ISSN: 1692-7257 - Volume 1 – Number 46 - 2026

RCTA
Revista Colombiana de Tecnologías de Avanzada
UNIPAMPLONA

Digital Object Identifier: 10.24054/rcta.v1i47.3833

Missions, points and rewards for teaching english in rural contexts

Missions, points and rewards for teaching english in rural contexts

MSc. Jhon Anderson Toca Figueredo[1], MSc. Lidia Constanza Hurtado Peña[1], PhD. Flavio Humberto Fernández Morales[1], MSc. Claudia Marcela Vergara Pareja[1], PhD. Jorge Armando Niño Vega[1]

[1] ***Universidad Pedagógica y Tecnológica de Colombia,*** *Duitama, Colombia.*

Correspondencia: *jorgearmando.nino@uptc.edu.co*

Received: *September 23, 2025.* ***Accepted:*** *December 21, 2025.* ***Published:*** *February 18, 2026.*

How to cite: *J. A. Toca Figueredo, L. C. Hurtado Peña, F. H. Fernández Morales, C. M. Vergara Pareja, and J. A. Niño Vega, "Missions, points and rewards for teaching english in rural contexts", RCTA, vol. 1, n.º. 47, pp. 233-241, feb. 2026. Recovered from https://ojs.unipamplona.edu.co/index.php/rcta/article/view/3833*

Abstract: A gamified teaching strategy is presented to strengthen English reading comprehension skills among eleventh-grade students at a rural educational institution. The experiment was conducted with five participants, utilizing a field diary, a questionnaire, and the GAMEX scale to assess their acceptance of the strategy. Most students improved at the inferential level, but not at the literal level. The GAMEX dimension with the highest acceptance was educational fun, with 72.9% of students, where high levels of enjoyment and satisfaction with the gamified strategy predominate. This implies that the integration of new technologies in the classroom and the use of active learning methodologies, such as gamification, do not necessarily guarantee the success of teaching strategies, since students' motivational aspects, among others, play a fundamental role in knowledge acquisition.

Keywords: reading comprehension, teaching strategy, english teaching, gamification.

Resumen: Se presenta una estrategia didáctica gamificada para fortalecer la competencia de comprensión lectora en inglés, en estudiantes de grado once de una institución educativa rural. La experiencia se adelantó con cinco participantes, utilizando el diario de campo, un cuestionario y la escala GAMEX para determinar la aceptación de la estrategia. La mayoría de los estudiantes mejoró en el nivel inferencial pero no así en el nivel literal. La dimensión GAMEX con mayor aceptación fue la de diversión educativa con un 72.9%, donde predominan los niveles altos de disfrute y agrado frente a la estrategia gamificada. Lo anterior implica que la integración de nuevas tecnologías en el aula y el uso de metodologías activas de aprendizaje, como la gamificación, no garantizan necesariamente el éxito de las estrategias didácticas ya que el aspecto motivacional de los estudiantes, entre otros, juega un rol fundamental en cuanto a la apropiación del conocimiento.

Palabras clave: comprensión lectora, estrategia didáctica, enseñanza del inglés, gamificación.

1. INTRODUCTION

Inequality in basic education in Latin America, particularly in rural areas and among impoverished families, affects the equitable and sustainable development of the rural sector [1]. Under these conditions, education faces the challenge of adapting to the new realities imposed by the digital age [2]. Information and Communication Technologies (ICTs) have penetrated rural educational institutions, influencing the way students learn and interact with their environment [3]. However, the integration of ICTs does not occur uniformly in all areas, but rather emphasizes those related to computer technology [4], neglecting the acquisition of critical skills such as reading comprehension in a second language.

Reading comprehension is defined as a person's ability to analyze, understand, interpret, reflect on, evaluate, and use written texts. This involves recognizing the structure, functions, and elements of texts, with the goal of developing reading comprehension and acquiring new knowledge that allows them to actively participate in society [5]. The initial level of reading comprehension is the literal level. At this level, keywords in the text are identified and explicit information is recognized, such as main ideas, order of actions, characters, time, and place [6]. The inferential level is based on the formulation of predictions, anticipations, or hypotheses, which are combined with the reader's experience and knowledge of the content and textual elements. This allows for a general understanding of the text and the construction of meaning, leading the reader to make assumptions and deductions to expand the information [7].

