Gamification in Educational Assessment: Transforming Learning into Interactive Experiences through a Systematic Review

Gamificación en la evaluación educativa: transformando el aprendizaje en experiencias interactivas desde una revisión sistemática

Norma Quenema Camacho
https://orcid.org/0000-0003-1011-5138
nquenemac@ucvvirtual.edu.pe
Universidad César Vallejo
Lima-Peru.

Paola Cynthia Otero Bocanegra
https://orcid.org/0009-0007-4345-9865
potero@ucvvirtual.edu.pe
Universidad César Vallejo
Lima-Peru.

Selman Dennis Condeso Camizan
https://orcid.org/0000-0002-2984-8385
scondeso@ucvvirtual.edu.pe
Universidad César Vallejo
Lima-Peru.

Erick Joel Hernández Ramos
https://orcid.org/0000-0002-8097-8716
jhernandezr@unf.edu.pe
Universidad Nacional de Frontera
Piura –Peru.

Freddy William Castillo Palacios
https://orcid.org/0000-0001-5815-6559
fcastillop@ucv.edu.pe
Universidad César Vallejo
Lima-Peru.

REVISTA INVECOM ISSN: 2739-0063

Received: 10/02/2025 Accepted: 08/05/2025

2026. V6. N1.

Abstract

This systematic review analyzes 30 studies published between 2020 and 2025 in the Scopus database, with the aim of evaluating how gamification transforms evaluation processes in university education. The results show that the integration of game mechanics —such as points, levels, challenges, and rewards— increases student motivation and commitment, facilitates the development of transversal competencies (critical thinking, communication, and teamwork), and redefines the role of the teacher as a designer of training experiences. Following the PRISMA protocol, empirical research was selected that applied tools such as Kahoot!, Quizizz and virtual reality environments, organizing the findings into five thematic dimensions: motivation, competencies, teaching role, academic performance and inclusion. The studies reviewed report significant improvements in grades and in the perception of learning, although they also underline the need for greater methodological systematization and teacher training to ensure its sustainability and equity. Overall, gamification is positioned as a complementary strategy capable of transforming the evaluation from a merely certifying practice into a dynamic, participatory, and formative process, provided that it is carefully adapted to the context and the needs of the students.

Keywords: gamification, university assessment, student motivation.

Resumen

Esta revisión sistemática analiza 30 estudios publicados entre 2020 y 2025 en la base de datos Scopus, con el objetivo de evaluar cómo la gamificación transforma los procesos de evaluación en la educación universitaria. Los resultados evidencian que la integración de mecánicas de juego —como puntos, niveles, desafíos y recompensas— incrementa la motivación y el compromiso estudiantil, facilita el desarrollo de competencias transversales (pensamiento crítico, comunicación y trabajo en equipo), y redefine el rol del docente como diseñador de experiencias formativas. Siguiendo el protocolo PRISMA, se seleccionaron investigaciones empíricas que aplicaron herramientas como Kahoot!, Quizizz y entornos de realidad virtual, organizando los hallazgos en cinco dimensiones temáticas: motivación, competencias, rol docente, rendimiento académico e inclusión. Los estudios revisados reportan mejoras significativas en las calificaciones y en la percepción del aprendizaje, aunque también subrayan la necesidad de una mayor sistematización metodológica y formación docente para asegurar su sostenibilidad y equidad. En conjunto, la gamificación se posiciona como una estrategia complementaria capaz de transformar la evaluación de una práctica meramente certificadora en un proceso dinámico, participativo y formativo, siempre que sea cuidadosamente adaptada al contexto y a las necesidades de los estudiantes.

Palabras clave: gamificación, evaluación universitaria, motivación estudiantil.

Introduction

In the current context of digital transformation and pedagogical renewal, gamification has established itself as an innovative methodological strategy with high potential to enhance teaching and learning processes. By incorporating playful elements characteristic of video game design, this technique aims to increase motivation, engagement, and active participation among students, fostering a more meaningful and autonomous educational experience (Kapp, 2012; Alsawaier, 2018; Prieto et al., 2022). Current conditions, such as greater access to digital technologies and curricular flexibility in higher education, have favored the adoption of active and interactive approaches, among which gamification has demonstrated significant impacts on motivation and academic performance (Albán et al., 2024; Saavedra et al., 2024; Coello et al., 2024).

