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The Use of ICT-mediated Gamification in Teaching English as a Foreign Language: A Systematic Review

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Abstract

Gamification is widely used in various educational settings. In teaching English as a foreign language, it has proven to enhance motivation and engagement in diverse learning processes and across different proficiency levels. This systematic review (SLR) is the result of a research project, and aims to present the most used methodologies, approaches, and frameworks for teaching English as a foreign language involving gamification mediated by ICT tools. Furthermore, the emphasis of this systematic literature review is to demonstrate how gamification has enhanced the educational experience over the last 5 years, showcasing the benefits it may offer in foreign-language teaching and learning processes, whether in a hybrid, face-to-face, or entirely virtual methodology.

Keywords: Gamification; TEFL; ICT; CLIL; Communicative Approach.

[es] El uso de la gamificación mediada por las TIC en la enseñanza del inglés como lengua extranjera: Una revisión sistemática

Resumen

La gamificación se utiliza ampliamente en diversos entornos educativos. En la enseñanza del inglés

como lengua extranjera, se ha demostrado que mejora la motivación y el compromiso en diversos procesos de aprendizaje y a través de diferentes niveles de competencia. Esta revisión sistemática (SLR) es el resultado de un proyecto de investigación y tiene como objetivo presentar las metodologías, enfoques y marcos más utilizados para la enseñanza del inglés como lengua extranjera con gamificación mediada por herramientas TIC. Además, el énfasis de esta revisión sistemática de la literatura es demostrar cómo la gamificación ha mejorado la experiencia educativa en los últimos 5 años, mostrando los beneficios que puede ofrecer en los procesos de enseñanza y aprendizaje de lenguas extranjeras, ya sea en una metodología híbrida, presencial o totalmente virtual.

Palabras clave: Gamificación, TEFL, ICT, CLIL, Enfoque comunicativo.

Sumario: 1. Introduction. 2. Literature review. 2.1. Theoretical Framework Related to Gamification 2.2. Learning and Teaching Foreign Languages in the 21st Century. 3. Methodology. 3.1. Research Questions. 3.2. Search Process. 3.3. Selection Criteria. 3.3.1. Inclusion Criteria (IC). 3.3.2. Quality Criteria (QC). 3.4. Prisma. 4. Results. 4.1. Mapping Results. 4.2. SLR Results. 5. Conclusion. 6. References

1. Introduction

Gamification is increasingly being used in teaching English as a foreign language (TEFL) for various reasons. It is mainly used to improve language skills and to make learning more engaging. When combined with technologies like virtual reality (VR) or augmented reality (AR), gamification helps to create realistic settings that help learners face different linguistic challenges. It is also widely used to make learning environments more interactive. It helps all the different kinds of learners, keeping their needs in mind.

We have carried out a research study on the use of gamified resources, game-based learning, and serious games. The goal of this research is to give a summary of existing research providing a comprehensive overview of the field's current state, with the aim of identifying benefits and possible drawbacks, informing about practices educators and practitioners can use and guiding future research. To achieve this, we have conducted a mapping study (Kitchenham et al., 2011) and a systematic literature review (SLR) (García-Peñalvo, 2022). These methodologies aim to collect and analyze information following an organized and reproducible process.

In order to maintain a structured approach concerning these two research methodologies (mapping and SLR), a set of research questions is formulated. With their predefined design, they facilitate the exploration of existing literature on this research topic (gamification, game-based learning, and serious games for teaching foreign languages). This structured and organized process primarily aims to optimize the analysis of vast amounts of data. Similarly, it enables transparent research that can be effectively reproduced by other individuals or institutions.

The research journey begins with a mapping study which provides a comprehensive overview of the field of gamification, game-based learning, and the use of serious games in teaching English as a foreign language. This mapping study not only keeps us aligned to various international publications but also helps to identify the most influential authors and magazines in the research field. Next, the SLR aims to address the research questions and methodologies used across studies. It presents the most common variables and limitations in previously conducted research processes. These studies have allowed for a comprehensive examination to be conducted. They have also revealed a lack of methodological clarity, despite a global presence and application across educational demographics (primary schools, high schools, institutes, and universities). Studies tend to prioritize the success of the use of gamification strategies over explaining the instructional methods or teaching approaches used, thereby sidelining valuable insights into the pedagogical processes.

In summary, these two data collection methodologies will provide detailed information on the subject with direct perspectives from various research works. Similarly, they will offer a broader view of the research status (García-Peñalvo, 2022; Kitchenham et al., 2011) guiding future research opportunities and further analysis.

Following the methodology proposed by Cruz-Benito et al., 2019, this article will be organized into three parts. The first part will feature the selected methodology, the incorporated research questions, and the criteria used for inclusion, also, the repositories used, including the selection of articles or resources. Moving forward, in the second part, the research questions will be answered based on the obtained results. Finally, the chapter will reveal the limitations encountered during the application of this review and data collection.

2. Literature review

2.1. Theoretical Frameworks related to Gamification

There are currently various definitions of gamification. Many of them are linked to different theories or teaching-learning frameworks. The most common one defines gamification as the use of game elements in different areas of knowledge with the aim to achieve a goal. This goal can be educational and, in some cases, commercial – in both cases it has a high impact on engagement and motivation" (Becker, 2021; Figueroa et al., n.d.; Yaroshenko et al., 2022). For the purpose of this article, we will focus on different methodologies and frameworks related specifically to gamification for teaching English as a foreign language.