In Colombia, second language teaching in public educational institutions has been strengthened through the National Bilingualism Plan (PNB) developed by the Ministry of National Education [8], which seeks to promote students capable of communicating in English. However, the MEN's strategies do not always align with the reality of educational institutions, especially in rural areas, due to the lack of an adequate methodology and a lack of linguistic diversity that reflects the country's cultural and social reality [9]. In other words, bilingual education depends on social or contextual factors, the pedagogical and didactic capacity of the educational institution, the location and factors involved in language acquisition, but also on the level of commitment and dedication of the students [10]. The La Amistad Educational Institution, located in the municipality of San José de Pare, Colombia, is no exception to this reality. The above suggests that classroom teaching and learning conditions can negatively affect students' academic performance and, consequently, their English reading comprehension [11]. In this sense, various methodologies have emerged that place the student at the center of the teaching-learning process, such as problem-based, project-based, and challenge-based learning, along with gamification, to name a few [12]-[14].

Gamification, understood as the application of game principles and elements to the educational process, is presented as a promising teaching strategy, capable of transforming the learning process into a more dynamic, accessible, and engaging one [9]. Several researchers have established that gamified educational materials can strengthen English literacy skills in elementary school students [15]-[17]. That is, through play and interaction with the content, students acquire knowledge, skills, and abilities that allow them to strengthen their cognitive development [18].

This research sought to answer the following question: How can eleventh-grade students at La Amistad Educational Institution in San José de Pare strengthen English reading comprehension? To this end, a gamified teaching strategy was developed to strengthen English reading comprehension for eleventh-grade students. It was necessary to identify the essential characteristics of these gamified teaching strategies, design a proposal adapted to the context of the educational institution, and implement the strategy to validate its effectiveness.

2. METHODOLOGY

In this research a mixed approach was used with a quantitative and qualitative contribution, since in this way the natural development of events is evaluated, the researcher enters the experiences of the participants and builds knowledge, always aware that it is part of the phenomenon studied, analyzing the data [19]. The sample was taken from the five eleventh grade students of the La Amistad Educational Institution, located in the municipality of San José de Pare, Colombia. The students, 2 men and 3 women with ages ranging from 16 to 18 years, voluntarily agreed to participate in the study, with prior informed consent from their parents when required.

The dependent variable in this study is reading comprehension, which was approached from two aspects: the literal level (A2) and the inferential

level (B1). The literal level assesses the ability to obtain explicit information from the text, such as: main ideas, sequence of actions, characters, times, places and explicit causes of events [6]. The inferential level considers the ability to understand and deduce implicit information through assumptions, predictions and conjectures during reading [7].

Reading comprehension was assessed using a questionnaire administered before and after the gamified experience. The questionnaire consists of 22 items organized as follows: 12 items for the literal level and 10 items for the inferential level. This test was developed based on the educational institution's area plan for the foreign language English. The questionnaire was developed based on the Colombian Institute for the Evaluation of Education test [20], an instrument validated by the Ministry of Education (MEN) that assesses, among other aspects, reading comprehension at the literal and inferential levels.

The gamified teaching strategy was implemented during 10 sessions, using specifically designed teaching materials. Observations were recorded in a field journal, which was analyzed using ATLAS Ti 7.4 to examine the emerging categories of the study [21]. The gamified experience was assessed using a questionnaire based on the GAMEX (Gameful Experience in Gamification) scale, which was administered at the end of the classroom activity.

The GAMEX scale is structured into six dimensions: Educational Fun (6 items), which measures the student's level of enjoyment of the gamified experience; Balanced Absorption (6 items), which assesses the student's level of immersion and concentration, as well as their perception of the environment during the experience; Creative Thinking (4 items), which assesses the student's perception of the development of their thinking and imagination throughout the activity; Activation (4 items), which measures the level of energy, dynamism, and active participation during the gamified process; Absence of Negative Effect (3 items), which seeks to identify whether the strategy generated frustration or negative feelings in the student; Mastery (4 items), which explores the student's perception of their understanding and control of the dynamics of gamification [22].

A total of 27 items are assessed, with three possible rating ranges: high (74-100), medium (47-73), and low (20-46). The Gamex scale was validated by [23] and has been used in various studies to determine the degree of acceptance and effectiveness of gamified teaching strategies [24]-[26].

