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EXPLORANDO EL USO DE *KAHOOT* PARA ENSEÑAR GRAMÁTICA INGLESA EN LA EDUCACIÓN SUPERIOR

EXPLORING THE USE OF KAHOOT TO TEACH
ENGLISH GRAMMAR IN HIGHER EDUCATION

EXPLORANDO O USO DO KAHOOT PARA
ENSINAR GRAMÁTICA DE INGLÊS NO ENSINO
SUPERIOR

María Dolores Martínez Lirola ¹

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¹ Doctora en Filología Inglesa por la Universidad de Jaén, Profesora Titular de la Universidad de Alicante y Research Fellow de la University of South Africa (UNISA). maria.lirola@ua.es <http://orcid.org/0000-0002-6427-425X>



RESUMEN

Este artículo muestra los resultados de un estudio que consistió en la implementación de Kahoot como herramienta de gamificación en una asignatura de inglés como lengua extranjera en la enseñanza universitaria. Los objetivos de este artículo son verificar si promover la enseñanza de la gramática inglesa, en la que se integre el uso de Kahoot, contribuye a motivar al alumnado a aprender y a dinamizar el estudio de los contenidos gramaticales en la educación superior, y conocer las opiniones del estudiantado sobre la implementación de esta herramienta de gamificación para enseñar gramática. El estudio empleó un diseño de investigación de métodos mixtos (cualitativos y cuantitativos) en el que se observó la participación de las/os estudiantes en la enseñanza de la gramática gamificada y se utilizó un cuestionario al final del semestre. Los resultados muestran que el alumnado valora mucho el uso de Kahoot para repasar los temas gramaticales explicados en las clases, ya que les permite revisar lo aprendido de forma lúdica, aplicar la teoría a la práctica de forma dinámica y verificar los errores de forma gamificada. Las principales conclusiones del estudio muestran que Kahoot dinamiza el proceso de enseñanza-aprendizaje, y fomenta la motivación y la creatividad del alumnado.

Palabras clave: gamificación, Kahoot, enseñanza de la gramática inglesa.

ABSTRACT

This article shows the results of a study that consisted of the implementation of Kahoot as a gamification tool in an English as a foreign language class in higher education. The objectives of this article are to verify if promoting the teaching of English grammar, in which the use of Kahoot is integrated, contributes to motivating students to learn and to stimulate the study of grammatical contents in higher education, and to know the opinions of the students on the implementation of this gamification tool to teach grammar. The study used a mixed methods (qualitative and quantitative) research design in which the participation of the students in the teaching of gamified grammar was observed and a questionnaire was used at the end of the semester. The results show that students highly value the use of Kahoot to review the grammar topics explained in class, as it allows them to review what they have learned in a playful way, apply theory to practice in a dynamic way, and check errors in a gamified way. The main conclusions of the study show that Kahoot stimulates the teaching-learning process, and encourages the motivation and creativity of the students.

Keywords: gamification, Kahoot, teaching English grammar.

RESUMO

Este artigo apresenta os resultados de um estudo que consistiu na implementação do Kahoot como ferramenta de gamificação em uma aula de inglês como língua estrangeira no ensino universitário. Os objetivos deste artigo são verificar se a promoção do ensino da gramática inglesa, em que se integra a utilização do Kahoot, contribui para motivar os alunos para a aprendizagem e estimular o estudo dos conteúdos gramaticais no ensino superior, e conhecer as opiniões dos alunos sobre a implementação dessa ferramenta de gamificação para ensinar gramática. O estudo utilizou um desenho de pesquisa de métodos mistos (qualitativo e quantitativo) em que foi observada a participação dos alunos no ensino da gramática gamificada e aplicado um questionário no final do semestre. Os resultados mostram

que os alunos valorizam muito o uso do Kahoot para revisar os tópicos gramaticais explicados em aula, pois permite revisar o que aprenderam de forma lúdica, aplicar a teoria na prática de forma dinâmica e verificar erros de forma gamificada. As principais conclusões do estudo mostram que o Kahoot estimula o processo de ensino-aprendizagem, além de estimular a motivação e a criatividade dos alunos.