From the articles used for this systematic review, we have selected and defined the most used concepts, such as Quest-based learning. Authors Ashe More and Nitché (2007) state that Quest-based learning is a set of challenges that include objectives, instructions, and rewards given to students to complete an educational practice. Kapp (2012), on the other hand, argues that Quest-based learning is just one component of gamification with the potential to support different pedagogies by increasing motivation (Philpott & Son, 2022b).

Another common concept is serious games. Serious games are digital games created for educational purposes. This type of video game has many gamification elements: levels, rankings, rewards, etc. It is not to be confused with game-based learning – game-based learning is an educational approach that allows active and participatory learning through gaming and exploration, whether digital or not (Becker, 2021; Junttila et al., 2023; Philpott & Son, 2022a). These approaches and methodologies naturally motivate students as they incorporate exploration as a process of knowledge discovery (Chen, 2022).

Moreover, virtual reality and augmented reality are increasingly present in teaching-learning processes. However, the two have significant differences. Virtual reality in language teaching-learning allows the simulation of 3D environments for educational immersion, providing the possibility to create educational processes where language learning is not isolated from cultural processes. It is important to note that language learning includes cultural aspects, language use, and other linguistic, sociolinguistic, and intercultural aspects. Additionally, the creation of these simulated environments helps to practice language in context (Khodabandeh, 2023). On the other hand, augmented reality adds virtual elements to the real environment, enabling exploration and vocabulary acquisition in foreign language teaching (Symonenko et al., 2020).

Similarly, it enables the creation of different gamification processes such as escape rooms and treasure hunts, among others. In summary, the most notable difference is that augmented reality interacts with the real world, expanding information or experience for users, while virtual reality creates entirely simulated experiences.

The use of educational mobile applications has been increasing in the last decade as well. Nowadays there are many applications designed for teaching and learning various subjects. In the case of teaching English as a foreign language, these applications use many gamification elements in their design (Chen et al., 2019; Fithriani, 2021). This is aimed at motivating students, attracting attention, and achieving student engagement.

As we can see, thanks to the volume of articles published and the different research studies, we can confidently say that gamification can have a positive effect on teaching English as a foreign language. This positive effect is evidenced by teachers' and students' acceptance of the use of gamification. Not only that: gamification can significantly improve the learning of the foreign language (Asiri, 2019; Fernández-Portero & Castillo-Rodríguez, n.d.; Qiao et al., 2022).

However, it is worth mentioning that most of the above-mentioned methodologies and approaches have been implemented within isolated frameworks. This suggests a significant proportion of researchers have concentrated their efforts on gamification (including game-based learning, serious games, among others), often neglecting its integration with TEFL methodologies. Certain studies have relegated their TEFL methodology or approach to a secondary role.

However, it is necessary to consider gamification and all related concepts as components of a broader pedagogical integration. Such integration could potentially enhance established pedagogical theories by ensuring that gamified activities or courses are fully aligned with learning objectives and outcomes. Furthermore, it could facilitate the exploration of cultural aspects of language use – in fact, successful gamification may require adaptation depending on the sociocultural context (Demirbilek et al., 2022). This being said, future research should aim to uncover the pedagogical processes behind successful gamification practices, which could help educators design more effective gamified activities, thereby reducing foreign language anxiety (FLA) and enhancing all language skills (Chen et al., 2022).

2.2. Learning and Teaching Foreign Languages in the 21st Century

The teaching of foreign languages has evolved over time, and different methods and methodologies have been used. Among the most effective ones nowadays, we find CLIL (Content and Language Integrated Learning). CLIL is a teaching methodology through subjects and is mainly used in teaching foreign languages and second languages (Hurajova, 2019). Its purpose is to achieve a high language level through content that facilitates language acquisition, incorporating the reading of academic and authentic texts that motivate discussion (Khatoony, 2019).

Countless methodologies, approaches, and practices could be mentioned when talking about teaching foreign languages. However, since the 1970s and 80s, one of the most widely used approaches after its appearance has been the communicative approach (Sánchez Freire & Pérez Barral, 2020). The communicative approach prioritizes the development of language communicative competence, focusing on practice for real interaction, emphasizing oral comprehension, written expression, etc. (Quitian, 2022).

Another important concept to consider in nowadays' teaching of foreign languages is interculturality, which refers to the integration and understanding of different cultures during the language learning process. It promotes respect and appreciation of the differences among students to enrich the linguistic experience (Serna Dimas et al., 2016). All the above aims to encourage effective communication in multicultural contexts (Vargas Berra, 2021).

On another hand, among the most common and complex problems in teaching foreign languages is the anxiety known as FLA. In their article, Chen Y, Zhan et Yin Hua (2022) present a comprehensive definition. FLA can affect foreign language learning both negatively and positively. Depending on the level of anxiety, it can be positive as it helps the learner overcome fears and face communicative situations in different contexts. However, if the level of anxiety is high, it can cause stress and blocks in the learning process. Additionally, FLA can lead to lack of confidence and fear of negative evaluation.