Despite its growing implementation in university settings, gamification has primarily been applied in teaching activities or content reinforcement, with limited integration into educational assessment processes, particularly in its formative dimension (Cáceres & Freire, 2023; Chacón et al., 2023). Traditionally, assessment has been understood as a process centered on measurement, verification, and grading, which has constrained its formative potential and capacity to foster self-regulated learning (Boud & Falchikov, 2007). In contrast, gamification represents an opportunity to reframe assessment as an interactive experience, where errors are not penalized but embraced as part of continuous learning (Catagua & Vigueras, 2023; Guanoluisa et al., 2022).

Various studies show that gamified tools such as Kahoot, Quizizz, and mobile platforms not only enhance motivation and participation but also improve the quality of feedback and student attitudes toward the assessment process (Tapia Gallardo, 2024; Mendoza Rojas, 2024; Domínguez et al., 2013). Additionally, pedagogical experiences in Latin American universities have documented significant benefits in the development of cognitive, social, and digital competencies, especially when articulated with active methodologies and authentic assessment (Araiza-Vázquez et al., 2023; Fernández de Castro de León & Villegas Pantoja, 2024; Contreras et al., 2024). However, many of these practices still lack rigorous systematization and a solid empirical foundation that allows for replicability.

A detailed literature review reveals diverse theoretical approaches, heterogeneous methodological techniques, and disparate results regarding the use of gamification in university assessment (Muñoz Bonilla & Vasco Gutiérrez, 2024; Ulloa & Carcausto, 2024; Valenzuela et al., 2024). Some experiences show improvements in attitudes toward assessment, while others warn of superficial learning when gamification is not implemented with a solid pedagogical foundation (Viñas, 2022; Blanco et al., 2020). Furthermore, the lack of valid instruments to measure its impact on formative assessment reinforces the need to advance toward more consistent design and implementation frameworks (Pinzón-Salazar et al., 2025; Jasso et al., 2024).

In light of these gaps, the present research aims to conduct a systematic review of studies published between 2013 and 2025 that address the integration of gamification in educational assessment processes at the higher education level. The goal is to identify trends, methodological approaches, tools used, and observed effects,

in order to provide conceptual and empirical clarity regarding its effectiveness. Additionally, it aims to support the design of future educational interventions that integrate gamification in assessment from a formative, innovative, and student-centered perspective (Parraga et al., 2025; Paredes-Chacín et al., 2023; Romero et al., 2025).

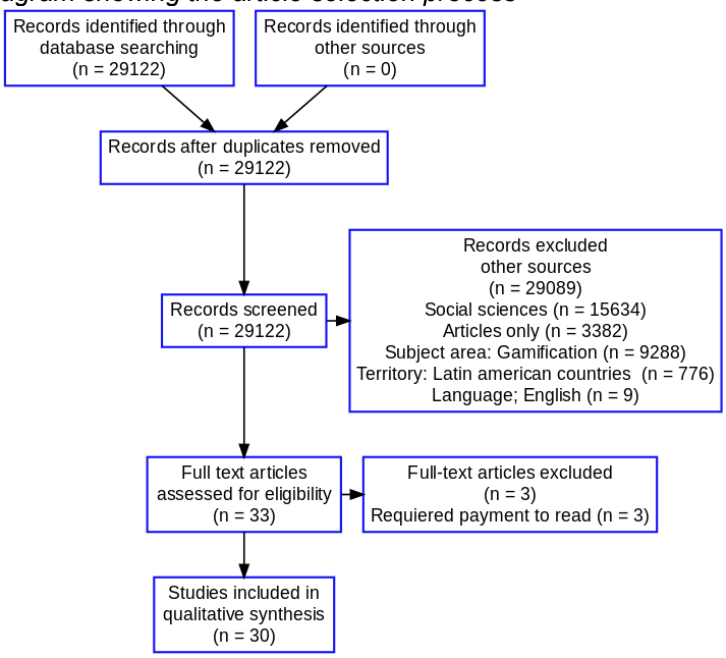
The objective of this systematic review is to analyze the scientific production on the use of gamification in educational assessment processes in the university context, examining its impact on motivation, academic performance, and student experience, as well as the barriers to its implementation.

Methodology

This systematic review was developed according to the guidelines of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol, with the aim of identifying and synthesizing scientific evidence related to gamification applied to university educational assessment processes between 2023 and 2025. It was a qualitative study focused on the systematic review of empirical literature published in journals indexed in the Scopus database.

For the selection of studies, rigorous inclusion criteria were applied. Only articles published between January 2023 and April 2025 were considered, which presented empirical research, whether quantitative, qualitative, or mixed. Studies had to specifically focus on the use of gamification in assessment processes at the university level, be available in full text, be written in Spanish or English, and have undergone peer review.