Palavras-chave: gamificação,, Kahoot, ensino de gramática inglesa

1. INTRODUCTION

XXI century education requests new methodologies and techniques in order to offer students opportunities to be the protagonists in the teaching-learning process and to acquire competences while they learn (Calabor et al., 2017; Gabarrón et al., 2020; Martínez, 2017; Villalustre & Del Moral, 2015). Current students demand new experiences, so teachers must look for activities that stimulate students to learn and develop different skills and competencies. In fact, it is necessary to encourage students' participation in higher education (Moliní & Sánchez, 2019), especially in classes with theoretical content such as English grammar classes on which this article focuses. In this sense, gamification is very useful to make classrooms dynamic, which normally involves the increase of students' motivation. Gamification was first used in the business world as a marketing tool to motivate employees and it is integrated into the video game culture that is so fashionable in today's society (Bernardo et al., 2021).

There are several digital applications currently available to gamify subjects, including Classcraft, Classdojo, Kahoot, Genially, Mentimeter, Socrative, Quizizz or Quizalize. These applications facilitate informal learning both in face-to-face and digital educational contexts; they are also useful so that people can access knowledge whenever and wherever they want (Calvo & López, 2021; Llorente et al., 2022). We have chosen Kahoot because it is a tool with multiple didactic applications that can be

used to review grammar content.

The methodology based on gamification (a term coined in the literature in 2008, Deterding et al., 2011, according to Miller, 2013) offers tools to apply concepts of playful activities to teaching in the different educational levels and encourages active participation. In this sense, gamification favors motivation due to the experiential nature of gamification experiences (Putz et al., 2020; Salvador, 2021).

The starting hypothesis of this article is that Kahoot is a suitable tool to revise English grammar at tertiary education. The objectives of this article are: 1. To promote teaching English grammar integrating the use of Kahoot to motivate students and to give dynamism to the study of grammatical content, and 2. To know students' opinion on the implementation of this gamification tool to teach grammar. The main research question that we will try to answer is the following: Is Kahoot a suitable gamification tool to revise grammatical content at tertiary education?

After this introduction, this article consists of the following sections: the next section presents the state of the art followed by the methodology; afterwards, the analysis of the didactic experience carried out is presented. The article ends with the discussion and some conclusions.

2. LITERATURE REVIEW

In general, gamification is defined as the use of game elements and techniques in non-game contexts (Caponetto et al., 2014; Deterding et

al., 2011; Kapp, 2012; Treiblmaier et al., 2018; Werbach & Hunter, 2012; Werbach, 2014) and it is based on research that has been carried out for decades in the gaming industry, in the media and in psychology (Abt, 1987; Figueroa, 2015).

The main objective of gamification is to increase users' participation and motivation through the use of game elements such as points, leaderboards, immediate feedback, etc., so that people commit to perform certain tasks (Bilgin & Gul, 2020; Figueroa, 2015). All areas of life are likely to be gamified, but in this article we focus on gamification in education or on educational gamification (Marín, 2015), specifically on gamification in English teaching at tertiary education.

There are many advantages of gamification, among which psychological benefits stand out by promoting the improvement of attention and concentration (De Soto, 2018; McGonigal, 2011), the development of deduction and spatial thinking (Contreras, 2016; Kapp, 2012) and the development of imagination and creativity (Miller, 2013). In general, studies agree that gamification is effective in improving education (Buckley et al., 2017; Putz et al., 2020) and that social and transversal skills are improved thanks to competition and entertainment (Cantador, 2015; Gil & Cantillo, 2018; Fernández et al., 2020). There are studies that link game-based learning with increased motivation (for example, the use of badges) and students' interest in learning, a fact that leads to significant learning (Deterding, 2012; Oliva, 2017; Seixas et al., 2016; Prieto, 2020; Strickland

& Kaylor, 2016; Urh et al., 2015).

Considering gamification and foreign language teaching, there have been many studies published in the last decades. For instance, Boquete (2014) makes clear that games facilitate the acquisition of a foreign language and can be used to keep interest and effort in tasks. In addition, Amaya & Bajaña (2020) focus on gamification to improve the teaching of English as a foreign language in higher education and on their benefits. Using gamification in the foreign language classroom offers teachers the possibility of encouraging students to feel interested in the tasks, while generating messages in the target language (Figueroa, 2015).

