Systematic Review

Impact of Gamification on Motivation and Academic Performance: A Systematic Review

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Abstract: This study aims to examine the existing evidence on gamification in educational settings, highlighting its impact on motivation and academic performance. Methodologically, a Systematic Literature Review (SLR) was developed under the PRISMA statement criteria using three multidisciplinary databases: Web of Science, Scopus, and Scielo. According to the inclusion, exclusion, and quality criteria, it was determined to include 9 SLR articles on gamification that address at least one of the two key variables: student motivation or academic performance. The articles were published between 2016 and 2022, available in open access, written in English or Spanish, and with content that is directly related to the research questions. The results reveal that gamification significantly influences motivation by facilitating the assimilation of knowledge, the improvement of skills and academic competencies of students, and specifically refers to a wide range of capabilities that are essential for success in the educational environment and that can be enhanced through playful and interactive learning experiences. These skills can be cognitive, self-learning, social, or collaborative, among others. It is concluded that creativity and adaptability are key to successfully implementing gamification in the classroom.

Keywords: gamification; games; recreational activities; systematic literature review; teaching-learning; motivation; academic performance; education and technology; SLR

1. Introduction

Gamification, conceptualized as the integration of elements and mechanics typical of games in non-recreational environments with the aim of enhancing and enriching the learning process, has emerged as a highly effective strategy in the educational field [1]. In scientific literature, a variety of perspectives on gamification in education are documented, ranging from research supporting its benefits [2,3] to critiques that question its effectiveness and application in different contexts [4–7].

Engagement and motivation are recurring concepts that are widely related to gamification. According to Leitão et al. (2022) [11], it is necessary to combine fun with the teaching-learning process; this does not imply eliminating the notion of play in education,
let alone trivializing it. Some studies, like that of Prieto-Andreu et al. [1], combine gamification with other active approaches such as Serious Games, Game Based Learning (GBL), Project Based Learning (PBL), Collaborative Learning, or flipped classrooms, where students can access gamified learning resources and activities at any time and place, increasing flexibility and adaptation to their schedules and individual needs.

This strategy aims to energize the information transfer process, breaking away from the traditional approach of unidirectional lectures and introducing a livelier interaction dynamic between teachers and students. The incorporation of game elements, such as rewards, leaderboards, levels, and challenges, generates a sense of achievement and satisfaction in students, motivating them to progress in their studies [12]. However, certain studies indicate that leaderboards [13,14] or some technical issues (system failures) can demotivate and frustrate students with their learning [15].

Despite the growing trend of using gamification in education, the theoretical foundations and its implementation are not uniform. In the educational field, various systematic literature reviews were published, studying the impact of gamification on learning and instruction [16], the implications of gamification in Higher Education [17], understanding the factors that impact the effectiveness of a gamified experience [18], and gamification proposals in seven academic disciplines [1]. However, there is a notable lack of studies focusing on the analysis of the systematic reviews regarding the gamification influence on student motivation and academic performance.

This gap in literature underscores the need for rigorous and systematic research that not only explains the extent of the reported benefits but also identifies the conditions under which gamification becomes an effective educational tool. A thorough investigation of the influence of gamification in educational settings is essential for designing pedagogical interventions that not only engage students’ interest but also drive real improvements in their academic performance. This systematic review of existing SLRs seeks to fill in this gap by carrying out a rigorous and structured process that allows the collection, evaluation, and synthesis of the available scientific information on gamification in order to provide a general evidence-based overview of how this strategy impacts motivation and academic performance in educational environments.

2. Materials and Methods

In order to guarantee the validity of a Systematic Literature Review (SLR), guidelines were provided by Petersen et al. [19] and Sinoara et al. [20], and criteria were suggested in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) declaration [21]. According to Mengist et al. [22], systematic reviews are a scientific technique for synthesizing all relevant publications and documents that answer a specific research question with minimal systematical mistakes.

This systematic review of existing SLRs focuses on educational gamification and its relationship with motivation and academic performance. It attempts to answer the following seven questions that correspond to the main objective mentioned above:

RQ1. What methodological strategies do teachers use to incorporate gamification in the classroom?
RQ2. What digital tools do teachers use to integrate gamification in the classroom?
RQ3. What are the effects of gamification on student motivation?
RQ4. How does gamification affect students’ academic performance?
RQ5. What game elements are most used to improve motivation and academic performance?
RQ6. What are the benefits of gamification in the teaching-learning process that have been obtained?

