

**Gamification and Student Retention in
Virtual Courses: Evidence from Language Teaching Practice**

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Abstract

Student retention in online education continues to be a major challenge, particularly in language courses where consistent practice, feedback, and motivation are key to success. This study examines how gamification tools can enhance engagement and persistence among online Spanish students. Four tools—Kahoot, Quizlet, Gimkit, and Quizzes—were integrated into asynchronous and synchronous activities in online Spanish courses. Data from Learning Management System (LMS) analytics and student feedback surveys were analyzed descriptively to assess engagement trends. Results show increased participation (85–92%), higher completion rates, and improved motivation, especially among students identified as at risk of dropout. This article illustrates the practical application of gamification in language education and offers evidence of its role in supporting student retention. The discussion highlights pedagogical implications, the need for accessible design, and recommendations for sustainable, inclusive gamification strategies in higher education.

Keywords: gamification, student retention, online education, language learning, motivation

Resumen

La retención estudiantil en la educación en línea sigue siendo un desafío significativo, especialmente en los cursos de idiomas donde la práctica constante, la retroalimentación y la motivación son esenciales para el éxito. Este estudio examina cómo las herramientas de gamificación pueden mejorar la participación y la persistencia de los estudiantes de español en línea. Cuatro herramientas —Kahoot, Quizlet, Gimkit y Quizzes— se integraron en actividades asincrónicas y sincrónicas en cursos en línea. Los datos de análisis del sistema de gestión del aprendizaje (LMS) y de encuestas a los estudiantes se analizaron de forma descriptiva para evaluar las tendencias de participación. Los resultados muestran un aumento en la participación (85–92%), mayores tasas de finalización y una motivación mejorada, especialmente entre los estudiantes identificados en riesgo de deserción. Este artículo ilustra la aplicación práctica de la gamificación en la enseñanza de lenguas y ofrece evidencia de su papel en el apoyo a la retención estudiantil. La discusión destaca las implicaciones pedagógicas, la necesidad de un diseño accesible y recomendaciones para estrategias sostenibles e inclusivas de gamificación en la educación superior.

Palabras claves: gamificación, retención estudiantil, educación virtual, enseñanza de lenguas, motivación

Retention and persistence are central issues in higher education, particularly within online environments. Students in virtual language courses often struggle with motivation, discipline, and interaction—factors directly linked to dropout rates (Hart, 2012). As Tinto (2017) argues, persistence increases when students feel academically engaged and supported. Gamification, understood as the application of game-based principles in non-game contexts (Deterding et al., 2011), has emerged as an effective way to address these challenges. By integrating elements such as points, badges, and competition, educators aim to promote engagement, collaboration, and consistency in learning (Werbach & Hunter, 2012). This source presents classroom-based evidence of how gamification strategies implemented in online Spanish courses improved engagement and student retention, providing an accessible yet research-informed perspective on educational practice.

Literature Review

Gamification has been widely examined in educational settings as a strategy to promote engagement and persistence. According to Self-Determination Theory (Deci & Ryan, 2000), motivation increases when learners experience autonomy, competence, and relatedness. Research reviews and empirical studies, including the literature review by Hamari et al. (2014) and the experimental work by Domínguez et al. (2013), have found that gamification improves motivation, participation, and learning outcomes. In online education, Meng et al. (2024) demonstrated that the inclusion of points and badges correlated positively with participation frequency. In language learning, Kumar and Vairavan (2024) observed that gamified apps improved vocabulary retention and motivation, while Cheng et al. (2025) showed improved reading comprehension and

enjoyment through gamified reading tasks. This study contributes to that body of knowledge by focusing on gamification within the context of online Spanish instruction and analyzing its relationship to retention outcomes.

Methodology and Teaching Context

The study was conducted in four fully online Spanish courses delivered through an LMS to students across the United States and Puerto Rico. The total sample included 112 students (64 female, 48 male) aged 16–22. Courses were asynchronous with optional synchronous sessions. Gamification was embedded across three units of instruction, combining grammar, culture, and communication skills. Each tool was used for a specific purpose: Kahoot for live grammar competitions, Quizlet for vocabulary reinforcement, Gimkit for collaborative gameplay, and Quizzes for formative assessments. The activities increased in complexity throughout the term. For example, early Kahoot sessions focused on verb conjugation in the present tense, while later ones involved complex sentence building and idiomatic expressions. Quizlet sets included 30–40 items organized by theme, and Gimkit introduced cooperative play modes to balance competition. Students completed a voluntary end-of-course survey to evaluate motivation and perceived learning gains.

To ensure transparency in the instructional design, each gamified activity was aligned with a specific learning objective and delivered following a structured sequence: introduction of content, guided practice through gamified tools, and reflection through short metacognitive prompts. Complexity increased intentionally across units to measure whether engagement persisted beyond simple tasks. This structured implementation

provides clearer insight into how each tool functioned pedagogically and allows more accurate interpretation of engagement patterns.