As educators in the 21st century, it is crucial to be aware of the different existing frameworks, methodologies, and approaches. Understanding them can help instructors incorporate diverse tools and strategies into their practice, fostering innovation while considering the needs of learners.

Content will continue to be an excuse for learning foreign languages. This, however, does not imply a disregard for the formal aspects of language. In fact, heightened awareness can facilitate language skill acquisitions, given the context and intercultural value it brings. Moreover, all these methods and approaches must include evaluation and feedback. It does not matter whether the course is online, blended, or face-to-face. Feedback serves as a critical tool for both learners and educators to identify, understand and rectify potential errors and gaps. As education is an ever-evolving field, the importance of continual updates and rectifications cannot be overstated.

3. Methodology

Next, the methodology used in the research will be described. Additionally, the process undertaken in conducting the search and selection of articles included during the literature review will be detailed.

3.1. Research Questions

As a first step in conducting any systematic review, the creation of research questions is the starting point, as it is these questions that guide and give meaning to the research (Kitchenham et al., 2011).

With the above in mind, the following questions are posed to guide the process of selecting articles and resources for conducting the mapping:

- **QM1** How has the scientific production on the subject of gamification, game-based learning, or video games in teaching foreign languages evolved?
- **QM2** Who are the most relevant authors on the subject?
- **QM3** Which journals are more specialized in the subject?
- **QM4** At what educational level have elements of gamification, game-based learning, or video games been implemented in teaching foreign languages?

On the other hand, the following questions have been proposed for the SLR with the purpose of thoroughly exploring the content of the resources found in terms of variables, methodology, and limitations:

- **QR1** What elements of gamification, game-based learning, or video games have been used in teaching foreign languages?
- **QR2** Under what framework has the concept of gamification been worked on?
- **QR3** What methodology has been implemented when teaching a foreign language mediated by ICT?
- **QR4** What is the perspective of the participants on the teaching-learning methodology?

3.2. Search Process

The search and data collection were conducted in Web of Science (WoS) and Scopus. These two databases were chosen because they allow access to articles from the institutional account and, in some cases, from a personal account. Additionally, they enable effective advanced search strings, which in turn allow for the delimitation and discovery of articles related to the subject in question. The search in the databases was conducted in TITLE-ABS-KEY with a limitation of the last five years.

Below are the concepts or keywords used in the search and their possible synonyms. These keywords were chosen due to their high importance and significance in the research topic.

Table 1.
Search String

Keyword or Concept	Synonyms
Gamification	<i>"Gamification" OR "game elements" OR "game-based learning" OR "videogames" AND "serious games"</i>
Language	<i>"Language learning" OR "Language teaching" OR "Foreign language"</i>
General	<i>"gamification" OR "game elements" OR "gamified" OR "serious games" AND "English as a foreign language"</i>
SCOPUS	<i>TITLE-ABS-KEY (gamification "OR"game elements" OR gamified OR "serious games" AND "English as a foreign language") AND PUBYEAR</i>

> 2018 AND PUBYEAR < 2024 [Link](#)

WOS

Results for: gamification OR game elements OR gamified OR serious games AND English as a foreign language (Topic) AND English (Language) AND gamification OR game elements OR gamified OR serious games AND English as a foreign language (Abstract) and Gamification (Should – Search within topic) and Foreign Language (Search within topic) [Link](#)

3.3. Selection Criteria

After presenting the questions, inclusion and exclusion criteria for material are designed to select only relevant resources for this research. The inclusion criteria are presented below:

3.3.1. Inclusion Criteria (IC)

- **IC1.** The research is related to gamification, gamified elements, video games (serious games), and the teaching of English as a foreign language.
- **IC2.** The texts are written in English.
- **IC3.** The texts have been published within the last five (5) years.
- **IC4.** The works have been indexed in WoS and Scopus.

For publications to be selected in this systematic literature review, they must meet all the criteria presented above. The following section aims to ensure the quality of the review and article selection. For this purpose, the following questions are proposed:

3.3.2. Quality Criteria (QC)

- **QC1.** The research presents research questions and objectives clearly.
- **QC2.** The data allow addressing the stated questions and objectives.
- **QC3.** The research methodology is clear and well-explained.
- **QC4.** All research questions posed are answered.
- **QC5.** Conclusions are entirely linked to the data presented by the research.
- **QC6.** Elements of gamification, game-based learning, or video games have been used in teaching English as a foreign language.
- **QC7.** A conceptual framework of the gamification concept is defined.
- **QC8.** The methodology implemented in teaching English as a foreign language is defined.
- **QC9.** The participants' perspective regarding the use of gamified methodology is presented.
- **QC10.** The research develops a theoretical and/or empirical study in the educational or social sciences field.

To ensure thoroughness and transparency, a scoring rubric has been created. The total score per article will be 10 points. The rubric is divided into three parts: Does not meet, Meets, Partially Meets. Each item will have a maximum of 0.5. An article will receive a maximum score if it meets the presented criteria; otherwise, it will receive 0.25 when Partially Meets and 0 when it Does not Meet.

Below is the rubric used for the article review.

Table 2.