Figure 1. *PRISMA flow diagram showing the article selection process*



Note. Content generated from https://hollyhartman.shinyapps.io/PRISMAFlowDiagram/

In contrast, studies that did not address educational assessment as a central focus, research applied at levels other than higher education (such as primary, secondary, or corporate training), theoretical articles, essays, editorials, non-systematic reviews, duplicate documents, or those that did not provide sufficient information for analysis were excluded.

The advanced search strategy was developed in the Scopus database, using a combination of keywords in English and Spanish, connected by boolean operators. The keywords used included "gamification," "gamified," "game-based," "assessment," "evaluation," "higher education," "university," and "learning." Results were limited to publications between 2023 and 2025, within the thematic area of social sciences, and filtered by document type (scientific articles), exact keywords (Higher Education, E-learning, Gamification, Students), language (Spanish), and country of affiliation (Mexico, Colombia, Ecuador, Peru, Chile, Cuba, Paraguay, Argentina). Additionally, all available open access options were included.

The initial search yielded a broad set of results. A first review was conducted by titles and abstracts, discarding studies that did not meet the established criteria. Subsequently, a complete reading of the articles that passed the first phase was conducted, and finally, 30 studies that met all inclusion requirements were selected.

For data extraction, a table was designed to collect key information from each study. This included data such as author, year of publication, country, type of study, sample size and characteristics, gamification tools used, type of assessment addressed, main findings, and limitations noted by the authors themselves. The analysis was conducted descriptively and thematically, aiming to identify common patterns and divergences in the results, which subsequently underpin the discussion and conclusions of the study.

Results

The results of this systematic review affirm that gamification has a positive and multifaceted impact on formative assessment processes in higher education. Ulloa & Carcausto (2024) highlight that this strategy significantly enhances active learning by fostering motivation, autonomy, teamwork, and the development of essential competencies such as communication and problem-solving. In a similar vein, Albán et al. (2024) argue that gamification elevates participation and academic performance, although they caution that more evidence is needed to definitively establish its impact on traditional academic achievement. They also emphasize the need to explore best practices for contextualized implementation.

Parraga et al. (2025) indicate that the use of gamification increases academic performance, motivates and engages students, promotes collaborative and inclusive learning, and strengthens 21st-century skills. Complementarily, Valenzuela et al. (2024) underscore its usefulness in enhancing interaction between teachers and students, generating more participatory learning experiences. These findings reinforce the general perception that gamification represents a tool with significant growth potential in the university context.

Guanoluisa et al. (2022) note that cooperative gamification is particularly effective in inclusive education settings, as it strengthens teamwork and motivates students through playful dynamics. However, they warn that there are still few in-depth studies on this approach, limiting its application with methodological rigor. Cáceres & Freire (2023) contribute that, in addition to its potential to increase motivation and engagement, gamification allows for immediate feedback, fosters active learning, and personalizes the educational process.

Other authors, such as Prieto et al. (2022), argue that combining formative and summative assessment enhances academic performance, maximizes learning, and adapts teaching to students' needs. In this regard, the use of tools like Quizizz has proven effective for structuring more dynamic assessment processes, as reported by Catagua & Vigueras (2023). These technologies reduce apathy and favor participation, facilitating the assimilation of knowledge, skills, and values by students.

In the university environment, Blanco et al. (2020) indicate that gamification contributes to improving group dynamics, attention, and reflective thinking—key elements for meaningful learning. It also transforms the teacher's role, enabling them to act as a mediator of more interactive experiences. Acosta (2022) reinforces this idea by noting that gamification not only facilitates teaching but also encourages students to learn actively and effectively.

For Coello et al. (2024), gamification drives deep learning and helps develop practical competencies useful in professional contexts. Viñas (2022) adds that by incorporating elements of reward and recognition, this strategy improves both outcomes and the acquisition of specific skills. Contreras et al. (2024) agree that gamification is a powerful tool for enhancing academic performance by integrating play into the formative process.

Additionally, Alcívar & Chancay (2023) remind us that collaborative learning—the foundation of many gamified experiences—is as old as humanity itself, yet it gains new relevance in digital environments that promote cooperation to achieve common goals. This perspective is reinforced by a review that identified a total of 30 studies published between 2023 and 2025, all extracted from the Scopus database, focused on gamification applied to formative assessment in higher education.