In order to fulfill the research objective, an exclusive selection of articles linked to systematic literature reviews in the gamification field related to motivation and academic performance was chosen. For this purpose, inclusion and exclusion criteria were established, which are presented in Table 1.
Table 1. Inclusion and exclusion criteria.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>Free access</td>
<td>Not free access</td>
</tr>
<tr>
<td>Article type</td>
<td>Systematic literature reviews</td>
<td>Not systematic literature reviews</td>
</tr>
<tr>
<td>Publication stage</td>
<td>Final publication</td>
<td>Articles under review</td>
</tr>
<tr>
<td>Language</td>
<td>English and Spanish</td>
<td>Not English and Spanish</td>
</tr>
</tbody>
</table>

For the information search, three recognized databases in the field of educational sciences were used, which have similar characteristics for applying the same search string (Table 2): Web of Science (WoS), Scopus, and Scielo.

Table 2. Search string results.

<table>
<thead>
<tr>
<th>Search String</th>
<th>Documents Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>(“Systematic literature review” OR “Systematic review” OR “Systematic review of the literature” OR RSL OR SRL OR “RSL gamification”) AND (learning) AND (gamification OR “gamification motivation” OR “gamification academic performance” OR “gamification performance in education” OR “RSL gamification motivation performance”) AND (motivation) AND (“academic performance” OR “performance in education” OR performance) AND (pupils OR students)</td>
<td>WoS: 32, Scopus: 17, Scielo: 1</td>
</tr>
</tbody>
</table>

In total, 50 articles were collected and based on the PRISMA flow chart [22], presented in Figure 1. Three phases were developed: identification, screening, and inclusion.

In the identification phase, it is revealed that out of the 50 systematic literature review articles obtained, 32 are registered in the Web of Science (WoS), 17 in Scopus, and 1 in Scielo. All obtained records were exported to Excel for analysis, and 21 duplicate articles were removed, leaving 29 articles for the screening phase. In this phase, titles, abstracts, and keywords of each record were analyzed, and 18 records that did not meet the inclusion criteria established in Table 1 were removed. The 11 remaining articles were analyzed in relation to 10 questions suggested by Kitchenham et al. [23], Petticrew and Roberts [24], and Riaz et al. [25], which were adapted to the needs of this study. Table 3 describes the questions and corresponding evaluation criteria; each question is evaluated with one point and presents three options on the scale used: yes, no, and partial, with scores of 1, 0, and 0.5, respectively.

The articles that proceeded to the inclusion phase were those that obtained 7 points or more as a final score on the scale. Table 4 presents the 9 systematic literature review articles that were included for the full reading and analysis in this SLR.

The data extraction from primary studies was organized in two parts. The first part considered general data, categorized by author(s), article title, abstract, keywords, digital object identifier (DOI), publication year, database, document type, and language. The second part defined categories to classify the selected primary studies. The categories are purpose, country where the study was conducted, strategies, tools, elements, effects, and gamification benefits in relation to student motivation and academic performance.
Figure 1. PRISMA Flow chart.

Table 3. Qualitative checklist.

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Do the objectives relate to the gamification influence on motivation or academic performance?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q2</td>
<td>Is the methodology understandable?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q3</td>
<td>Is the study type identified?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q4</td>
<td>Does the study establish conclusions about the gamification influence?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q5</td>
<td>Does the study establish the influence of gamification motivation on academic performance?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q6</td>
<td>Does the study indicate what strategies the teacher establishes to incorporate gamification?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q7</td>
<td>Does the study establish what tools are employed for gamification?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q8</td>
<td>Does the study show in which knowledge areas gamification was applied?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q9</td>
<td>Does the study indicate gamification benefits?</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Q10</td>
<td>Does the study establish mechanics (game design elements and principles) used with gamification?</td>
<td>Yes/No/Partial</td>
</tr>
</tbody>
</table>
Table 4. Evaluation of selected studies.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Authors</th>
<th>Title</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>[26]</td>
<td>Camacho-Sánchez R., Manzano-León A., Rodríguez-Ferrer J.M., Serna J., Lavega-Burgués P.</td>
<td>Game-Based Learning and Gamification in Physical Education: A Systematic Review</td>
<td>8</td>
</tr>
<tr>
<td>[27]</td>
<td>Dahalan F., Alias N., Shaharom M.S.N.</td>
<td>Gamification and Game Based Learning for Vocational Education and Training: A Systematic Literature Review</td>
<td>6</td>
</tr>
<tr>
<td>[33]</td>
<td>Subhash, S; Cudney, EA</td>
<td>Gamified Learning in Higher Education: A Systematic Review of the Literature</td>
<td>7</td>
</tr>
<tr>
<td>[16]</td>
<td>Zainuddin, Z; Chu, SKW; Shujahat, M; Perera, CJ</td>
<td>The Impact of Gamification on Learning and Instruction: A Systematic Review of Empirical Evidence</td>
<td>8</td>
</tr>
</tbody>
</table>
3. Results

This study, based on a Systematic Literature Review (SLR) that examines SLRs published between 2016 and 2022, confirms the existence of a knowledge gap regarding the impact of gamification on motivation and academic performance. The selection of this time period ensures the inclusion of recent research, which potentially addresses the lack of updated information in previous studies. Through a quantitative analysis of the data, a comprehensive synthesis of the potential of gamification to enhance the educational experience in various contexts is provided.