3. RESULTS AND DISCUSSION

3.1 Gamified Teaching Strategy

The proposed teaching strategy is based on gamification, which has the advantages of fostering intrinsic motivation, active student engagement, and personalized learning [27]. Unlike traditional strategies, developing reading comprehension through gamification includes the use of contextual missions and challenges, the integration of rewards and point systems, and content personalization and adaptation [28]. The use of missions and characters in a story allows for personal involvement of users and creates a sense of progress in the game [29].

Figure 1 presents the path of the gamified teaching strategy, based on Bloom's taxonomy and structured according to a logical teaching-learning sequence, which favors more effective cognitive processes in students' knowledge acquisition. In this regard, the teaching strategy proposed to begin with the administration of a pretest aimed at identifying prior knowledge related to reading comprehension in English. Subsequently, three sequential missions were established, designed to strengthen reading skills at the literal and inferential levels. Once the three missions were completed, students were assessed through a posttest and the Gamex survey. If difficulties were identified in the learning process, feedback was provided to support and reinforce the development of each student's English reading skills.

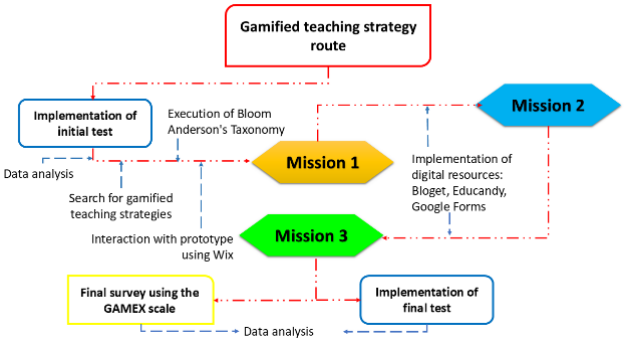

Fig. 1. *Gamified teaching strategy path.*
Source: *Prepared by the authors.*

Table 1 presents the characteristics of the learning missions integrated into the teaching strategy, as well as the activities and digital resources available for the development of each of them. The missions are organized into dimensions of knowing, understanding, applying, analyzing, evaluating, and

creating, in order of increasing complexity according to what is proposed in Bloom's taxonomy [30].

In this regard, the first mission focuses on the dimensions of knowing and understanding. To this end, it introduces key concepts related to literal and inferential reading comprehension, in addition to exercises aimed at identifying linguistic structures in English.

The second mission addresses the dimensions of applying and analyzing. In this mission, students develop matching activities, reading analysis, and textual inference exercises, with the purpose of applying the acquired knowledge to interpret textual structures in different tenses.

Finally, the third mission focuses on the dimensions of evaluating and creating. In this phase, students strengthen their reading comprehension by identifying the type of text, the problem, its solution, and its causes. Likewise, the creation of aids and texts that contribute to improving reading comprehension at the literal and inferential levels in English is encouraged.

Table 1: *Characteristics of learning missions*

Mission	Dimensions	Activity developed	Digital resources
Mission 1	Know	In this first phase, students were introduced to the key concepts of literal and inferential reading comprehension through interactive readings in Wix and Blooket.	Wix y Blooket
	Grasp	Blooket was used to reinforce the recognition of nouns and verbs, facilitating the identification of linguistic structures within texts.	Blooket
		Through Google Forms, comprehension exercises were applied where students had to identify levels of comprehension in specific texts.	Google Forms
Mission 2	Apply	At this stage, students applied the knowledge they had acquired to interpret textual structures in different verb tenses.	Blooket
		With Blooket and Educandy, they carried out activities to associate meanings and analyze common errors in reading comprehension.	Educandy y Blooket
	Analyze	The Educandy platform facilitated textual inference exercises, where students had to read between the lines to understand implicit ideas.	Educandy
		Distinguish between literal and inferential levels of reading comprehension through a text.	Google Forms
Mission 3	Assess	Determine whether the text is an autobiography, biography, informative text, or persuasive text.	Blooket
		Practice reading comprehension exercises at the literal and inferential levels.	Google Forms
	Create	Determine the structure of a text: problem, solution, cause or effect, compare, contrast, sequential or chronological order.	Blooket
		Create reading comprehension aids at the literal and inferential levels and create a reading comprehension text using context as a basis.	PowerPoint y Google forms

Source:*Authorship*

Student motivation was guided by the allocation of points for completing missions, with 10 points assigned for each activity completed. This scoring system allowed for tracking each student's progress on the different missions.

