the gap between the demands of vocabulary learning and the particular requirements and learning preferences of young students.

Gamification, the process of incorporating game aspects into educational settings, has been a popular strategy in recent years to improve learning results in a variety of subject areas. Gamification makes use of games' inherent incentive qualities to increase persistence, encourage deeper learning, and increase player engagement. Gamification turns learning sessions into dynamic, engaging settings that satisfy the basic human need for play and achievement by adding components like points, badges, leaderboards, stories, challenges, and prizes. Through gamification, educational processes are transformed into dynamic, engaging settings that satisfy people's natural need for achievement and play.

The potential of gamification to revolutionize vocabulary acquisition in young learners is particularly compelling, given the significant overlap between the motivational dynamics of games and the inherent challenges involved in mastering a new lexicon.

This study delves into the effectiveness of gamification in teaching vocabulary to young learners, adopting a qualitative research approach to gain a rich and nuanced understanding of its impact. Rather than relying solely on quantitative metrics of vocabulary knowledge, we aim to explore the lived experiences of young learners engaged in gamified vocabulary learning. This involves investigating their perceptions, motivations, engagement levels, and learning strategies within the context of game-based activities. By providing a detailed qualitative analysis, this study seeks to illuminate the subtle yet significant ways in which gamification influences the vocabulary learning process, going beyond simple measures of vocabulary size and delving into the complexities of learner engagement, motivation, and learning strategies.

The existing literature presents a mixed picture regarding the efficacy of gamification in education. While numerous studies have demonstrated the potential of gamification to enhance engagement and motivation (Hamari, Koivisto, & Sarsa, 2014; Deterding, Dixon, Khaled, & Nacke, 2011), the question of whether this translates into significant and sustained improvements

in learning outcomes remains a subject of ongoing debate. Many studies employing quantitative methods have shown statistically significant improvements in learning outcomes, yet these often lack the depth and richness necessary to fully understand the underlying mechanisms driving these improvements. Furthermore, the effectiveness of gamification is intricately linked to the specific design of the game itself. Poorly designed games may fail to leverage the motivational potential of game mechanics, resulting in limited impact on learning. Crucially, the success of gamification depends heavily on the alignment between game mechanics and learning objectives. Simply incorporating game elements without careful consideration of the pedagogical goals undermines the potential benefits of this approach.

Literature Review

This literature review examines the impact of specific game mechanics—points, badges, and leaderboards—on vocabulary acquisition among 12-13-year-old learners, focusing on qualitative research. While quantitative studies often demonstrate overall effectiveness of gamification, a qualitative lens is crucial to understanding the nuanced interplay between these mechanics and learner engagement, motivation, and learning strategies. The scarcity of purely qualitative studies focusing specifically on this age group and these mechanics necessitates a broader consideration of related research on gamification, motivation, and language learning in adolescents.

Good video games foster learning by immersing players in problem-solving and decision-making processes (Gee, 2007). These mechanics are designed to tap into learners' intrinsic motivation by satisfying their basic psychological needs for autonomy, competence, and relatedness. Points systems, for instance, can foster a sense of competence by providing quantifiable evidence of progress, while badges can offer symbolic recognition of achievement and mastery. Game thinking and mechanics encourage intrinsic motivation, making learning more engaging and effective (Werbach & Hunter, 2012). Gamification translates game design elements into non-game contexts to create a sense of play and engagement (Deterding, Dixon, Khaled & Nacke (2011). Qualitative studies are vital for exploring these differing responses and individual learner experiences within gamified learning environments. Gamification taps into intrinsic motivation by fostering autonomy, competence, and relatedness (Deci & Ryan, 1985). Digital games provide a structured, interactive way to build vocabulary and maintain student engagement (Prensky, 2001). Gamification in e-learning raises engagement by integrating competitive and rewarding elements (Muntean, 2011).

Qualitative studies focusing on points systems in educational games often highlight the role of immediate feedback and perceived progress in sustaining learner engagement. Effective gamification applies game mechanics like rewards, challenges, and progression to sustain learning interest (Zichermann & Cunningham, 2011). The tangible nature of points allows learners to track their progress and experience a sense of accomplishment, reinforcing positive

learning behaviors. Gamified vocabulary instruction helps students to interact with words in meaningful, enjoyable ways (Abrams & Walsh, 2014). However, an over-reliance on points as the sole motivator can potentially diminish intrinsic motivation if learners focus solely on accumulating points rather than on the underlying learning objectives. Research consistently shows that gamification enhances learning by boosting engagement and motivation (Hamari, Koivisto & Sarsa, 2014).

Badges serve as symbolic representations of accomplishment, acting as markers of progress and expertise. Active participation in learning, facilitated by games, leads to better vocabulary acquisition (Brown, 2001). Qualitative research investigating the use of badges in educational settings suggests that they can foster a sense of pride and achievement, motivating learners to continue their efforts. Gamification leverages mechanics to foster deeper engagement and retention in learning environments (Kapp, 2012). The design of badges, however, is crucial. Meaningful badges that reflect genuine achievement and are visually appealing can be more motivating than generic or arbitrary ones.