Games enhance skills in English as a foreign language that can later be transferred to real life situations. In this sense, Amaya & Bajaña (2020) refer to the objectives that can be set with games in grammar classes: to work on grammatical aspects such as a certain verb tense, to work on language functions such as giving and receiving information and, ultimately, to work on oral skills in order to improve fluency and oral expression in the foreign language.

It is important to design gamification strategies properly at tertiary education so that students see their purpose clearly and do not perceive them as trivial activities that do not contribute to the acquisition of content. In this sense, Kahoot has been used in several university degrees so that students could retain arduous theoretical concepts while improving motivation to learn (Montoya et al., 2019).

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Kahoot is one of the fun digital learning tools that have been most widely accepted in Spain in recent years because it is free, easy to use and energizes the classroom. This tool was designed in 2013 by Professor Alf Inge Wang of the Norwegian University of Science and Technology to create fun and comfortable educational environments (Martínez, 2017). In addition, Kahoot is a web page with free and open access that allows carrying out questionnaires, surveys or debates. It can be used for assessment, self-assessment, or revision. We agree with Martínez (2017) that the main purposes of Kahoot are:

“to see previous knowledge about a topic, to know the most important aspects of a unit before starting it or once it is finished or to check what has been learned, to evaluate the degree of understanding of a certain reading or discussing a specific issue” (p. 266).¹

Kahoot can be used from any mobile device and allows students reviewing or putting into practice what they have learned in a playful way. Therefore, it integrates games, learning and new technologies in the learning process. This article will describe how we have used Kahoot to revise grammar in a

¹The original of this quotation is the following: “ver conocimientos previos sobre un tema, conocer los aspectos más importantes de una unidad antes de empezarla o una vez terminada o comprobar lo que se ha aprendido, evaluar el grado de comprensión de una determinada lectura o debatir sobre un asunto en concreto” (Martínez, 2017, p. 266).

core subject in the degree in English Studies in a Spanish University and to make sure that students have understood grammatical contents.

3. METHODOLOGY

The methodology of the article is mixed because, on the one hand, it describes the way in which Kahoot was used in grammar classes and, on the other hand, the article presents the quantitative data of the questionnaire that the students completed at the end of the semester.

3.1 Context and participants

English Language V is a compulsory six credit subject that is taught in the first quarter of the third year of the degree in English Studies. The main objective of this subject is that students improve their level of English until they reach a C1 level when they study this subject in the first semester and the subject English Language VI in the second semester by working on the five skills (listening, speaking, reading, writing and interaction).

The subject is taught for four hours per week: the first is devoted to academic writing, the second to grammar revision, and the remaining two hours to the development of oral skills through oral presentations and cooperative debates. During the academic year 2021-2022, there were 87 students enrolled in the English Language V subject (69 women and 18 men) divided into two groups (group A with 37 people and group B with 50 people).

The selection of Kahoot in the grammar classes in the subject English Language V, is motivated by the desire to increase students' motivation in the said classes and to

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exploit the potential of this tool so that the students review the grammatical contents explained in the classroom.

3.2 Instruments

The teacher prepared quizzes in *Kahoot* to review the grammar topics studied each week. Thanks to the grammar questions posed through *Kahoot*, students become aware of the grammatical aspects that needed to be revised if the answer chosen by students was not the correct one. Revision could be done by revising the theory presented in the grammar book, in the outlines provided by the teacher in *PowerPoint* presentations and in a list of videos on the grammatical aspects studied.

The teacher prepared an anonymous questionnaire of ten questions (see Appendix I) in order to know students' opinion about the use of *Kahoot*. The questionnaire that was completed at the end of the semester by all the students enrolled in the subject allows obtaining some quantitative data. There are three dichotomous questions, four short-answer questions, one multiple-choice question, and two questions in which a Likert scale is used (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree). The data obtained from the questionnaire were statistically analyzed using Excel software (Microsoft office), in order to obtain univariate statistical parameters.