At the end of the process, the total points earned for the activity were displayed on the website, where overall performance could be viewed, motivating students to continue developing their reading skills independently. The digital resources were developed using tools such as Kahoot, Google Forms, Blooket, Educandy, Quizizz, Educaplay, and PowerPoint, and were integrated into the Wix platform due to its popularity for this type of application [31].

3.2 Student Performance

Table 2 presents the pretest and posttest results for the students participating in the research, at the inferential and literal levels of reading comprehension.

Table 2: *Students' correct answers in the pretest and posttest*

Student	Literal Level		Inferential Level	
	Pretest	Postest	Pretest	Postest
E1	10	8	2	5
E2	7	3	3	5
E3	6	11	3	8
E4	6	3	3	3
E5	2	4	3	2

Source: *Authorship*

The pretest shows that, for the literal level, E1 performed highly, correctly solving 10 of the 12 answers, unlike E5, who only correctly solved 2, while the others were at an intermediate level (see

Table 2). In the posttest, E3 improved significantly, going from 6 to 11 correct answers, as did E5, who went from 2 to 4 correct answers.

However, the other students' performance decreased in the literal level of reading comprehension, which may indicate difficulties adapting to the gamified strategy and low motivation. Another aspect that may have affected the group's performance at the inferential level was the poor attitude of one of the students, which generated a negative environment, initially affecting the concentration and morale of their classmates.

At the inferential level, the pretest shows that all students performed poorly, as none of them got more than 3 correct answers (see Table 2). This indicates difficulties in interpreting implicit meanings and establishing relationships within the text. That is, although students can recognize direct information, they have serious limitations when analyzing and reflecting on the content of the English text.

However, in the posttest, most students improved at the inferential level, with E3 being the most significant, achieving 8 out of 10 possible correct answers, while only E5 decreased their performance. This indicates that the gamified teaching strategy was more beneficial for improving students' inferential level of English reading comprehension compared to the literal level.

Overall, students maintained stable performance in reading comprehension. However, it is interesting to note that E3 significantly improved in both the literal and inferential levels of English reading comprehension, indicating a high level of motivation and commitment to their learning.

This implies that the integration of new technologies in the classroom and the use of active learning methodologies, such as gamification, do not necessarily guarantee the success of teaching strategies, since students' motivational aspects, among others, play a fundamental role in knowledge acquisition [26] and [33].

3.3 Classroom experience and acceptance of the strategy

Classroom work was carried out over 10 sessions, using the teaching materials developed for this purpose. During the missions, the students successfully completed the proposed challenges, which were designed to achieve the learning objectives outlined in each mission.

Through a cognitive conflict that promoted critical analysis, students were able to recognize the literal and inferential levels of reading comprehension in English. Each activity presented a challenge that required students to navigate the platform and work interactively, using the teaching resources hosted on Wix.

The field diary records showed that the gamified teaching strategy provided a dynamic and entertaining environment, with comments such as: "Yes, teacher, give us more of these activities." The students achieved collaborative learning, explaining the activities in detail to their classmates.

Overall, a positive classroom environment was evident, with most students actively participating, although one student seemed apathetic about learning through the proposed strategy.

Likewise, the development of communicative skills in English was observed. As students strengthened their reading comprehension, they also improved their listening and speaking skills, as one student stated: "Teacher, give us more activities like that. I want to learn vocabulary." In the final session, it was found that the students were able to express their opinions about the games used, sharing how they felt and what they learned during the process.

Table 3 presents the results of the GAMEX scale, which determines the degree of student acceptance of the gamified teaching strategy. It is evident that the most widely accepted dimension was educational fun, with 72.9%, where high levels of enjoyment and satisfaction predominate over the gamified strategy. The items "My experience with the game was pleasant" and "Playing was fun" were the most widely accepted by students, with 80% and 75%, respectively. However, there was evidence of low intrinsic motivation, as few students expressed interest in playing on their own initiative.