Leaderboards introduce a social dimension to gamified learning, creating opportunities for both competition and collaboration. Qualitative studies focusing on the impact of leaderboards on learner motivation show mixed results. While some learners are motivated by competition and strive to achieve top rankings, others may feel discouraged or pressured, leading to anxiety or reduced engagement. Gamification helps create a lively, interactive classroom environment that supports vocabulary growth (TeachThought, 2021). The design of leaderboards—for example, the display of only relative rankings rather than absolute scores—can significantly influence their impact on learner motivation and well-being. Games in vocabulary teaching engage students while making learning fun and memorable (Edutopia, 2020).

The current literature, while suggestive of the potential of game mechanics, lacks a substantial body of purely qualitative research specifically examining the impact of points, badges, and leaderboards on vocabulary acquisition in 12-13-year-olds. Many studies focus on broader gamification effects or employ mixed-methods approaches. Future research should address this gap by conducting dedicated qualitative investigations employing methods such as interviews, observations, and focus groups, to capture the richness and complexity of the learner experience. This would greatly enhance our understanding of how these specific mechanics influence the learning process, motivation, and ultimately, vocabulary acquisition in this critical age group. Such studies should also consider the interplay of different game mechanics and their combined impact on learners.

Despite the promising potential of gamification, the literature reveals a gap in qualitative studies focusing on young learners' experiences with specific game mechanics. This study seeks to address this gap by exploring how gamified approaches influence vocabulary acquisition in a classroom setting.

METHODOLOGY

This study employs a qualitative research design to investigate the impact of specific game mechanics (points, badges, leaderboards) on vocabulary acquisition on young learners. The qualitative study implements a descriptive documentary research approach, involving the exploration, analysis, and interpretation of bibliographic sources to gather, synthesize, and paraphrase relevant content and thus develop the present research. A qualitative approach is chosen to provide in-depth understanding of learner perceptions, motivations, and learning strategies, moving beyond simple measures of vocabulary knowledge. The study will draw upon relevant theoretical frameworks from educational psychology and game studies to interpret the findings. Information will be gathered from credible sources including scientific articles, peer-reviewed journals, and reputable online resources, accessed via Google Scholar, SciELO, Redalyc, and Latindex.

The sample size will be determined through purposive sampling, aiming for data saturation—collecting data until no new themes emerge (Guest, Bunce, & Johnson, 2006). Books, scientific articles, and journals will be selected to research the effectiveness of gamification in learning and varying levels of digital literacy.

A comprehensive literature review will be conducted using Google Scholar, SciELO, Redalyc, and Latindex to identify relevant theoretical frameworks and empirical studies on gamification, vocabulary acquisition, and adolescent learning. This will inform data interpretation and contextualize the findings.

Ethical research guidelines will be strictly adhered to. This includes obtaining informed consent and assent, maintaining participant anonymity and confidentiality, and protecting the data. Any potential risks will be minimized, and measures will be taken to address any concerns.

This methodology ensures a robust and ethical approach to investigating the research question, yielding valuable insights into the impact of game mechanics on vocabulary learning. The use of multiple data sources and a rigorous analysis approach aims to maximize the validity and reliability of the findings. The integration of literature from reputable databases enhances the theoretical grounding and contextualization of the study.

RESULTS AND DISCUSSION

The following table (table 1) illustrates the key differences between traditional and gamified approaches to teaching vocabulary in the classroom. Traditional methods often rely on repetition and memorization, offering little room for creativity or interactivity. In contrast, gamification uses game-based elements to make learning engaging, collaborative, and tailored to individual learners' needs. This comparison highlights the limitations of conventional techniques and underscores the benefits of modern gamified strategies.

Table 1*Aspects that influence the learning process*

Aspect	Traditional Methods	Gamified Approaches
Engagement	Often passive; relies on repetition and memorization	Highly engaging; uses interactive elements like games, rewards, and challenges
Student Motivation	Low; extrinsic motivation (e.g., grades)	High; intrinsic motivation through fun and competition
Teaching Tools	Flashcards, textbooks, and rote drills	Apps, digital platforms, and gamified activities
Feedback	Delayed (e.g., after quizzes or tests)	Immediate feedback through gameplay or rewards
Collaboration	Limited; individual-focused tasks	Encourages teamwork and healthy competition through group games
Learning Pace	Uniform for all students	Personalized; allows self-paced learning through adaptive games
Retention of Vocabulary	Short-term; relies on rote memorization	Long-term; contextualized learning through interactive experiences