3.3 Procedure

Different activities were planned during the first quarter of the 2021-2022 academic year to work on the contents of the subject. The gamification experience that we propose in this article is framed in the principles proposed by the

inverted classroom. In other words, at the beginning of the semester, students were given a calendar with the grammatical topics that would be worked on each week from the book *Advanced Grammar in Use* (Hewings, 2013). They also had a *PowerPoint* presentation before class with an outline of the contents of each grammar topic that was studied in the semester. In addition, they had a list with videos on grammatical aspects so that they could delve into them.

In this way, class time was spent solving doubts, correcting previously prepared exercises and discussing problematic examples. In addition, it was essential to check that the fundamental knowledge of each topic had been acquired, for which *Kahoot* was selected so that students could choose the correct answer from two proposals and explain the grammatical aspect under study, i.e., they had to justify their answer. In this way, interaction is enhanced and students are given an active role in the teaching-learning process (González & Lasagabaster, 2019). At the end of the semester, students were asked to answer an anonymous questionnaire in order to know their opinion about the use of *Kahoot* in grammar classes framed in the flipped classroom methodology.

4. RESULTS. ANALYSIS

4.1 Integration of Kahoot in an English grammar class

As previously indicated, the students had an outline of each grammar topic, a list of videos and a calendar with the topics that were going to be reviewed each week. In most cases, the two grammatical topics

that were explained each week were not, as can be seen in Table 1. were related, but in other cases they

Table 1. Grammatical topics studied in Lengua Inglesa V

Week of the semester	Grammar topics studied
Week 1	45, 87 Articles and connectors
Week 2	53, 54 Relative pronouns
Week 3	40, 41 Subject verb agreement
Week 4	42, 43 Subject verb agreement and compound nouns
Week 5	46, 47 Articles
Week 6	32, 33 Reported speech
Week 7	66, 67 Adjectives
Week 8	68, 69 Adjectives
Week 9	70, 71 Adjectives +to inf., ing., etc. Adjectives and adverbs
Week 10	22-23 Passive voice
Week 11	74, 75 Adverbs
Week 12	Exam
Week 13	76, 99 Adverbs and inversión
Week 14	77,100 Adverbs and inversión
Week 15	Doubts and revision

The classes were organised in the following way: at the beginning of the class, the teacher asked students if they had any questions related to the *PowerPoints* of the topics studied that week and that they had in advance (see section 3). It was quite common that students remained silent and did not respond, a fact that could indicate that the *PowerPoints* had not been consulted or that the summary of the theory presented in the *PowerPoints* was clear. In this context, the teacher shared her screen and reviewed the most important aspects of the grammar topics of each week and illustrated them with examples both from the *PowerPoint* that was already prepared and with other examples

that she wrote on the blackboard during the first ten minutes. After revising grammar in this way and answering the possible questions, the exercises in the grammar book (Hewings, 2013) were corrected in order to put into practice the aspects explained theoretically and to solve students' doubts.

It should be noted that the fact that students had the grammar outline beforehand allowed the teacher focusing only on the most important points or on completing some aspects that were not sufficiently explained in the book. In addition, as already mentioned, the teacher prepared a list of videos related

to the grammatical topics studied in the subject (see Table 1). The objective of offering a list of videos to students at the beginning of the semester was that both people who had a higher level and a lower level could deepen on the revision of the grammatical aspects under outside the classroom. Thus, the videos offered the opportunity to work on listening, undoubtedly one of the fundamental skills in the subject.

The last ten minutes were used to review the main aspects of the lesson using *Kahoot* so that students could choose between a correct and incorrect sentence, which facilitated that the teacher could see if the grammatical aspect under review was understood or if it an additional review was needed. The selection of *Kahoot* is justified because this gamification tool is well known and increases students' motivation by energizing the classroom while reviewing the main grammar points reviewed in each class. Also, this tool was chosen because it is free and easy to use.

Kahoot can be used from any mobile phone and allows students reviewing or putting into practice what they have learned in a playful way. In this way, it integrates games, learning and new technologies in the teaching-learning process. In fact, *Kahoot* promotes competition in the classroom, because the student who wins is the one who chooses the correct answer in the shortest time possible. After each question, the correct answer is offered, as well as the results of each student and the grade obtained.