Table 3: *Results of the GAMEX scale by dimension and categories*

Dimensions	Questions	Average	%	Level
Educational fun	Playing was fun	4.0	75	High
	I liked to play	3.8	70	Medium
	I really enjoyed playing	4.0	75	High
	My experience with the game was pleasant.	4.2	80	High
	I think playing is very entertaining	3.8	70	Medium
	I would play this game by myself, not just when asked.	2.8	45	Low
Balanced absorption	Playing made me forget where I am.	3.2	55	Medium
	I forgot about my immediate surroundings while playing.	2.8	45	Low
	After playing it felt like coming back to the "real world" after a trip.	2.8	45	Low

	Playing "took me away from everything"	3.4	60	Medium
	While playing I was completely unconnected to everything that surrounded me.	3.0	50	Medium
	While playing I lost track of time.	3.0	50	Medium
Creative thinking	Playing sparked my imagination.	3.2	55	Medium
	While playing I felt creative.	4.0	75	High
	While playing I felt like I could explore things.	3.6	65	Medium
	While playing I felt adventurous.	3.2	55	Medium
Activation	While playing I felt active.	3.8	70	Medium
	While playing I felt nervous.	2.8	45	Low
	While playing I felt frantic.	3.0	50	Medium
	While playing I felt excited.	3.6	65	Medium
Absence of negative effect	While playing I felt annoyed.	3.8	76	High
	While playing I felt hostile.	2.8	56	Medium
	While playing I felt frustrated.	3.0	60	Medium
Domain	While playing I felt dominant / I had the feeling of being in charge	2.6	52	Medium
	While playing I felt influential	3.0	60	Medium
	While playing I felt autonomous	3.2	64	Medium
	While playing the game I felt confident	3.2	64	Medium

***Source**: Authorship*

The balanced absorption dimension presented a medium level of acceptance (64.8%), where the items: I forgot about my surroundings (45%) and I lost track of time (50%) indicate that, while the game captured some interest, it did not generate deep immersion or disconnection from the environment, key aspects of emotional engagement.

Regarding creative thinking (70%), the results show moderate stimulation, highlighting the perception of creativity, but without reaching generalized levels of exploration or adventure.

The activation dimension reflects active participation without triggering intense emotions (70%), which suggests a balanced response to the game's stimulus. In this dimension, some students reported feeling a certain level of nervousness or frenzy while playing, while others did not experience these sensations.

This could be due to individual differences in how each student approaches gamified challenges. For some, the competition or pace of the game may have generated a sense of urgency or stress, while others may have perceived it as a manageable and fun challenge.

The absence of negative effects had a medium level of acceptance (64%), showing that most students did not experience emotions such as frustration or annoyance during the activity. The mastery dimension was the weakest (60%), with "I felt dominant" being the lowest-ranking item (52%), indicating that students did not feel fully in control or autonomous within the game environment.

Regarding the gamified teaching strategy, most students perceived it as user-friendly and consistent. They felt comfortable using the Blooket platform, supported also by the website created and other digital resources, such as Educandy and Google Forms. This experience generated a pleasant work environment and engagement on the part of the students, who actively participated in the process of acquiring new knowledge.

Overall, the results reflect that while gamification was effective in generating enjoyment and positive experiences, more work is needed to design activities that enhance immersion, independent thinking, and a sense of competence in students to consolidate its pedagogical impact.

3.4 Discussion

The analysis of the field diary established that motivation is influenced by technological skills, so it is possible that the use of technological tools fosters interest and engagement in learning. Motivation is part of reading comprehension, indicating that motivated students tend to be more engaged in reading, which facilitates their comprehension [15].

Furthermore, motivation is associated with collaborative learning and autonomous learning, suggesting that motivation influences how students learn, both in group settings and independently. Therefore, a motivated student can actively participate in collaborative activities and develop autonomy in their learning [17] and [29].

The results show that the gamified strategy generated a dynamic and participatory learning environment, which is consistent with Parra-González and Segura-Robles [23], who assert that technology and digital resources can improve learning processes and student motivation. This led to an improvement in the inferential level of students' English reading comprehension, thanks to a teaching strategy that uses context-adapted digital educational resources [33].

However, despite high student participation and engagement, no significant improvements were achieved in the literal level of English reading comprehension. In this regard, Ojeda-Lara and Zaldivar-Acosta [34] emphasize that the success of gamified environments depends on factors such as teacher training, adaptation of the school context, and adaptation of the nature of the subjects to students' learning styles, among others.

In this sense, educational conditions in rural areas can represent an obstacle to the quality of learning,

which could explain the persistence of low levels of reading comprehension among students [3].

Second language teaching must adapt to these conditions, integrating practices that reflect students' daily experiences, such as writing texts in English related to their environment, strengthening their language skills and connecting learning with their reality [9] and [14].