The analysis of these studies allowed for the grouping of findings into five major dimensions. First, motivation and student engagement, where multiple studies agreed that gamification transforms assessment into a more interactive and less stressful experience, increasing students' interest in participation. Second, development of skills and competencies, with evidence of strengthening abilities such as critical thinking, effective communication, and teamwork. Third, transformation of the teacher's role and feedback, where the use of digital tools facilitates more personalized and formative assessment processes. Fourth, academic performance, although with mixed results, there is consensus that gamification promotes meaningful learning and improves content retention. Finally, fifth, inclusion and cooperation, where it is recognized that cooperative gamification contributes to equity and the building of stronger, more participatory learning communities.

Table 1. *Synthesis of studies on gamification and active methodologies in higher education (2023–2025)*

N°	Author(s) and Year	Methodology	Main Contribution
1	Prieto & Troncoso (2025)	Likert Survey + Focus Group	Classroom gaming motivates and improves executive functions.
2	Pinzón et al. (2025)	EFA/CFA of Instrument (n=208)	Reliable CAP-GD scale for diagnosing teaching gamification.
3	Romero et al. (2025)	Systematic Review (65 docs)	Gamified AI adapts and personalizes assessments in virtual environments.
4	Herrera (2025)	Quasi-experimental Pre-Post (n=34/37)	Gamification elevates performance in mathematics and communication.
5	Saavedra et al. (2024)	Qualitative Case Study (Focus Groups)	Kahoot improves motivation and feedback in playful assessments.
6	Laclote et al. (2024)	Descriptive Survey on PBL (n students)	Gamified PBL reinforces quality perception in assessment.
7	Pinzón et al. (2024)	Cross-sectional Likert Survey (n=47)	Gamification in production facilitates technical self-assessment.
8	Lapo-Pauta & Martínez-Solano (2024)	Flipped + PBL in Laboratory	Active methodologies with playful components improve equity in assessment.
9	Fernández de Castro & Villegas (2024)	Teacher Survey (n=53)	Gamification identified as an emerging resource in higher education assessment.
10	Muñoz & Vasco (2024)	Longitudinal Quasi-experimental + Interviews	Serious games increase written exam performance by 20%.
11	Mendoza (2024)	Descriptive Study (n=152) with MC Statistics	Kahoot and Quizizz motivate, despite not improving accuracy compared to non-gamified assessments.
12	Tapia (2024)	Description of Experience with Kahoot	Kahoot facilitates interaction and modernizes assessment in Law.
13	Jasso et al. (2024)	Bibliometric Analysis (n≈20 years, WoS/Scopus)	Identifies global growth of active methodologies in universities.
14	Solano-Barliza et al. (2024)	Quantitative Survey (Phases 1–3)	ChatGPT improves comprehension but raises concerns about AI dependence.
15	Ponce Ceballos et al. (2024)	Comparative MOOC Survey (Dropout vs. Finish)	Completing MOOCs is associated with more benefits, although all perceive advantages.

16	Morán Herrera & Idrovo (2024)	Qualitative Literature Review	Inquiry-based pedagogy enhances critical thinking, demanding adaptation.
17	López-Padrón et al. (2024)	Descriptive Comparative Study (n=415)	Smartphones are a key academic resource; usage varies by university region.
18	Rodríguez-Torres et al. (2023)	Instrumental (n=600) with EFA/Cronbach/JASP	Valid scale for measuring interdisciplinary work among students.
19	Ventín-Sánchez et al. (2023)	Interviews and Program Analysis	Detects lack of continuity in media entrepreneurship projects.
20	Norambuena et al. (2023)	Qualitative Study (Focus Group + Documents)	Training in values is incomplete; requires integration of value education.
21	Valladares et al. (2023)	Descriptive (n=156), Pre-Post Tests	Games (Kahoot, Cards) raise grades and motivate teamwork.
22	Huamán-Romaní et al. (2023)	Correlational (n=2,641), SPSS Survey	High α=0.978: satisfaction and full adaptation to e-learning in Peru.
23	Rueda (2023)	Mixed (n=54), Deep Learning & Decision Tree	Facebook/GC improves motivation; models predict their use in virtual environments.
24	Lerma-Noriega et al. (2023)	Comparative Mexico-Colombia (n≈200)	App InContext enhances writing and metacognition.
25	Colón (2023)	Qualitative (7 Interviews)	Three levels of informational competence; key: conditional knowledge.
26	Llovera-López et al. (2023)	Bibliographic (2017-20)	Cyber-plagiarism persists; global mapping of practices and proposals.
27	George-Reyes et al. (2023)	Sequential Case WebVR (n=176), Survey	VR-WebVR enhances critical thinking and reasoning in education.
28	Paredes-Chacín et al. (2023)	Qualitative (25 Teachers), Pilot Questionnaire	Defines phases and indicators for evaluating online learning post-COVID.
29	Araiza-Vazquez et al. (2023)	Quasi-experimental (n=1,250), t-test	M-learning improves creativity; mobile model vs. traditional differs significantly.
30	George-Reyes (2023)	Systematic Review (2010-21)	Integrated model CT+AL: guide for including CT as higher literacy.