Figure 2 shows that the highest number of publications on this topic are found in 2021 and 2022.

![Figure 2](image_url)

Figure 2. RSL articles were published from 2016 to June 2023.

This outcome can be attributed to technological advancement and increased accessibility to digital tools. Furthermore, the COVID-19 pandemic accelerated digital transformation and encouraged the search for innovative methods to maintain motivation and engagement in remote learning environments and telework. The combination of technological, social, and academic factors has contributed to the rise in publications on gamification in recent years, highlighting its relevance and applicability in various contexts.

Spain is the country with the highest concentration of SLRs on gamification and its influence on motivation and academic performance (66.67%, N = 6), while the United States, Greece, and Hong Kong contributed with one SLR study, each one with 11.11% (Figure 3).

![Figure 3](image_url)

Figure 3. RSL articles published by country.

Next, the most relevant results of this study are presented based on the research question posed.
RQ1. What strategies do teachers use to incorporate gamification in the classroom?

Of the nine studies analyzed, seven focus on describing the methodological strategies proposed by teachers for incorporating gamification into classrooms (Table 5). This information is useful for educators, as it provides them with a practical view of possible approaches for using gamification. While the study by Prieto et al. [1] does not describe specific strategies used by teachers, it highlights the general importance of using gamification in education and contextualizes its potential. Furthermore, the study by Manzano-León et al. [32] examines how gamification can draw on Self-Determination Theory (SDT) to promote students’ intrinsic motivation rather than focusing on implementation strategies.

Table 5. Strategies used by teachers to integrate gamification in the classroom.

<table>
<thead>
<tr>
<th>Study</th>
<th>Authors</th>
<th>Title</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>[26]</td>
<td>Camacho-Sánchez R., Manzano-León A., Rodríguez-Ferrer</td>
<td>Game-Based Learning and Gamification in Physical Education: A Systematic Review</td>
<td>Narratives, Challenges</td>
</tr>
<tr>
<td>[17]</td>
<td>Pegalajar Palomino, M.</td>
<td>Implications of Gamification in Higher Education: A Systematic Review of Student Perception</td>
<td>Roleplay, Flipped classroom, Game-based learning</td>
</tr>
<tr>
<td>[33]</td>
<td>Subhash, S; Cudney, EA</td>
<td>Gamified Learning in Higher Education: A Systematic Review of the Literature</td>
<td>Gamified learning management system</td>
</tr>
<tr>
<td>[16]</td>
<td>Zainuddin, Z; Chu, SKW; Shujahat, M; Perera, C</td>
<td>The Impact of Gamification on Learning and Instruction: A Systematic Review of Empirical Evidence</td>
<td>LMS Learning Management System</td>
</tr>
</tbody>
</table>

RQ2. What digital tools do teachers use to integrate gamification in the classroom?

Table 6 presents the answer to this question. 56% of the analyzed studies mention digital tools that could serve as a reference for employing gamification in the classroom in various knowledge domains. From these, Pegalajar Palomino [17] and Zainuddin et al. [16] coincide in using Kahoot and Quizizz.
Table 6. Technological tools to integrate gamification in the classroom.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>[28]</td>
<td>Gamification in Physical Education: A Systematic Review</td>
<td>Classdojo</td>
</tr>
<tr>
<td>[17]</td>
<td>Implications of Gamification in Higher Education: A Systematic Review of Student Perception</td>
<td>Kahoot Socrative Quizizz CelebritiEdu TurningPoint</td>
</tr>
<tr>
<td>[16]</td>
<td>The Impact of Gamification on Learning and Instruction: A Systematic Review of Empirical Evidence</td>
<td>Classdojo Classbadges Rain classroom Quizbot Duolingo Kahoot Quizizz gEchoLu</td>
</tr>
</tbody>
</table>

RQ3 What are the effects of gamification on student motivation? The results reveal that gamification has a significant effect on student motivation. Of the nine articles reviewed, 56% of the authors claim that the integration of gamification into the educational setting fosters greater engagement, participation, and motivation among students, achieving autonomy, knowledge assimilation, competence, collaboration, and the enhancement of academic skills in relation to their basic psychological needs [26,28,29,32,33]. Meanwhile, 22% highlight that, in addition to the positive effect on motivation, it also influences behavior, responsibility, and creativity [1,6]. It is important to note that all the authors mentioned agree that the increase in motivation is directly related to students’ ability to maintain interest and concentration on learning tasks, which is essential for educational success.