4. CONCLUSIONS

The implementation of a gamified teaching strategy to strengthen English reading comprehension among eleventh-grade students at a rural school proved effective for inferential reading comprehension, although it had no significant effect on literal reading comprehension. This difference could be explained by the fact that students tended to focus more on deducing general meanings and establishing relationships between ideas, neglecting detailed analysis of the literal meaning of sentences.

The use of gamification in this strategy increased students' motivation, engagement, and active participation. The integration of scores, rewards, and progressive challenges encouraged learning autonomy and promoted a more dynamic and meaningful experience. Furthermore, the Wix platform served as a structural backbone for organizing activities and enabled intuitive navigation through missions, facilitating access to digital resources and providing constant feedback.

In conclusion, implementing a gamified teaching strategy in a rural context such as that of La Amistad Educational Institution presents both opportunities and challenges. The lack of reliable technological resources, students' socioeconomic conditions, and a lack of reading comprehension skills are factors that must be taken into account when designing and implementing innovative pedagogical strategies.

However, the advent of digital tools demonstrates that, with the right resources and a deep understanding of the context, it is possible to create a dynamic and participatory learning environment that, despite its barriers, can offer students new opportunities for academic and personal development.

REFERENCES

[1] J. A. Fernández, “Desigualdad e inequidad en la educación rural mexicana: la experiencia del CONAFE en el estado de Chihuahua”, *Revista Iberoamericana de Educación*, vol. 91, n.° 1, pp. 115-133, mar. 2023, doi: 10.35362/rie9115568.

[2] L. C. Hurtado-Peña, J. A. Niño-Vega, y F. H. Fernández-Morales, “El desarrollo humano y la educación para el trabajo en una Pedagogía basada en Competencias”, *RCTA*, vol. 2, n.° 44, pp. 177–188, ago. 2024, doi: 10.24054/rcta.v2i44.3008

[3] A. Uribe-Zapata, J. F. Zambrano-Acosta, y L. M. Cano-Vásquez, “Usos educativos de TIC en docentes rurales de Colombia”, *Revista de Investigación Desarrollo E Innovación*, vol. 13, n.° 2, pp. 287-298, ago. 2023, doi: 10.19053/20278306.v13.n2.2023.16834.

[4] G. G. Guzman-Guzman y J. S. Santoyo-Diaz, “Diseño de una aplicación con realidad aumentada en la creación de contenidos educativos”, *Revista Colombiana de Tecnologias de Avanzada*, vol. 2, n.° 44, pp. 142-152, jul. 2024, doi: 10.24054/rcta.v2i44.3032.

[5] A. Rivera, “Estrategias metodológicas activas para la comprensión lectora como eje de los aprendizajes en adolescentes de 12 - 13 años”, *Espacios*, vol. 45, n.° 01, pp. 1-17, ene. 2024, doi: 10.48082/espacios-a24v45n01p0

[6] T. A. Becerra-Ccora, M. Piña-Zamudio, L. Pérez-Lazo, y A. M. Enríquez-Chauca, “Nivel de comprensión lectora en los niños de 4 años de la Institución Educativa Inicial 531 de Huancavelica, Perú”, *e-Revista Multidisciplinaria del Saber*, pp. 1-9, ene. 2023, doi: 10.61286/e-rms.v1i.18.

[7] G. C. Arce-Narváez, N. Y. González-Domínguez, y M. Carnero-Sánchez, “Voces y miradas de los procesos universitarios en el contexto internacional: la lectura crítica-nivel inferencial”. *Revista Cubana de Educación Superior*, 42(3), 2023

[8] Ministerio de Educación Nacional, MEN. Plan Nacional de Bilingüismo (PNB), 2013, https://educacionrindecuentas.mineducacion.gov.co/pilar-1-educacion-de-calidad/programa-nacional-de-bilinguismo/

[9] B. Ramos-Holguín, J. Aguirre-Morales, N. y Torres-Cepeda, “Enhancing EFL speaking in rural settings: challenges and opportunities for material developers”, Libro, Editorial Universidad Pedagógica y Tecnológica de Colombia, 2018. http://repositorio.uptc.edu.co/handle/001/3272. Jun. 06, 2025 [En línea]

[10] C. M. Vergara-Pareja, J. B. Nielsen-Niño, y J. A. Niño-Vega, “La gamificación y el fortalecimiento de la habilidad oral en inglés a

niños de primera infancia", *Revista de Investigación Desarrollo E Innovación*, vol. 11, n.° 3, pp. 569-578, ago. 2021, doi:10.19053/20278306.v11.n3.2021.13355.