Quality Rubric

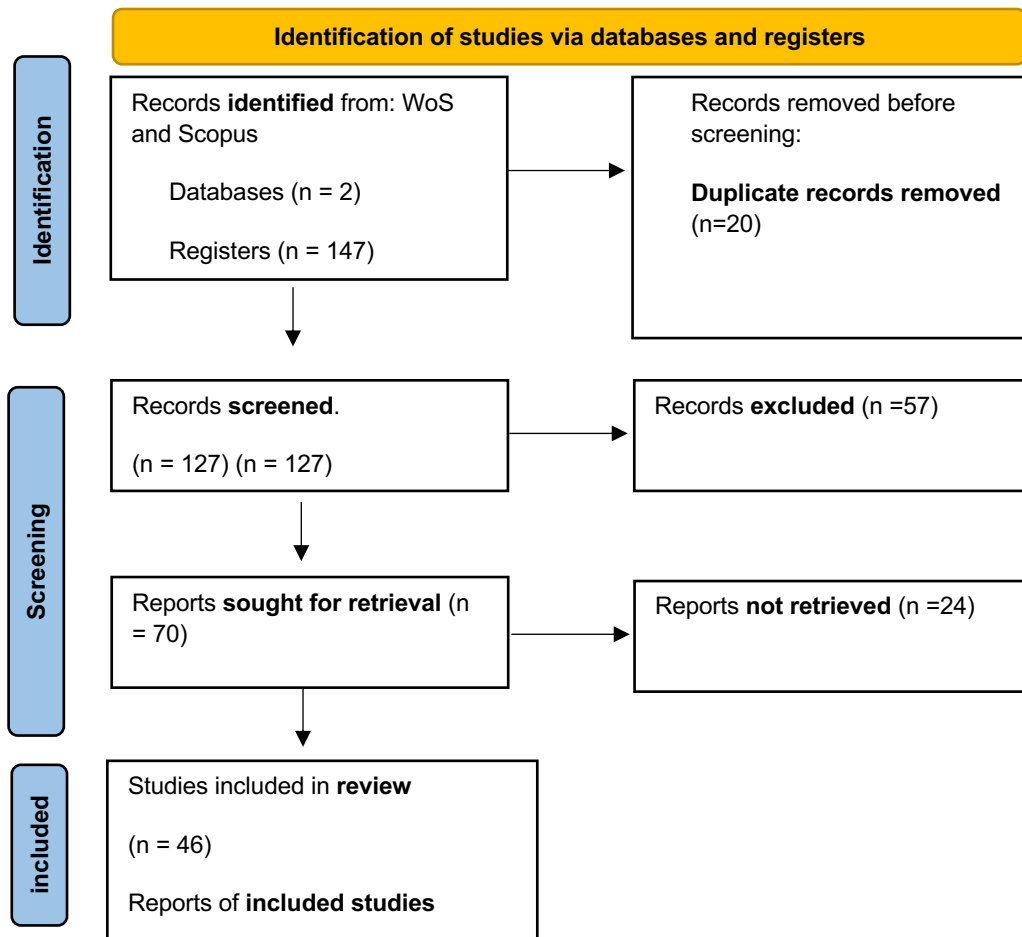
Quality Criteria (QC)	Does not meet	Partially meets	Meets	Score
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QC1. The research presents research questions and objectives clearly.	NO	Partially addresses them	Yes	0-0.5
QC2. The data allow addressing the stated questions and objectives.	NO	Partially addresses them	Yes	0-0.5
QC3. The research methodology is clear and well-explained.	NO	Not clear/not well explained.	Yes	0-0.5
QC4. All research questions posed are answered.	NO	Partially presented	Yes	0-0.5
QC5. Conclusions are entirely linked to the data presented by the research.	NO	Partially defined	Yes	0-0.5
QC6. Elements of gamification, game-based learning, or video games have been used in teaching English as a foreign language.	NO	N/a	Yes	0-0.5
QC7. A conceptual framework of the gamification concept is defined.	NO	Partially defined	Yes	0-0.5
QC8. The methodology implemented in teaching English as a foreign language is defined.	NO	Partially defined	Yes	0-0.5
QC9. The participants' perspective regarding the use of gamified methodology is presented.	NO	Partially presented	Yes	0-0.5
QC10. The research develops a theoretical and/or empirical study in the educational or social sciences field.	NO	It is not deep enough or is partially theoretical/empirical.	Yes	0-0.5
Total Score				10

3.4. Prisma

As can be seen, this review began with the search for research documents in two databases: WoS (Web of Science) and Scopus, where 146 articles were found through the previously presented search strings. Subsequently, the elimination of duplicate documents left a total of 127 reviewed articles. In

this phase, a quick review was conducted following the above-mentioned inclusion criteria. A total of 57 documents were excluded. Following this, a deeper review was carried out with the 70 documents that met the inclusion criteria. The thorough review was conducted according to the quality and scoring criteria presented in the rubric. Consequently, 24 more documents were excluded, resulting in a total of 46 documents included in the final phase of the systematic review.



NOTA. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*2021;372:n71. doi:10.1136/bmj.n71

4. Results

In this section, the detailed results of the questions posed during this chapter will be presented. After an in-depth reading, a total of 46 articles has been selected. First, the mapping study results will be disclosed. After that, the results of the systematic literature review (SLR) will be revealed.