4.2 Results of the questionnaire

When asking the students in the first question if they enjoyed participating in the *Kahoots* used every week in the grammar class, 97.3 % offered an affirmative answer, while 2.8 % answered negatively. When students were asked about the reasons to justify their choice in question 2, the majority pointed out that *Kahoot* is fun, it makes the class more dynamic, because it allows seeing errors clearly and working to improve them, thanks to *Kahoot* learning can take place through play, it facilitates the revision of what has been learned, it allows putting into practice the theory that is reviewed in each grammar class, etc. Students who offered a negative answer indicated that they preferred to review grammar at home and work on their notes independently.

When students were asked to reflect on the strengths of *Kahoot*, the vast majority highlighted the dynamism it offers in grammar classes, fun and the encouragement of participation. Creativity, innovation and cooperation are less prominent. 100 % of the students surveyed responded positively to question 4 when asked if *Kahoot* has been useful to review the different grammatical topics studied during the semester. In question 5, the students were asked if the use of *Kahoot* had motivated them to review the grammar topics before the class. 81.1 % offer a positive response compared to 18.9 % who responded negatively.

In question 6, a *Likert* scale was used to find out up to what extent

the use of *Kahoot* had motivated students to review the grammar topics in the classroom, and the results are as follows: 2.7 % choose 1 and 2, 21.6 % choose 3, 45.9 % choose 4, and 27 % choose 5, that is, almost 75 % of the students choose the highest score, so we can deduce that *Kahoot* influences the preparation of topics before class.

Similarly, in question 7, a *Likert* scale was also used to find out if the students consider that *Kahoot* has contributed to learning grammar: 2.7 % marked 1, 5.4 % marked 2, 18.9 % selected 3, almost 50 %, specifically 45.9 % chose 4 and, finally, 27 % chose 5. Therefore, as in the previous question, almost 75 % of the students chose 4 and 5, so that it can be deduced that *Kahoot* was considered a tool that facilitates the way in which students learn grammar.

Students offered diverse answers in question 8 when they were asked about the main advantages of using *Kahoot*, for example, the quizzes indicate the grammatical aspects that must be reviewed in more detail if the answer is incorrect, the questions in *Kahoot* invite them to review the grammatical explanation offered in class, it motivates participation, fun, it is useful to discuss with the rest of the class the aspects that need to be reviewed, it allows competing with the rest of the students and this encourages the revision of grammar, it breaks the monotony of the class, etc.

In question 9, the main disadvantages that students point out when using *Kahoot* are: the example goes deeper than the theory that confirms whether it is correct or incorrect,

the aspect that needs revision can be forgotten, it can be distracting, there is limited time to answer the questions, it is necessary to have a telephone or a computer to use *Kahoot*. There were many students who indicated that they did not find negative aspects in the use of *Kahoot*. Finally, in question 10, students were asked how else could *Kahoot* be used in other subjects and they mention: to teach or review vocabulary, new expressions or phrasal verbs, to break the monotony in long classes, to ask questions about the topic presented in oral presentations, among others.

5. DISCUSSION

Encouraging participation in grammar classes is essential in order to check that students acquire the concepts. Thus, we agree with Medina et al. (2016) that teaching by asking is a good practice because it promotes students' participation and involvement in the classroom. In this sense, the selection of *Kahoot* was motivated by the fact that it was a free application or a website that allowed the teacher creating questionnaires on each of the grammatical topics reviewed to verify that the knowledge of each topic had been acquired, as well as to observe the grammar areas that needed improvement. For example, the day the topic of subject-verb agreement was revised, the teacher explained that when the subject follows the verb, it must agree with it, as can be seen in this example: "Among the important researchers was a friend of mine" and the students claimed to have understood this aspect. However, using *Kahoot* at the end of the class to review this grammatical aspect by

asking which of these sentences was correct: a) “Among the politicians was a friend of mine” and b) “Among the politicians were a friend of mine”, the teacher was surprised by the fact that one third of the students chose sentence b) because they understood that ‘Among the politicians’ was the subject.