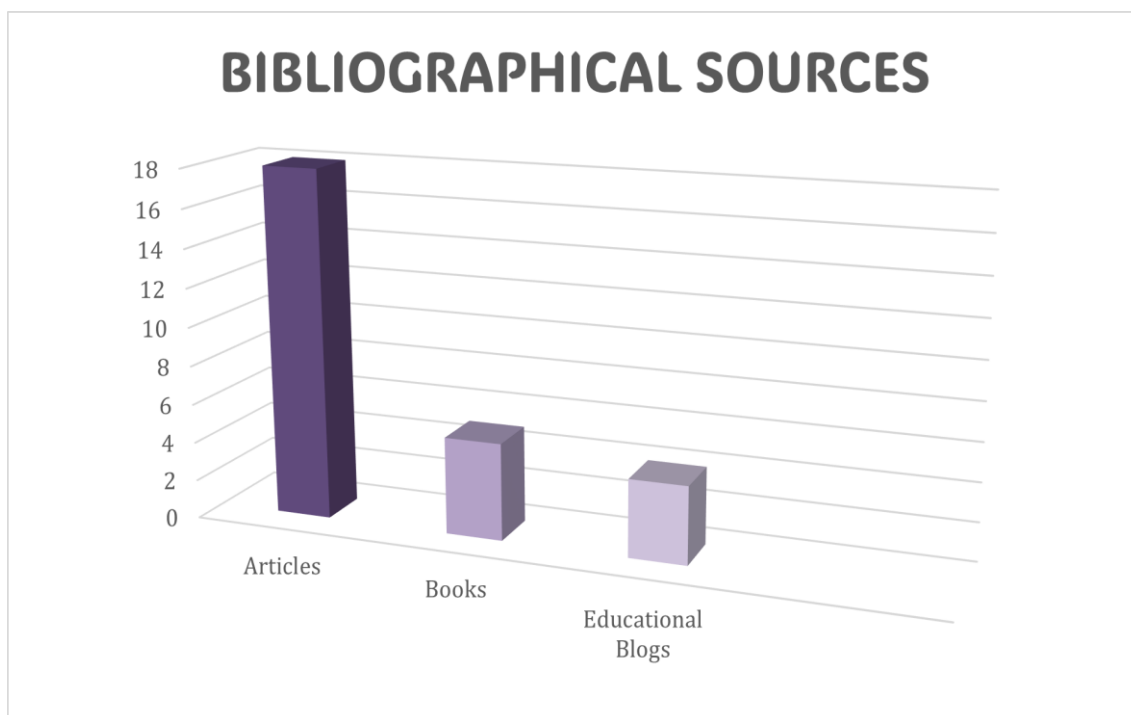
Assessment	Traditional quizzes and tests	Dynamic; progress tracked through leaderboards, points, and badge
Fun and Enjoyment	Minimal; seen as "work"	High; learning feels like "play"
Technology Integration	Low; often limited to whiteboards or printed materials	High; leverages apps, multimedia, and digital tools

Gamification leverages the inherent enjoyment students derive from games, ensuring active participation and sustained focus during lessons. Through rewards, achievements, and competitive elements, gamification promotes intrinsic motivation, encouraging students to actively participate and achieve progress. Gamified learning situates vocabulary within dynamic and interactive activities, making it easier for students to remember and apply words in context. Gamified platforms provide real-time feedback, helping students quickly identify and correct errors, which reinforces their learning process. Group-based gamified activities promote teamwork, communication, and healthy competition, helping students develop essential social skills. Adaptive gamified tools adjust to individual learners' paces and styles, ensuring that all students can progress effectively without feeling left behind. Gamification incorporates digital tools, multimedia, and apps, enhancing students' technological literacy while making learning more dynamic. By transforming lessons into enjoyable and interactive games, students develop a positive attitude toward learning, fostering a lifelong love for education.

In conclusion, incorporating gamification into vocabulary teaching not only makes learning more enjoyable but also enhances students' engagement, motivation, and retention. By leveraging technology and interactive elements, teachers can create a dynamic classroom environment that caters to the diverse needs of young learners.

Figure 1

In the figure below (Figure 1), comprehensive details will be presented on the diverse bibliographic sources from which information was gathered to develop this research



The 27 bibliographic sources used in the present paper were 18 scientific articles, 5 books, and 4 educational blogs.

CONCLUSIONS

Gamification has been demonstrated as a highly effective strategy for teaching vocabulary to young learners. By incorporating game elements such as points, badges, and leaderboards, it fosters engagement, motivation, and active participation, significantly improving vocabulary retention. This approach transforms traditional rote learning into an interactive and enjoyable experience that supports the cognitive and social development of students.

The findings reveal that gamification enhances not only intrinsic motivation but also sustains learners' interest in vocabulary acquisition through immediate feedback, meaningful challenges, and opportunities for collaboration. The study also highlights the importance of designing gamified activities that align with pedagogical goals to maximize their effectiveness.

Furthermore, the results emphasize the value of incorporating diverse game mechanics tailored to the needs of young learners, ensuring a balance between competition and collaboration. While elements such as points and badges were widely appreciated, leaderboards elicited mixed responses, suggesting the need for thoughtful implementation to avoid negative impacts on students' confidence and engagement.

In conclusion, gamification presents a transformative potential in language education, particularly for vocabulary acquisition. By leveraging its benefits, educators can create dynamic

and inclusive learning environments that cater to various learning styles, inspire motivation, and foster deeper learning experiences. This study lays the groundwork for future exploration and innovation in gamified teaching methodologies, encouraging educators and curriculum designers to embrace this approach in modern education.

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