4.1. Mapping Results

According to the data obtained from the mapping process, gamification, game-based learning, or video games in the teaching of foreign languages have been on the rise in recent years. Among the articles selected for the SLR, it is observed that, in the last 5 years, including the current year 2023, the year 2022 shows the highest number of publications, totaling 15 studies.

It is worth noting that the year 2023 is not yet finished, and this study covers the months from June to October. Therefore, more studies will still be included in 2023.

In total, there are 103 authors. Most of these authors participated with a single publication. The most prominent author in recent years is Yang Chen, who has made three publications in the years

2021, 2022, and 2023. These publications have been in collaboration with other authors. Additionally, there are various other notable authors:

Figure 1

Academic article writing on gamification in the last 5 years.

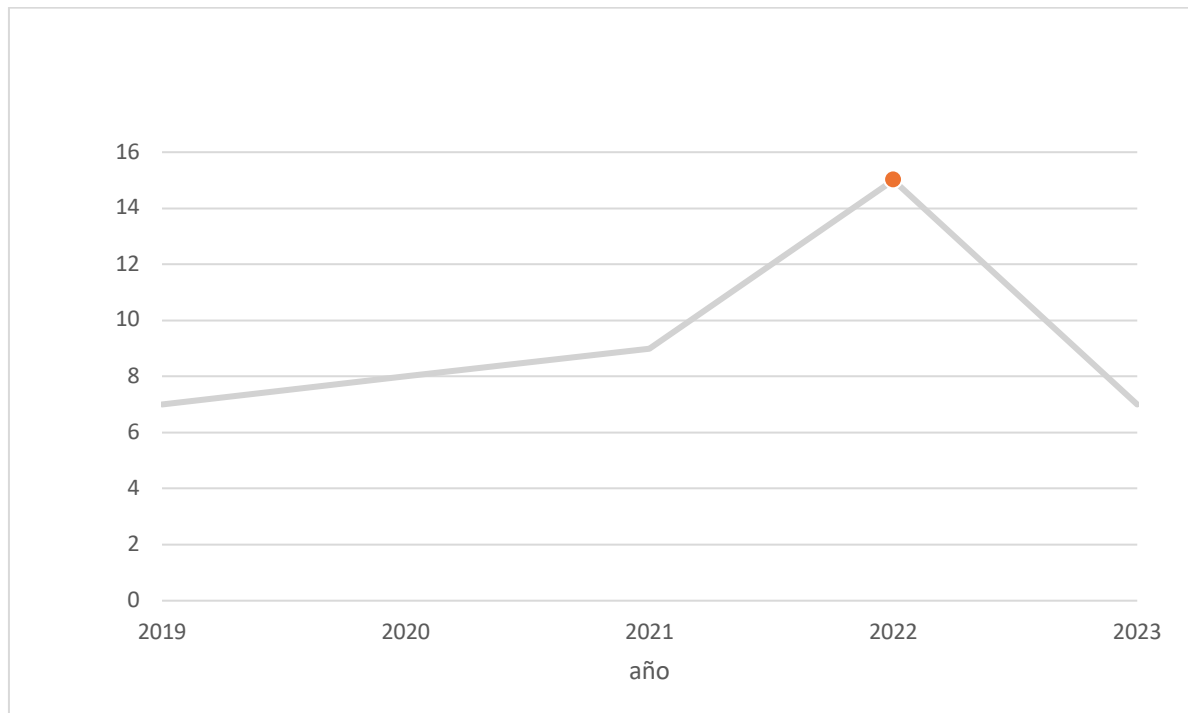


Table 2.

Featured authors in the last 5 years

Autor	Publications in the last 5 years
Yang Chen (2021, 2022, 2022)	3
Luying Zhang (2021, 2022), Shuang Zhao (2021, 2022), Katja Junttila (2022, 2023), Anna-Riikka Smolander (2022, 2023), Reima Karhila (2022, 2023), Mikko Kurimo (2022, 2023), Sari Ylinen (2022, 2023), Andrew Philpott (2022, 2022), Jeong-Bae Son (2022, 2022), Irene Rivera-Trigueros (2019, 2020), Sanchez-Perez (2019, 2020), Di Zou (2019, 2020).	2

On the other hand, among the selected publications, there is a wide variety of publications and type of studies. Some are part of books published from educational conferences in different cities. Similarly, there are various articles published in journals indexed in the WoS and Scopus databases.

Table 3.

Outstanding magazines in the last 5 years

Journals	Publications in the last 5 years
<i>iJET: International Journal of Emerging Technologies in Learning</i> <i>Sustainability</i> <i>Journal of Computer Assisted Language Learning</i>	3

- *International Journal of Technology in Education (IJTE)*
- *Educ Inf Technol*
- *Teaching English with Technology*
- *Computer Assisted Language Learning Electronic Journal*