In this sense, *Kahoot* is useful to identify in a playful way if there is any aspect that needs revision. That is, after the use of *Kahoot* at the end of all grammar classes, on the one hand, the teacher could check if all the students had understood the grammatical aspects explained by offering a correct answer. On the other hand, if any student/s offered an incorrect answer, the teacher deduced that they had not understood the topic under revision and asked one of the students who had answered correctly to justify the correct answer. In this way, students who want to work as teachers in the future had an opportunity to explain the grammatical aspect under study to their classmates.

The gamification experience presented in this article shows that using *Kahoot* in English grammar classes contributes to making dynamic the teaching of grammar and to motivating students to participate in class by having to answer the questions to review the weekly grammar topics using electronic devices. Therefore, its use contributes to increasing students’ commitment in their learning thanks to the fact that they learn in a playful way. In addition, the teacher receives feedback on the knowledge and difficulties of each student when observing the answers, which allows

her deepening on the grammatical aspects that show greater complexity.

Having to choose the correct answer in a limited time using *Kahoot* encourages competition and the fact that in some cases the students choose the answer by agreeing with the people sitting nearby encourages cooperation. It is observed, therefore, how the game entails the acquisition of skills that enhance personal development, among which the social ones (communication, cooperation, leadership, etc.) stand out. Thus, the game enhances egalitarian relationships while learning and the increase in skills and abilities that help overcome difficulties (Córdoba et al., 2017; Tamayo & Restrepo, 2016).

In addition, we consider that opting for a gamification process framed in the principles of the flipped classroom, as we have done in this article, contributes to students’ empowerment by offering them the opportunity to manage their time outside the classroom while making the most of the lecture time, in which it is necessary to have done previous work, such as having reviewed the grammar topics and having done the exercises for each topic in order to put into practice what they have learned, to apply theory to practice and to observe possible difficulties or doubts that may arise in class.

The didactic experience presented goes beyond the acquisition of knowledge by offering students the possibility of preparing classes in advance with the materials provided by teachers and reflecting on the difficulties encountered before classes. Consequently,

“The didactic experience presented goes beyond the acquisition of knowledge by offering students the possibility of preparing classes in advance with the materials provided by teachers”

competencies such as leadership, time management, communication or cooperation occupy a central place in the teaching-learning process.

6. CONCLUSIONS

The didactic proposal that we have presented in this article strengthens that Kahoot facilitates that grammatical knowledge is revised in a playful way while the students registered in the subject are responsible of their learning. Thus, *Kahoot* dynamizes the teaching-learning process by rewarding the highest number of correct answers and the fastest answers of the students, so that game and competition are combined while learning. *Kahoot* also encourages motivation and creativity as it facilitates collaborating, creating, sharing knowledge, investigating and communicating because it is an interactive and dynamic resource. In other words, students are motivated and have fun while

learning and revising English grammar, a fact that is linked to their active participation and role in the teaching-learning process.

The specific objective of the gamification experience presented in this article was to make grammar classes more dynamic, but in a collateral way a secondary result has also been achieved because students developed a positive attitude towards learning grammar (see results of the questionnaire) during the teaching-learning process. In other words, gamification contributes to improving students' learning and to actively involving them in the classroom. This means that students no longer have a passive, introverted and inconspicuous role. Thanks to the gamification experience presented in this article, the learning of reading, writing, speaking, collaboration and interaction is enhanced, as well as the revision of grammar.