[11] G. J. Posada-Hernández, M. López-Bonilla, D. A. Uribe-Suarez, V. Gómez-Ceballos, y L. F. Cardona-Palacio, "Estimating the added value of critical reading competence in college students using statistical modeling", *Revista de Investigación Desarrollo E Innovación*, vol. 15, n.° 1, pp. 67-86, feb. 2025, doi: 10.19053/uptc.20278306.v15.n1.2025.18823.

[12] J. A. Gómez-Mendivelso, A. C. Medina-Mariño, y J. A. Niño-Vega, "Aprendizaje Basado en Proyectos con integración TIC para la enseñanza de estadística a estudiantes de primaria", *Gestión y Desarrollo Libre*, vol. 7, n.° 13, jun. 2023, doi: 10.18041/2539-3669/gestionlibre.13.2022.8783.

[13] P. H. De la Cruz-Velazco, E. Poquis-Velasquez, R. A. Valle-Chavez, M. I. Castañeda-Sánchez, y K. R. Sánchez-Anastacio, "Aprendizaje basado en retos en la educación superior: Una revisión bibliográfica", Horizontes *Revista de Investigación En Ciencias de la Educación*, vol. 6, n.° 25, pp. 1409-1421, sep. 2022, doi: 10.33996/revistahorizontes.v6i25.422.

[14] B. C. Goyeneche-Fernández, M. N. Monroy-Fonseca, J. A. Niño-Vega, y F. H. Fernández-Morales, "Use of classcraft for the development of reading and writing skills in primary basic education", *Saber Ciencia y Libertad*, vol. 19, n.° 2, pp. 227-248, jul. 2024, doi: 10.18041/2382-3240/saber.2024v19n2.12011.

[15] C. M. Vergara-Pareja, J. A. Niño-Vega, y F. H. Fernandez-Morales, "Fortalecimiento de la lectura crítica en inglés a estudiantes de grado quinto a través de un recurso educativo digital", *Revista Colombiana de Tecnologias de Avanzada*, vol. 2, n.° 40, jul. 2023, doi: 10.24054/rcta.v2i40.2370.

[16] P. Del R. Santiago-González, R. C. Ramirez-Heredia, J. Nina-Cuchillo, y F. De M. Sánchez-Aguirre, "Gamificación y Comprensión de Textos en Inglés en Estudiantes de una Escuela Militar Peruana", *Revista Docentes* 2 0, vol. 16, n.° 2, pp. 347-356, nov. 2023, doi: 10.37843/rted.v16i2.434.

[17] M. Loor-Aldás y M. Hidalgo-López, "Incidencia de la aplicación de gamificación en la enseñanza del idioma inglés en tiempos COVID-19", *Horizontes Revista de Investigación en Ciencias de la Educación*, vol. 7, n.° 29, pp. 1201-1210, abr. 2023, doi: 10.33996/revistahorizontes.v7i29.584.

[18] Y. A. Aguirre-Álvarez, C. E. Patino-Rodríguez, C. M. Maya-Iregui, y E. Bolívar-Torres, "Beer Game as a gamification strategy applying Industry 4.0: more than an inventory game", *Revista de Investigación Desarrollo e Innovación*, vol. 14, n.° 1, pp. 155-178, may 2024, doi: 10.19053/uptc.20278306.v14.n1.2024.17629.

[19] R. Hernández-Sampieri, y C. P. Mendoza-Torres, (2018). Metodología de la investigación. Las rutas cuantitativa, cualitativa y mixta.

[20] Instituto Colombiano para la Evaluación de la Educación, ICFES, Marco de referencia prueba de inglés Saber 11, 2017 [Sitio web]

[21] Y. N. Rojano-Alvarado, M. M. Contreras-Cuentas, y D. Cardona-Arbeláez, "proceso etnográfico y la gestión estratégica de datos cualitativos con la utilización del aplicativo Atlas.Ti", *Saber Ciencia y Libertad*, vol. 16, n.° 2, ago. 2021, doi:10.18041/2382-3240/saber.2021v16n2.6500.

[22] R. Eppmann, M. Bekk, y K. Klein, "Gameful Experience in Gamification: Construction and Validation of a Gameful Experience Scale [GAMEX]", *Journal Of Interactive Marketing*, vol. 43, n.° 1, pp. 98-115, may 2018, doi: 10.1016/j.intmar.2018.03.002.