RQ4 How does gamification affect students’ academic performance? Arufe-Giráldez et al. [28], Arias and Mon [30], and Subhash and Cudney [33] agree that gamification positively affects students’ academic performance (33%). With students being better disposed to learn, they achieved higher cognitive performance, reflected in their final grades and the development of skills and knowledge. Lampropoulos et al. [29], Manzano-León et al. [32], and Zainuddin et al. [16] report that instructors obtained better learning outcomes when they used gamification with their students (33%). These authors suggest that gamification not only captures students’ attention but also provides structures and contexts that facilitate a deeper understanding of the study material.

In RQ5, “Which game elements are most commonly used to improve motivation and academic performance?”, it was found that 33% of the studies, represented by Lampropoulos et al. [29], Prieto-Andreu et al. [1] and Subhash and Cudney [33], used elements such as missions, badges, points, challenges, levels and avatars in their gamified activities. On the other hand, Camacho-Sánchez et al. [26] and Manzano-León et al. [32], representing 22% of the studied articles, used the MDA (Mechanics, Dynamics, and Aesthetics) framework to carry out gamification. This framework provides a useful model for understanding how gamification works, where mechanics refer to the rules and components of the game, dynamics are the behavioral patterns that emerge from the mechanics, and aesthetics are the desired emotional responses in users.
In summary, while one-third of the studies used concrete game elements such as missions, badges, and avatars, another group of studies relied on the MDA framework to structure the gamified experience.

Finally, Table 7 presents the answers to the research question RQ6: What are the benefits of gamification in the teaching-learning process that have been obtained? The findings identified allow for a concrete, solid, and precise identification of the benefits of gamification. It is important to highlight that RQ3 identified and quantified that 56% of the studies report positive effects on motivation following the use of gamification, while RQ4 determined that 33% of the studies report positive effects on academic performance. Consequently, the remaining 11% corresponds to other benefits, as shown in Table 7. This information provides a nuanced and comprehensive understanding of the effectiveness of gamification in the educational field.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1,16,29]</td>
<td>Motivation</td>
</tr>
<tr>
<td>[16,26,29,33]</td>
<td>Academic performance</td>
</tr>
<tr>
<td>[16,32,33]</td>
<td>Commitment</td>
</tr>
<tr>
<td>[1,16,29]</td>
<td>Learning outcomes</td>
</tr>
<tr>
<td>[26]</td>
<td>Motor control improvement</td>
</tr>
<tr>
<td>[28]</td>
<td>Cognitive performance</td>
</tr>
<tr>
<td>[29]</td>
<td>Participation</td>
</tr>
<tr>
<td>[30]</td>
<td>Interaction and teamwork</td>
</tr>
<tr>
<td>[32]</td>
<td>Feedback</td>
</tr>
</tbody>
</table>

This study corroborates the importance of gamification as an educational tool to improve motivation and academic performance. It provides substantial evidence of the positive effects that gamification can have on these two key variables of the teaching-learning process.

Although the study does not elaborate on the issue of teacher training, it does indirectly suggest that adequate teacher preparation in gamification is valuable for its successful use in the classroom. The findings fill the existing gaps in previous research on the impact of gamification on motivation and academic performance, aiming to inform educators and researchers about the potential of gamification in the educational field.

4. Discussion

The systematic literature review has highlighted two significant studies in the field of gamification. The first, conducted by Camacho-Sánchez et al. [26], delves into gamification-based methodological proposals, focusing on aspects such as dynamics, mechanics, and game elements. This study suggests that gamification when implemented with an appropriate methodology, can be effective in educational environments. The second study, by Lampropoulos et al. [29], highlights the benefits of incorporating augmented reality into student-centered gamification. The results indicate that this strategy can enhance engagement, motivation, participation, knowledge acquisition, and other important aspects of learning. Both studies underscore the importance of careful design and implementation of gamification to maximize its positive impact on education.