REFERENCES

- Abt, C.C. (1987). *Serious Games*. University Press of America.
- Amaya, I. & Bajaña, J. (2020). The use of gamification to enhance the English as a foreign language. *Polo del Conocimiento*, 43(5), 865-881. <https://doi.org/10.23857/pc.v5i3.1388>
- Bernardo, P., Gómez, A. & Vergara, D. (2021). Gamificación en aulas bilingües de secundaria: una experiencia educativa. *Encuentro*, 29, 1-16.
- Bilgin, C. & Gul, A. (2020). Investigating the effectiveness of gamification on group cohesion, attitude, and academic achievement in collaborative learning environments. *TechTrends*, 64(1), 124-136. <https://doi.org/10.1007/s11528-019-00442-x>
- Boquete, G. (2014). El juego dramático en la práctica de las destrezas orales. ASELE.
- Buckley, P., Doyle, E. & Doyle, S. (2017). Game On! Students' perceptions of gamified learning. *Educational Technology & Society*, 20(3), 1-10. <https://bit.ly/2U5rMjL>
- Calabor, M., Mora, A. & Moya, S. (2017). Adquisición de competencias a través de juegos serios en el área contable: un análisis empírico. *Revista de Contabilidad*, 7, 1-10. <https://doi.org/10.1016/j.rcsar.2016.11.001>
- Calvo, V. & López, M. (2021). University classroom gamification: a “reverse escape room” experience. *REDU. Revista de Docencia Universitaria*, 19(1), 45-74. <https://doi.org/10.4995/redu.2021.15666>
- Cantador, I. (2015). La competición como mecánica de gamificación en el aula: Una experiencia aplicando aprendizaje basado en problemas y aprendizaje cooperativo. In R. Contreras Espinosa & J. L. Eguía (Eds.), *Gamificación en aulas universitarias* (pp. 68-97). Bellaterra.
- Caponetto, I, Earp, J. & Ott, M. (2014). Gamification and education: a literature review. In C. Busch (Ed.), *Proceedings of the 8th European Conference on Games- Based Learning - ECGBL* (pp. 50-57). Academic conferences and publishing international Limited.
- Contreras, R. (2016). Presentación. Juegos digitales y gamificación aplicados en el ámbito de la educación. *RIED. Revista Iberoamericana de Educación a Distancia*, 19(2), 27-33. <http://dx.doi.org/10.5944/ried.19.2.16143>
- Córdoba, E., Lara, F. & García, A. (2017). El juego como estrategia lúdica para la educación inclusiva del buen vivir. *ENSAYOS, Revista de la Facultad de Educación de Albacete*, 32(1), 81-92.
- De Soto, I. (2018). Herramientas de gamificación para el aprendizaje de ciencias de la tierra. *EduTec. Revista Electrónica de Tecnología Educativa*, 65, 29-39. <https://>

doi.org/10.21556/edutec.2018.65.1143

- Deterding, S. (2012). Gamification: designing for motivation. *Interactions*, 19(4), 14-17.
- Deterding, S., Dixon, D., Khaled, R. & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 9-15). ACM. <http://dx.doi.org/10.1145/2181037.2181040>
- Fernández, P., Ordóñez, E., Vergara, D. & Gómez, A. (2020). La gamificación como técnica de adquisición de competencias sociales. *Prisma Social*, 31, 388-409.
- Figuroa, J. (2015). Using gamification to enhance second language learning. *Digital Education Review*, 27, 32-54.
- Gabarrón, Á., Pino, A., Salvadores, C. & Trujillo, F. (2020). Tecnología para la enseñanza y el aprendizaje de lenguas extranjeras. La enseñanza de lenguas asistida por ordenador. Pasado, presente y futuro. *Pragmalingüística*, 28, 238-254.
- Gil, J. & Cantillo, C. (2018). Las relaciones interactivas en el coaching educativo, base imprescindible para la gamificación. In R. Marfil-Carmona, S. Osuna-Acedo & P. González-Aldea (Eds.), *Innovación y esfuerzo investigador en la Educación Mediática contemporánea* (pp. 175-192). Egregius Ediciones.
- González, F. & Lasagabaster, D. (2019). Enhancing L2 Motivation and English Proficiency through Technology. *Complutense Journal of English Studies*, 27, 59-78.
- Hewings, M. (2013). *Advanced Grammar in Use* (3rd ed.). Cambridge University Press.
- Kapp, K. (2012). *The gamification of learning and instruction: Game-based methods and strategies for training and education*. John Wiley.
- Llorente, C., Gil, J. & Hurtado, A. (2022). Editorial. *Alteridad. Revista de Educación*, 17(1), 7-10.
- Marín, V. (2015). La gamificación educativa: una alternativa para la enseñanza creativa. *Digital Education Journal*, 90, 1-4.
- Martínez, G. (2017). Tecnologías y nuevas tendencias en educación: aprender jugando. El caso de Kahoot. *Opción*, 83, 252-277.
- McGonigal, J. (2011). *Reality is broken: why games make us better and how they can change the world*. Penguin Press.
- Medina, J., Cruz, L. & Jarauta, B. (2016). La dimensión dialógico-reflexiva del conocimiento didáctico del contenido en la docencia universitaria. *Revista de*