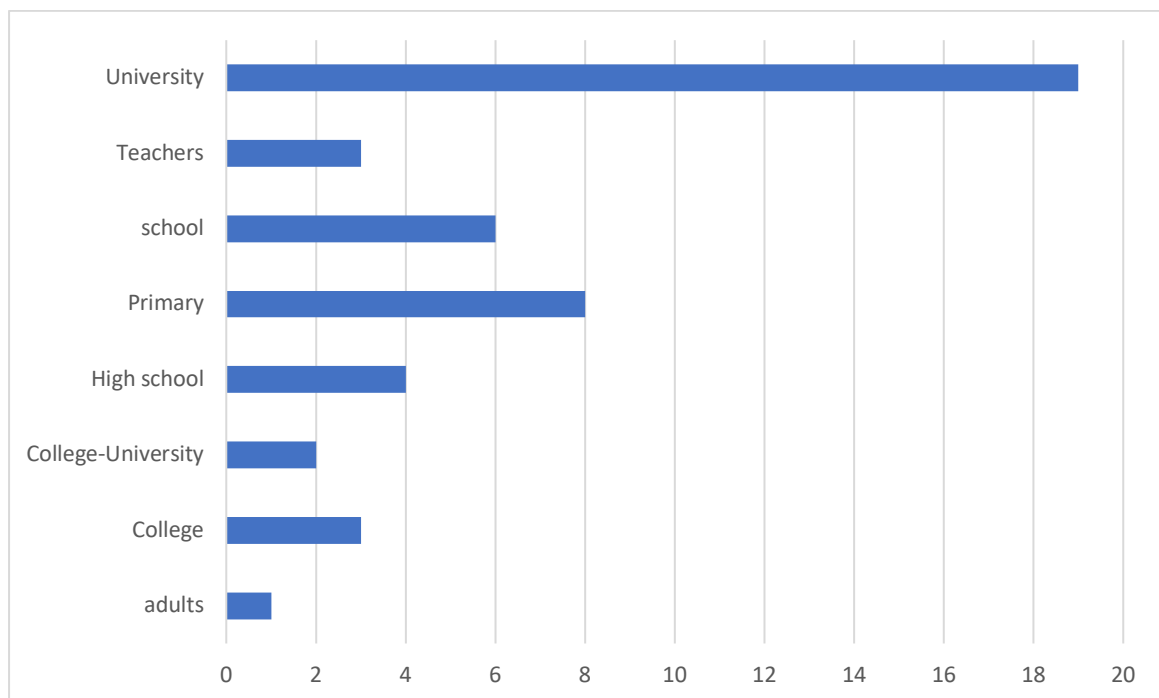
2

As shown in the previous graph, among the final 46 articles, three were published in the journals or books IJET, Sustainability, and Journal of Computer Assisted Language Learning. These journals stand out for contributing more articles to the topic in question over the last 5 years. Similarly, there are other journals and conference books that have contributed two articles in the same period.

On the other hand, the educational level where gamification, game-based learning, or video games have been most implemented in teaching foreign languages is within university contexts, accounting for 24 publications. This context includes pre-university types. Other contexts vary, with eight publications in primary education and ten publications in secondary or high school education. Additionally, there are studies conducted from a teacher's perspective with three publications, and one publication is not categorized in formal education but rather in adult education contexts.

Figure 2.

Educational level where gamification processes were carried out.



To conclude, here is a brief summary of the answers to the questions posed in the mapping:

Table 4.

Summary

Mapping	Publication in the last 5 years
QM1	<i>According to the results, the year 2022 shows the highest number of publications with a total of 15 studies.</i>
QM2	<i>The most prominent author in these last years is Yang Chen.</i>
QM3	<i>The journals or books IJET, Sustainability and Journal of Computer assisted language Learning. They are the most prominent in the subject in question.</i>

4.2. SLR Results

The first question of the SLR, QR1, focuses on the elements of gamification, game-based learning, or video games used in teaching foreign languages. To answer this question, the 46 articles that passed through different stages, from inclusion to exclusion and quality criteria, were analyzed.

All these included articles define gamification based on their research needs, choosing a specific theoretical framework to define gamification according to the tools used. These tools were M learning, mobile device learning, use of virtual reality, augmented reality, and serious games, both analog and virtual. However, the overall definition mostly portrays gamification as the use of gaming elements in educational contexts with the aim of facilitating learning (Junttila et al., 2022; Nurutdinova et al., 2021).

The 46 articles selected in the end encompass at least one of the following gamification elements: rewards, serious games, video games, or gamified assessments through platforms. Each article reflects activities involving role-playing, progress bars, point-ranking systems, and entirely game-based activities. However, each article presents a different objective and framework according to its needs.

Question 2 aims to specify under what framework the concept of gamification operates. The definitions of gamification all converge, but the tools and sometimes the theoretical frameworks used are different. These refer to methodologies or theories that use gamification elements or processes within their practices.

The following graph provides a more concise summary of some frameworks used for gamification:

Figure 3.

Most Common frameworks for Gamification



(Chen et al., 2019; Fithriani, 2021; Thékes & Szilvássy, 2021; Yassin & Abugohar). Additionally, the article presented by Chen & Zhao, 2022; Philpott & Son, 2022b showcases their work focusing on the acceptance of application use for learning and introduces the Self-determination theory (SDT) along with Self-regulated learning processes. These theories are also explored by other authors. Their work focuses on gamification and self-directed learning in different types of online education, namely hybrid and fully online courses (Qiao et al., 2022).