[23] M. E. Parra-González, y A. Segura-Robles, "Traducción y validación de la escala de evaluación de experiencias gamificadas" *Revista de Pedagogía*, vol. 71, n.° 4, pp. 87-99, sep. 2019, doi: 10.13042/bordon.2019.70783.

[24]C. Navarro-Mateos, I. J. y Pérez-López, "El escape room como estrategia didáctica en el Máster de Profesorado" *Retos*, vol. 44, pp. 221-231, oct. 2021, doi: 10.47197/retos.v44i0.91035.

[25] S. Pozo-Sánchez, G. Lampropoulos, y J. López-Belmonte, "Comparing Gamification Models in Higher Education Using Face-to-Face and Virtual Escape Rooms". *NAER: Journal of New Approaches in Educational Research*, vol. 11, n.° 2, pp. 307-322, jul. 2022, doi: 10.7821/naer.2022.7.1025.

[26]V. Sánchez-Domínguez, De N.Alba-Fernández, y E. Navarro-Medina, "Percepciones del alumnado universitario sobre gamificación, diseño y validación de un instrumento". *Profesorado, Revista de Currículum y Formación del Profesorado*, vol. 27, n.°1, pp. 321-346, mar. 2023, doi: 10.30827/profesorado.v27i1.21198.

[27] C. E. Briceño-Núñez, "La gamificación educativa como estrategia para la enseñanza de lenguas extranjeras". ACADEMO *Revista de Investigación en Ciencias Sociales y Humanidades*, vol. 9, n.º 1, pp. 11-22, ene. 2022, doi: 10.30545/academo.2022.ene-jun.2.

[28] J. A. Álvarez-Martínez, y J. de J. Rojas-Ochoa, "La motivación intrínseca y extrínseca en el aprendizaje del idioma inglés: Un estudio de caso en estudiantes universitarios de la ciudad de Medellín". *Cuadernos de Educación y Desarrollo*, vol. 13, n.° 5, pp. 38-47, jul. 2021, doi: 10.51896/atlante/geai9779.

[29] M. A. Valencia-Rueda, y I. Y. Rodríguez-Tamayo, "An online course as a way to work on socio affective learning strategies in the EFL classroom". *Saber, Ciencia y Libertad*, vol. 19, n.º 2, pp. 300-320, jul. 2024, doi: 10.18041/2382-3240/saber.2024v19n2.12013.

[30] S. R. Toala-Ponce, L. Y. Gómez-Pinillo, R. N. Guevara-Heredia, y E. C. Quiñonez-Ortiz, "Application of Bloom's taxonomy to improve teaching-learning". *Sapienza: International Journal of Interdisciplinary Studies*, vol. 3, n.º 6, pp. 176-189, sep. 2022, doi: 10.51798/sijis.v3i6.507.

[31] O. E. Puentes-Aguillón, F. H. Fernández-Morales, y J. A. Niño-Vega, "La inteligencia artificial y sus posibilidades en la educación básica: una experiencia con docentes en ejercicio*". RGYDL*, vol. 10, no. 19, Abr. 2025, doi: 10.18041/2539-3669/gestion_libre.19.2025.12738.

[32] J. D. Raigoso-Espinosa, "Análisis de los determinantes del rendimiento académico en matemáticas para los estudiantes de Quindío, Colombia, a partir de las pruebas Saber 11". *Revista de Investigación, Desarrollo e Innovación*, vol. 15, n.º 1, pp. 101-118, mar. 2025, doi: 10.19053/uptc.20278306.v15.n1.2025.19182.

[33] W. F. Lancheros-Bohorquez, y G. J. Vesga-Bravo, "Uso de la realidad aumentada, la realidad virtual y la inteligencia artificial en educación secundaria: una revisión sistemática". *Revista de Investigación, Desarrollo e Innovación*, 14 (1), 95-110, 2024, doi:10.19053/uptc.20278306.v14.n1.2024.17537

[34] O. G. Ojeda-Lara, y M. del S. Zaldívar-Acosta, "Gamificación como Metodología Innovadora para Estudiantes de Educación Superior". *Revista Tecnológica-Educativa Docentes 2.0*, vol. 14, n.º 1, pp. 95-110, ene. 2024, doi: 10.19053/uptc.20278306.v14.n1.2024.17537.