- Educación, 374, 69-93. <https://doi.org/10.4438/1988-592X-RE-2016-374-326>
- Miller, C. (2013). The gamification of education. *Developments in business simulation and experiential learning*, 40, 196-200.
- Moliní, F. & Sánchez, D. (2019). Fomentar la participación en clase de los estudiantes universitarios y evaluarla. *REDU, Revista de Docencia Universitaria*, 17(1), 211-227.
- Montoya, A., Moss, S. & Riestra, B. (2019). Kahoot! y Challenge, recursos online para las asignaturas de “Lengua española” y “Lengua inglesa” en los grados de Traducción y Comunicación Intercultural, Publicidad y Relaciones Públicas y Turismo. In E. de la Torre Fernández (Ed.), *Contextos universitarios transformadores: construyendo espacios de aprendizaje*. III Jornadas de Innovación Docente (pp. 57-70). Universidade da Coruña. <https://doi.org/10.17979/spudc.9788497497121.057>
- Oliva, H. A. (2017). La gamificación como estrategia metodológica en el contexto educativo universitario. *Realidad y Reflexión*, 44, 29-47. <https://doi.org/10.5377/ryr.v44i0.3563>
- Prieto, J. (2020). Una revisión sistemática sobre gamificación, motivación y aprendizaje en universitarios. *Teri*, 32(1), 73-99. <http://dx.doi.org/10.14201/teri.20625>
- Putz, L., Hofbauer, F. & Treiblmaier, H. (2020). Can gamification help to improve education? Findings from a longitudinal study. *Computers in Human Behavior*, 110, 106392. <https://doi.org/10.1016/j.chb.2020.106392>
- Salvador, C. (2021). Gamificando en tiempos de coronavirus: el estudio de un caso. *RED. Revista Educación a Distancia*, 65(21), 1-20. <https://doi.org/10.6018/red.439981>
- Seixas, L., Gomes, A. & de Melo, I. (2016). Effectiveness of gamification in the engagement of students. *Computers in Human Behavior*, 58, 48-63.
- Strickland, H. & Kaylor, S. (2016). Bringing your a-game: Educational gaming for student success. *Nurse Education Today*, 40, 101-103. <http://doi.org/10.1016/j.nedt.2016.02.014>
- Tamayo, A. & Restrepo, J. (2016). El juego como mediación pedagógica en la comunidad de una institución de protección, una experiencia llena de sentidos. *Revista Latinoamericana de Estudios Educativos*, 13(1), 105-128. <https://doi.org/10.17151/rlee.2017.13.1.6>
- Treiblmaier, H., Putz, L. & Lowry, P. (2018). Setting a definition, context, and theory-based research agenda for the gamification of non-gaming applications. *Association for Information Systems Transactions on Human-Computer Interaction (THCI)*, 10(3), 129-163. <https://doi.org/10.17705/1thci.0010>

Urh, M., Vukovic, G. & Jereb, E. (2015). The model for introduction of gamification into e-learning in higher education. *Procedia-Social and Behavioral Science*, 197, 388-397.

Villalustre, L. & Del Moral, M. (2015). Gamificación: Estrategia para optimizar el proceso de aprendizaje y la adquisición de competencias en contextos universitarios. *Digital Education Review*, 27, 13-31.

Werbach, K. (2014). (Re) Defining gamification: a process approach, persuasive technology. *Lecture Notes in Computer Science*, 8462, 266-272. https://doi.org/10.1007/978-3-319-07127-5_23.

Werbach, K. & Hunter, D. (2012). *For the win: How game thinking can revolutionize your business*. Wharton Digital Press.