On the other hand, various authors propose using videos, online games, game-based learning, and other tools designed exclusively for educational purposes, known as serious games (Aguilar-Cruz et al., 2023; Al-Emran et al., 2022; López-Torres Julian, et al., 2023.; Massler et al., 2022; Nurutdinova

et al., 2021; Octaberlina & Rofiki, 2021; Torres-Rodriguez & Martínez-Granada, 2022; Yaroshenko et al., 2022; Zohud, 2019; Zou, 2020). Some authors have also used game-based learning through analog role-playing games, which are non-digital games (Freiermuth & Ito, 2022; Torres-Rodriguez & Martínez-Granada, 2022).

Some studies have researched and implemented gamification elements such as rankings, badges, computational thinking, simple problem-solving, mechanics, point systems, challenges incorporating task-based and quest-based learning, puzzles, levels, progress bars, etc., using various online platforms or an LMS (Barcomb & Cardoso, 2020; Cumbre-Coraizaca et al. 2023; Demirbilek et al., 2022; Freiermuth & Ito, 2022; Harvey Arce & Cuadros Valdivia, 2020; De la Cruz et al., 2022.; Philpott & Son, 2022a; Rivera-Trigueros, 2020.; Rueckert et al., 2020; Sanchez-Perez & Rivera Trigueros, 2019; Tamayo et al., n.d.; Zhihao & Zhonggen, 2022).

Generally, these studies aim to investigate the acceptance of gamification and to showcase teachers' and learners' perceptions of its use, as well as enhancing motivation for teaching and learning (Asiri, 2019; Chen, 2022; Fernández-Portero & Castillo-Rodríguez, n.d.; Fu et al., 2021; Liman Kaban & Karadeniz, 2021). The perception of using gamification is positive for both teachers and learners. Furthermore, gamification paves the way to explore deeper processes, such as FLA, as it makes teaching-learning processes more natural (Chen et al., 2022; Hong et al., 2022).

However, the study on FLA and Cognitive Load (CL) presented by Chen et al., (2022), has yielded contradictory results regarding the use of gamification and its impact on FLA. On one hand, their findings indicate no significant changes in either CL or FLA. However, they also show that the relationship between students' emotions and cognitive load is influenced by the design of gamification elements. In other words, gamification holds undeniable potential due to its ability to facilitate multifaceted processes that cater to populations with varying learning difficulties or disorders. Therefore, during the design phase, it is crucial to recognize individual differences among participants, consider sociocultural contexts, and account for other relevant aspects within the course (Chen et al., 2022).

Additionally, there are studies demonstrating changes in brain plasticity due to gamified learning processes (Junttila et al., 2022, 2023). These studies demonstrate that gamified processes with children enhance their ability to learn new sounds of a foreign language. Similarly, these processes cause a brain response that facilitates access to long-term memory representations (Junttila et al., 2022).

Question QR3 refers to the methodologies implemented when teaching a foreign language mediated by ICT. It is important to note that most studies minimally focus on language teaching-learning processes and instead emphasize gamification and technological components. Therefore, very few mention the methodologies used to carry out teaching and learning processes. However, authors like Barcomb & Cardoso, 2020; Castillo-Cuesta, 2020; Harvey Arce & Cuadros Valdivia, 2020; Korosidou & Bratitsis, n.d.; Liao et al., 2023; López-Torres, et al., 2023.; Massler et al., 2022; Torres-Rodríguez & Martínez-Granada, 2022, refer to some methodologies when teaching a foreign language mediated by ICT. Among these are the communicative approach, competency-based approach, active methodologies, content and language integrated learning (CLIL), and linguistic intercultural processes.

To conclude our systematic review, we will address question QR4, which explores how participants both teachers and students – perceive the utility of gamification in teaching-learning. The studies selected in this review (Asiri, 2019; Chen, 2022; Fernández-Portero & Castillo-Rodríguez, 2022.; Fu et al., 2021; Liman Kaban & Karadeniz, 2021) strongly support a highly positive perception towards this methodology or the incorporation of gamified elements. Authors examine how both teachers and students perceive and benefit from gamification in the educational process. Teachers manage to hold students' attention for longer periods and carry out a more natural process. Students highlight the ease of understanding topics and their increased natural participation and motivation.

In addition to the above, it is worth mentioning that teachers' perception is closely tied to students' oral production. By naturally increasing student participation, learners indirectly engage in longer dialogues, whether with or without errors. These extended interactions contribute to fluency, vocabulary acquisition, and other aspects of foreign language learning (Sanchez-Perez & Rivera Trigueros, 2019; Zohud, 2019).

When discussing online gamification processes, several studies highlight that students who engage with mobile applications, online games, and other gamified resources significantly improve their language skills and vocabulary usage. However, some educators emphasize that resource awareness and adequate preparation are essential for successful implementation of gamified practices. Furthermore, they suggest that designing tailored reward systems can mitigate excessive competitiveness, which may arise during gamification processes (Demirbilek et al., 2022, 2022).

However, there are also negative factors associated with the use of gamified resources or gamified processes. Both students and educators have observed that certain activities lead to negative dynamics due to noise and a lack of control. Additionally, online activities can result in a loss of attention when approached too liberally. Maintaining teacher guidance is crucial, especially in virtual or hybrid learning spaces, where it may pose a challenge (Chen & Zhao, 2022; Demirbilek et al., 2022; Sanchez-Perez & Rivera Trigueros, 2019; Zohud, 2019).