Discussion

The results obtained from this systematic review align with the findings of Prieto & Troncoso (2025), who emphasize the pedagogical value of games as a methodological resource to activate motivational circuits and improve attention in university environments. Likewise, the studies by Herrera (2025) and Saavedra et al. (2024) demonstrate that gamification significantly increases student engagement and curiosity, reflected in substantial improvements between pretest and posttest scores across various subjects. These results suggest that gamification not only stimulates interest but can also generate a measurable positive impact on academic performance.

Pinzón-Salazar et al. (2025) introduce a relevant variable: teachers' attitudes toward gamification. Measured through the CAP-GD instrument, these attitudes emerge as a key predictor for both the effective implementation of playful dynamics and students' willingness to participate actively. This reinforces the idea that the role of educators is crucial in ensuring the quality of the gamified process.

Regarding collaborative learning, contributions from Jasso et al. (2024) and Fernández de Castro de León & Villegas (2024) agree that active methodologies, by integrating gamified challenges, enhance effective communication and teamwork. Complementarily, Muñoz Bonilla & Vasco (2024) highlight that serious games—especially those incorporating elements of chance—enhance social interaction and foster student inclusion. Concrete examples, such as the work by Pinzón-Salazar et al. (2024) in production planning and the use of Kahoot reported by Tapia Gallardo (2024) in teaching Law History, illustrate how these dynamics create more participatory and equitable learning spaces.

However, not all aspects are positive. There are methodological limitations that need to be addressed. Mendoza Rojas (2024) and Rueda (2023) caution about the need to expand sample sizes and utilize longitudinal designs to observe the sustained impact of gamification over time. Additionally, Romero et al. (2025) and Colón (2023) underline the urgency of having standardized assessment instruments to allow for more rigorous comparison of results. The considerable heterogeneity of research designs reviewed—from descriptive studies to systematic reviews—highlights the lack of a common framework for studying the real effects of these strategies.

Despite these limitations, there is consensus that the success of gamification as an evaluative tool relies on the active role of the educator as a designer of learning experiences. Chacón et al. (2023) and Blanco et al. (2020) stress the importance of educators acquiring solid techno-pedagogical competencies that enable them to effectively integrate gamification into the curriculum, balancing playfulness with educational intent.

In summary, gamification has significant empirical support—as evidenced by studies from Prieto and Troncoso (2025), Herrera (2025), and Albán et al. (2024)—but its impact directly depends on a reflective pedagogical approach, the systematization of methodologies used, and, above all, ongoing teacher training to ensure its sustainable, ethical, and effective implementation in university environments.

Conclusions

After a process of academic discussion and brainstorming among the authors of this article, it is concluded that gamification represents a transformative pedagogical tool in the context of university educational assessment. The systematic review of 15 studies allowed for the identification of relevant evidence supporting the potential of this strategy to energize evaluative processes and strengthen active learning in higher education.

Among the main findings, the following points stand out:

• Gamification enhances motivation, engagement, and student participation by incorporating playful dynamics into assessment, transforming the traditional process into a more interactive, meaningful, and attractive experience (Ulloa & Carcausto, 2024; Catagua & Vigueras, 2023).

• This strategy contributes to the development of fundamental 21st-century competencies, such as collaboration, autonomy, creativity, and problem-solving, which are key skills for the comprehensive training of university students (Parraga et al., 2025; Coello et al., 2024).

• Educators who integrate gamification take on a more active and creative role in the classroom, becoming designers of pedagogical experiences aligned with the interests and needs of their students, contributing to more effective teaching (Blanco et al., 2020).

• Gamification, especially in its cooperative modality, supports educational inclusion by promoting more equitable, accessible, and participatory learning environments for all students, thus strengthening the social dimension of education (Guanoluisa et al., 2022).

• However, significant challenges remain, including the need for more rigorous empirical research to support its impact on traditional academic performance and the development of clear methodological guidelines for effective and sustainable implementation (Albán et al., 2024).