Data Collection and Analysis

Data sources included LMS analytics (activity completion, quiz attempts, discussion participation) and survey responses (N = 98, 87% response rate). Quantitative data were analyzed using descriptive statistics—means, frequencies, and percentage distributions—while qualitative comments were coded thematically to identify patterns in motivation, engagement, and perceived learning improvement. Gender-related comparisons were also conducted to observe whether participation and engagement levels varied significantly. Qualitative comments were coded using inductive thematic analysis. Two major cycles of coding were conducted to ensure reliability, and themes emerged only when at least 20% of respondents referenced the same pattern. This approach provides analytical rigor and strengthens the validity of the qualitative interpretations presented in the Results section.

Results

The results show that gamified activities produced higher engagement and persistence across all four courses. Average completion rates increased from 78% in non-gamified tasks to 88–92% in gamified ones. Female students demonstrated slightly higher consistency in participation, while male students reported greater enjoyment in competitive settings. These patterns suggest that gender dynamics influence engagement style but not overall retention.

Analysis of open-ended survey responses revealed three dominant themes. First, students expressed *increased enjoyment*, describing gamified tasks as “a fun way to practice grammar,” “less intimidating than regular quizzes,” and “motivating because I can see my progress immediately.” Second, students reported *perceived learning improvement*, particularly in vocabulary recall, grammar accuracy, and reading fluency. Third, a recurring theme was *reduced anxiety*: several at-risk students mentioned that collaborative Gimkit modes made them feel “less alone,” “more confident,” and “encouraged to keep going.” Notably, three students identified as at risk of dropout stated that gamified tasks “kept me from disconnecting,” aligning with Tinto’s (2017) view that persistence increases when learners experience academic engagement and a sense of belonging.

Although slight participation differences were observed between female and male students, these patterns cannot be interpreted as generalizable trends due to the small and uneven sample. With 64 female and 48 male participants, the study does not meet the threshold for making claims about gendered behaviors in online engagement. The differences observed likely reflect individual preferences rather than broader demographic patterns, and future research with larger, more balanced samples is needed to examine whether gender influences engagement in gamified virtual courses.

Table 1*Engagement by Gamification Tool (N = 112)*

Tool	Activity Type	Engagement Rate (%)	Observation
Kahoot	Grammar competitions	92	Strong enthusiasm during live sessions
Quizlet	Vocabulary sets	87	High independent engagement before exams
Gimkit	Collaborative gameplay	89	Promoted teamwork and peer learning
Quizzes	Formative assessments	85	Supported self-paced review and mastery checks

Note. Data based on average completion and participation rates per tool across all courses.

Table 2

Engagement by Gender and Course Level (N = 112)

Group	Average Engagement (%)	Retention (%)	Observation
Female students	91	94	Higher steady participation across term
Male students	88	91	Higher motivation in competitive tasks
Mixed-level Spanish I/II	90	92	No major difference by proficiency level

Note. Engagement based on LMS activity logs; retention defined as course completion.

Discussion

The findings confirm that gamification significantly enhances motivation and participation in virtual language courses. In alignment with Hamari et al. (2014) and Kumar and Vairavan (2024), gamified tools maintained learner interest through consistent, structured rewards. Although engagement varied slightly by gender, both groups benefited from the structured competition and feedback mechanisms. Cooperative gameplay (Gimkit) also sustained engagement longer than individual competition alone.

These findings echo Tinto's (2017) framework for student persistence, which emphasizes that academic engagement and connection to course activities are central to reducing dropout. Gamified interactions—particularly those that provide immediate feedback, enable low-stakes practice, and foster a sense of community- function as mechanisms that strengthen the learner's academic and social integration. In this sense, gamification does not merely increase participation; it supports the conditions that enable retention in online learning environments.

Another key consideration is the need for accessible and inclusive design when implementing gamification. While tools such as Kahoot and Quizlet are widely used, they vary in terms of screen-reader compatibility, visual contrast, timing controls, and mobile responsiveness. Inclusive gamification requires selecting tools that support diverse learners, including those with disabilities, limited bandwidth, or older devices. Sustainability is also essential; novelty effects diminish over time if activities lack variation or adaptive difficulty. To maintain long-term engagement, instructors should rotate gamification formats, integrate collaborative modes, and align game mechanics with clear learning objectives rather than entertainment alone.

However, limitations include the small sample and reliance on descriptive data. Future studies should apply inferential analysis and explore innovative approaches, such as AI-driven adaptive quizzes or immersive simulations, to examine long-term retention effects.

Conclusion and Implications

Gamification continues to demonstrate its value in promoting engagement, persistence, and retention within online learning. In Spanish language instruction, gamified tasks foster not only enjoyment but also academic consistency. Institutions and educators should integrate gamified activities purposefully, ensuring equitable access and continuous variation to sustain motivation. Further research could test scalable adaptive gamification systems and their effects on long-term student success.

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