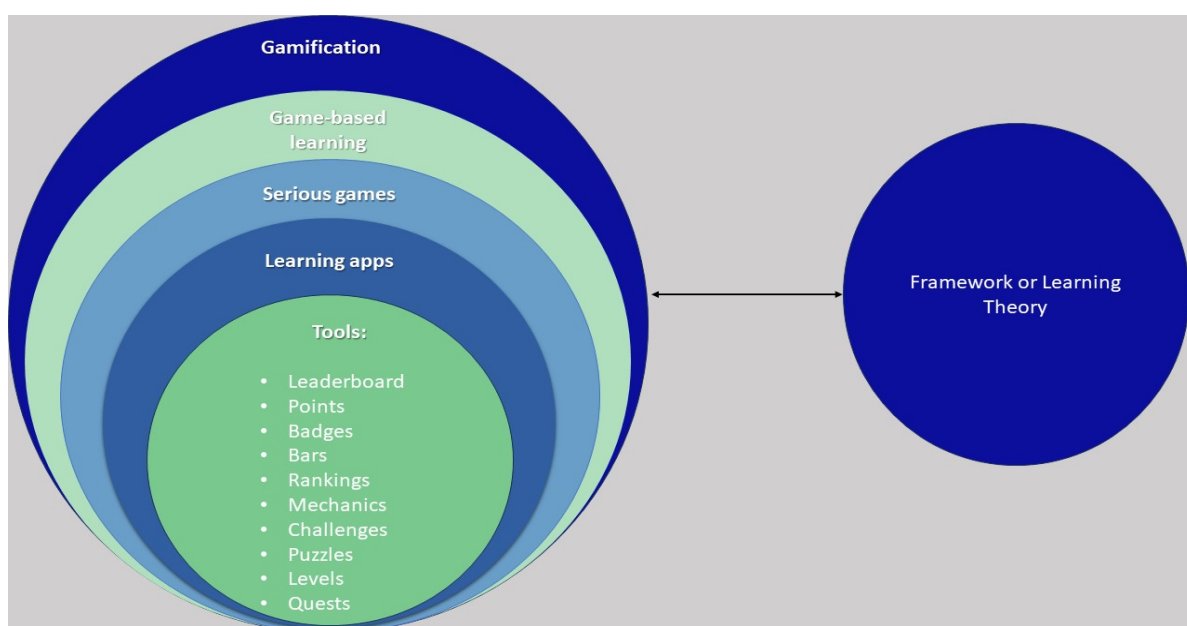
5. Conclusion

Both the mapping and the systematic literature review offer a comprehensive overview of gamification in English language learning. As detailed throughout this research, an objective article selection process was undertaken. Mapping and review methods require a detailed description of the steps followed to identify, select, and evaluate the studies included, enabling other researchers to follow and comprehend the review process. This ensures the analysis is detailed and transparent, allowing other researchers to reproduce the review, verify results, and potentially make updates or adjustments in evidence synthesis. Transparency and reproducibility are crucial for ensuring the validity and reliability of conclusions drawn in the systematic review.

From the mapping and SLR, it is evident that the use of gamification continues to increase across various fields, particularly in teaching English as a foreign language. Its usage is not limited to a single gamified platform or solely focused on motivation. Instead, gamification is viewed as a holistic concept for implementing game-based learning, serious games, among others. Moreover, its impact is positive for individuals experiencing foreign language anxiety, reducing their fear, nervousness, or discomfort in communicating in a foreign language due to teamwork and different dynamics it can produce in a class. Additionally, as presented in various articles, it enhances brain plasticity and improves participants' engagement, connection, and motivation, vocabulary and sounds acquisition in the course and long-term memory acquisition.

Figura 4.

Marco general para la utilización de la gamificación en la educación.



Furthermore, gamification offers a wide range of possibilities for promoting English language teaching and learning processes, spanning from linguistic components to the development of the four language skills. It not only aims to work on perception but also opens up study possibilities across various linguistic aspects and language skills.

Gamification does not exclude the use of different teaching-learning theories, whether technology-mediated or entirely analog. On the contrary, it is necessary to employ diverse methodologies to create educational spaces with clear objectives coherent with a well-defined methodology.

Despite the demonstrated positive impact on teaching and learning foreign languages, gamification research for teaching English as a foreign language has been more prevalent in higher education. Publications indicate that the majority of researchers conducted studies with university-level students. Therefore, it is crucial for educators at primary and secondary levels to engage in research activities, implementing and documenting new methodologies. This would facilitate the sharing of these experiences.

Potential innovations could explore the use of artificial intelligence in more complex gamified processes, incorporating level unlocks, badges, and guided support through entirely virtual courses. These innovations would not solely focus on certain language skills (e.g., writing or listening) but could also integrate speaking and pronunciation aspects. This approach aims to create a motivating environment for students, encouraging them to engage without fear of making mistakes.

6. References

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Conflicto de intereses

Los autores expresan que no existe conflicto de intereses en el trabajo realizado.

Contribución de autores

López-Torres Julián A: la concepción, diseño, búsqueda, selección, análisis y síntesis de la literatura, así como en la redacción y edición final del manuscrito.

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