In conclusion, gamification in university assessment emerges as a promising strategy that can enrich pedagogical practice and strengthen learning, provided it is designed and implemented from a critical, contextualized, and well-founded approach.

References

Acosta, S. (2022). La gamificación como herramienta pedagógica para el aprendizaje de la biología. *Revista Latinoamericana Ogmios, 2*(5), 249-266. https://doi.org/10.53595/rlo.v2.i5.036

Albán, J., Oña, Á., Manobanda, E., & Cocha, M. (2024). El uso de la gamificación en la educación superior para mejorar el aprendizaje y la motivación. *Reincisol., 3*(6), 778-805. https://doi.org/10.59282/reincisol.V3(6)778-805

Alcívar, M., & Chancay, C. (2023). El aprendizaje colaborativo como estrategia didáctica para la aplicación de la gamificación en el aula de clases. UNESUM-Ciencias. *Revista Científica Multidisciplinaria. 7*(1), 4-16. https://doi.org/10.47230/unesum-ciencias.v7.n3.2023.720

Alsawaier, R. (2018). The effect of gamification on motivation and engagement. The *International Journal of Information and Learning Technology, 35*(1), 56-79. https://doi.org/10.1108/IJILT-02-2017-0009

Araiza-Vázquez, M. J., Figueroa-Garza, F. G., & Pedraza-Sánchez, E. Y. (2023). Estimating student performance in a mobile learning experience. *Formación Universitaria, 16(*1), 33–44. https://www.scielo.cl/pdf/formuniv/v16n1/0718-5006-formuniv-16-01-33.pdf

Blanco, M., Salazar, F., & Salguero, F. (2020). *The Role of Educational Innovation at University Context: A Pedagogical Experience by Using Gamification*. https://accedacris.ulpgc.es/bitstream/10553/76564/2/the_role_of_educational.pdf

Boud, D., & Falchikov, N. (2007). *Rethinking Assessment in Higher Education: Learning for the Longer Term*. https://www.routledge.com/Rethinking-Assessment-in-Higher-Education-Learning-for-the-Longer-Term/Boud-Falchikov/p/book/9780415397797?srsltid=AfmBOopx9ihXSBIC9bIqNPwrM4mcbQCzOvdaoZ-VuNsTxNWc0IOe6ZuI

Cáceres, M., & Freire, T. (2023). Gamificación para la innovación de la educación: una revisión sistemática de la literatura. *Revista Perspectivas, 5*(2), 25-38. https://doi.org/10.47187/perspectivas.5.2.198

Catagua, C., & Vigueras, J. (2023). La herramienta de gamificación Quizizz para el fortalecimiento del proceso evaluativo de los docentes. *MQRInvestigar, 7*(3), Article 3. https://doi.org/10.56048/MQR20225.7.3.2023.2381-2404

Chacón, P., Yánez, J., Soria, Caillagua, D., & Siza, C. (2023). Evaluación formativa y sumativa en el Proceso Educativo: Revisión de Técnicas Innovadoras y sus efectos en el Aprendizaje Del Estudiante. *Ciencia Latina Revista Científica Multidisciplinar, 7(*2), 1478-1497. https://doi.org/10.37811/cl_rcm.v7i2.5414

Coello, R., Bonilla, J., & Choca, A. (2024). La gamificación, factor esencial en el aprendizaje de estudiantes universitarios. *Yachana Revista Científica, 13*(1). https://doi.org/10.62325/10.62325/yachana.v13.n1.2024.867

Colón, J. E. (2023). Characterization of the performance levels of informational competence: The case of Universidad José Vasconcelos, México. *Información, Cultura y Sociedad*, (48), 157–178. https://doi.org/10.34096/ics.i48.12501

Contreras, A., Valenzuela, S., & Rivera, E. (2024). La innovación educativa y la gamificación. https://repository.uaeh.edu.mx/revistas/index.php/sahagun/article/view/12576/11543

Domínguez, A., Saenz, J., de-Marcos, L., Fernández, L., Pagés, C., & Martínez, J. (2013). Gamifying learning experiences: Practical implications and outcomes. *Computers & Education,* 63, 380-392. https://doi.org/10.1016/j.compedu.2012.12.020

Fernández de Castro de León, J., & Villegas Pantoja, R. A. (2024). Active methodologies in higher education: The case of a private university in Mexico. *European Public and Social Innovation Review,* 9. https://doi.org/10.31637/epsir-2024-631

George-Reyes, C. E., López-Caudana, E. O., Ramírez-Montoya, M. S., & Ruiz-Ramírez, J. A. (2023). Pensamiento computacional basado en realidad virtual y razonamiento complejo: caso de estudio secuencial. *Revista de Educación a Distancia (RED)*, *23*(73). https://doi.org/10.6018/red.540841

Guanoluisa, J., Quichimbo, J., & Muevecela, S. (2022). La gamificación cooperativa como estrategia de enseñanza inclusiva en estudiantes de la Unidad Educativa "Molleturo". Una revisión de la literatura. Religación. *Revista de Ciencias Sociales y Humanidades, 7*(34), e210939. https://doi.org/10.46652/rgn.v7i34.939

Herrera, J. J. S. (2025). Gamification strategies in primary education and their impact on the development of mathematical and communication skills. *Educar, 61*(1), 245–261. https://doi.org/10.5565/rev/educar.2255

Huamán-Romaní, Y.-L., Coronel-Chugden, J.-W., Flores-Castillo, M.-M., & Gutiérrez-Gómez, E. (2023). Perspective of the quality of service in e-learning teaching for university students in Peru. *Revista de Ciencias Sociales*, 29(Especial 7), 210–225. https://doi.org/10.31876/rcs.v29i.40459

Jasso, R. D., García-Prieto, F. J., & García-Rojas, A. D. (2024). Active methodologies in the university: International bibliometric analysis (2003–2023). *Formación Universitaria, 17*(4), 151–162. http://dx.doi.org/10.4067/S0718-50062024000400151

Kapp, K. (2012). *The gamification of learning and instruction: Game-based methods and strategies for training and education. San Francisco*, CA: Pfeiffer. https://www.researchgate.net/publication/273947281_The_gamification_of_learning_and_instruction_Game-based_methods_and_strategies_for_training_and_education_San_Francisco_CA_Pfeiffer

Lapo-Pauta, M., & Martínez-Solano, F. J. (2024). Learning Active Methodologies in the Hydraulic Engineering area. *European Public and Social Innovation Review*, 9. https://doi.org/10.31637/epsir-2024-1096

Lerma-Noriega, C.-A., Flores-Palacios, M.-L., Cobos-Cobos, T.-L., & Rebolledo-Méndez, G. (2023). InContext: Learning Comparison of Mexican and Colombian students using a mobile application. Pixel-Bit, *Revista de Medios y Educación*, (67), 257–282. https://doi.org/10.12795/pixelbit.99353

Llovera-López, Y., Aragón-Carretero, Y., & Cano-Olivares, P. (2023). Academic ciberplagiarism among university students: An approach to the current state of the subject (2017–2020). *Revista colombiana de educación*, (87), 207–226. https://doi.org/10.17227/rce.num87-13143

López-Padrón, A., Mengual-Andrés, S., & Hermann-Acosta, E. A. (2024). Academic use of smartphones in postgraduate education: Student perception in Ecuador. Pixel-Bit, *Revista de Medios y Educación*, 69, 97–129. https://doi.org/10.12795/pixelbit.102492

Mendoza Rojas, H. J. (2024). Use of gamified digital tools in the evaluation of prior knowledge of human anatomy. *Investigación en Educación Médica, 13*(49). https://www.medigraphic.com/cgi-bin/new/resumenI.cgi?IDARTICULO=116259

Morán Herrera, Á. A., & Idrovo Hurel, M. M. (2024). Inquiry pedagogy in higher education academic programs. *Revista de Ciencias Sociales, 30*(2), 320–331. https://doi.org/10.31876/rcs.v30i2.41912

Muñoz Bonilla, H. A., & Vasco Gutiérrez, D. F. (2024). Contributions for the evaluation of gamified pedagogical strategies with serious games and intervention of luck. *Revista Interuniversitaria de Formación del Profesorado, 99*(38), 231–252. https://recyt.fecyt.es/index.php/RIFOP/article/download/93896/77944/416618

Norambuena, S. P., Doña, A. M., Cervantes, C. T., & García, E. R. (2023). Education in values in the training of physical education teachers: A pending issue? *Movimento*, 29, e29044. https://www.scielo.sa.cr/scielo.php?pid=S2215-26442023000100676&script=sci_abstract

Paredes-Chacín, A. J., Vargas-Escobar, L. A., Inciarte-González, A., & Mercado-Porras, C. (2023). Assessment of learning in online academic programs from the digital transformation impelled by Covid-19. *Revista de Ciencias Sociales, 29*(1), 18–34. https://doi.org/10.31876/rcs.v29i1.39761

Parraga, A., Nagua, J., Bonifaz, M., Sevillano, N., Ordoñez, J., Baldeón, V., & Pacheco, C. (2025). Gamificación como estrategia innovadora para promover el aprendizaje significativo en Estudios Sociales. *Ciencia Latina Revista Científica Multidisciplinar, 9*(1). https://doi.org/10.37811/cl_rcm.v9i1.15860

Pinzón-Salazar, S., Pulgarín-Arias, L., Ospina-Cano, S., & Quiroz-González, E. (2025). Instrument for assessing teacher's knowledge, attitudes and practices on gamification (KAP-GD): Analysis of psychometric properties. *European Public and Social Innovation Review*, 10, 1–22. https://doi.org/10.31637/epsir-2025-1341

Ponce Ceballos, S., Díaz López, K. M., & Ruelas Mexía, P. (2024). Conclusion and dropout of university students in MOOC courses: Analysis from the benefits perspective. *Praxis Educativa*, 19. https://doi.org/10.5212/PraxEduc.v.19.22754.040

Prieto, J., Gómez, J., & Said, E. (2022). Gamificación, motivación y rendimiento en educación: Una revisión sistemática. *Revista Electrónica Educare, 26*(1), 1-23. https://doi.org/10.15359/ree.26-1.14

Prieto, V. H., & Troncoso, C. P. (2025). The evaluation of traditional games in the university classroom. *European Public and Social Innovation Review*, 10. https://doi.org/10.31637/epsir-2025-1609

Rodríguez-Torres, Á.-F., Cargua-García, N.-I., Marín-Marín, J.-A., Moreno-Guerrero, A.-J., & López-Belmonte, J. (2023). Design and validation of the scale to evaluate interdisciplinary work in university students from Ecuador. *International Journal of Educational Research and Innovation*, 20. https://www.upo.es/revistas/index.php/IJERI/article/view/7698/8229

Romero, R. A., Araya-Carvajal, K., & Reyes-Acevedo, N. (2025). Role of artificial intelligence in the personalization of distance education: A systematic review. *RIED-Revista Iberoamericana de Educación a Distancia, 28*(1), 9–36. https://doi.org/10.5944/ried.28.1.41538

Saavedra, E., Zúñiga, M., & Fuentes-Vilugrón, G. (2024). Gamification in the initial teacher training of physical education students: A case study. Retos, 61, 695–705. https://doi.org/10.47197/retos.v61.108822

Solano-Barliza, A. D., Ojeda, A. D., & Aarón-Gonzalvez, M. (2024). Quantitative analysis of the perception of using ChatGPT artificial intelligence in the teaching and learning of Colombian-Caribbean undergraduate students. *Formación Universitaria, 17(*3), 129–138. http://dx.doi.org/10.4067/s0718-50062024000300129

Tapia Gallardo, P. S. G. (2024). An educational experience with Kahoot in the subject History of Law in Chile at University of Atacama. *Revista Pedagogía Universitaria y Didáctica del Derecho, 11*(2), 197–214. https://rej.uchile.cl/index.php/RPUD/article/download/74095/78449/302882

Ulloa, D., & Carcausto, W. (2024). Efecto de la gamificación en el aprendizaje activo: Revisión sistemática. Horizontes. *Revista de Investigación en Ciencias de la Educación, 8*(33), 931-944. https://doi.org/10.33996/revistahorizontes.v8i33.774

Valenzuela, S., Guardado, K., & Díaz, M. (2024). La influencia de la gamificación en la educación superior. Revisión de literatura. *Revista de Investigación en Tecnologías de la Información, 12*(26), 39-47. https://doi.org/10.36825/RITI.12.26.004

Valladares, V. O., Montes, L. H., & Arbalti, F. Z. (2023). Game as a learning tool in higher education. *Revista Electrónica de Investigación Educativa*, 25, e28. https://doi.org/10.24320/redie.2023.25.e28.4952

Ventín-Sánchez, J. A., Gutiérrez-Coba, L., & Gómez-Santos, L. (2023). Media entrepreneurship skills in Latin American universities social communication and journalism programs. *Profesional de la Información, 32*(2), e320217. https://doi.org/10.3145/epi.2023.mar.17

Viñas, M. (2022). *Nueva estrategia educativa en el nivel superior: La gamificación*. https://sedici.unlp.edu.ar/handle/10915/147803