It is crucial to follow appropriate educational methods and strategies, taking into account the students’ knowledge, interests, unique characteristics, and personality traits. On
the other hand, Montalbán Martínez [34], Arias and Mon [30], Ordoñez Ocampo et al. [35], and Artal Sevil [36] agree that implementing the flipped classroom to introduce gamification in their classes has yielded positive results. As a result, they have managed to motivate students and foster meaningful learning, as gamification leverages the intrinsically motivating nature of games to create more engaging and stimulating learning experiences. According to Deterding et al. [37] and Hamari et al. [38], the inclusion of game elements such as points, badges, and leaderboards can increase intrinsic motivation by making learning more fun and attractive, while the presence of missions and challenges can improve student engagement by providing clear goals and a sense of progress. Similarly, Hanus and Fox [39] suggest that leaderboards and rewards can foster healthy competition among students, encouraging them to strive harder to improve their academic performance. Together, these gamification elements can contribute to a more motivating and stimulating learning environment.

On the other hand, the effectiveness of gamification and the flipped classroom in education has been a subject of debate. Clark et al. [40] found that digital games can enhance learning, but the effects vary. Bishop and Verleger [41] indicated that the flipped classroom can increase student engagement, but the results on academic performance are mixed. Hanus and Fox [39] highlighted that gamification could have negative effects on intrinsic motivation and academic performance if it focuses too much on competition and external rewards. These studies suggest that the implementation of these methodologies requires a balanced approach and adaptation to the needs of students, their interests, and learning preferences.

In addition, gamification also has positive effects on students’ academic performance. Sailer et al. [42] highlight that by making learning more interactive and attractive, gamification can improve knowledge retention and understanding of complex concepts. Likewise, Rivera and Garden [43] agree that gamification can help develop important skills such as problem-solving and critical thinking by offering activities that require the application of these skills. Finally, Navarro-Mateos et al. [44] point out that gamification can increase the students’ persistence in difficult tasks by providing immediate feedback and encouraging the overcoming of challenges, which can lead to an improvement in academic performance.

In the course of this research, it was observed that Arufe-Giraldez et al. [28] use the Classdojo tool to gamify the classroom, supporting the choice of Sierra Lledo and Juste Martínez [45] and Corchuelo-Rodriguez [46]. The latter also emphasizes that Classdojo is appropriate for carrying out gamified activities since it offers functions such as stopwatch, raffles, the possibility of uploading a photographic narrative of the class, and the creation of questions for debate.

In the implementation of gamification in the educational field, various researchers, including Magadan-Díaz and Rivas-Garcia [47], Vélez-Osorio [48], Artal Sevil [36], Zainuddin et al. [16], and Pegalajar Palomino [17], have found Kahoot to be an effective tool for gamifying content in various areas. These studies highlight that Kahoot facilitates the successful implementation of gamification, resulting in increased motivation and improved student performance. The platform allows for the creation of interactive and competitive quizzes that capture the attention of students and encourage their active participation in the learning process. Also, Posada [49], in his study, expands the spectrum of tools available for gamification by suggesting options for creating badges, managing game activities, and incorporating game-based learning. These tools offer educators a variety of resources to design more dynamic and attractive learning experiences tailored to the needs and preferences of students.

SLR reveals a consensus of various authors such as Camacho-Sánchez et al. [26], Arufe-Giraldez et al. [28], Lampropoulos et al. [29], Prieto-Andreu et al. [1], Manzano-León et al. [32], Subhash and Cudney [33], and Zainuddin et al. [16], who noted the positive impacts of this strategy on student motivation. The studies show that gamification not only increases extrinsic motivation, as reported by López-Navarro et al. [50], but also intrinsic motivation, as noted by Rodriguez-González et al. [51]. This improvement in motivation...
is observed in various areas of knowledge, including physical education, language and communication, natural sciences, languages, and mathematics. These findings suggest that gamification is a versatile and effective tool for increasing student interest and participation in the learning process, regardless of the area of study.

As we mentioned before, motivation plays a determining role in the level of attitude and interest that a student dedicates to their studies [52]. The relationship between gamification and motivation in the educational context is a subject of considerable debate. As García-Casaus et al. [53] suggest, both are intrinsically linked and oriented toward improving learning and academic performance. This perspective is supported by research such as that of Arufe-Giraldez et al. [28], Lampropoulos et al. [29], Arias and Mon [30], and Subhash and Cudney [33], which emphasizes the positive impact of gamification on academic performance. Additionally, studies by Manzano-León et al. [32] and Zainuddin et al. [16] report encouraging results in terms of learning achievements. These findings suggest that gamification can be an effective tool for increasing motivation and, consequently, enhancing the students’ academic performance and learning achievements.

The benefits of gamification in the educational field are enriched by the findings of various studies. Zainuddin et al. [16], Prieto-Andreu et al. [1], and Lampropoulos et al. [29] highlight learning achievements as one of the main benefits of gamification. Arufe-Giraldez et al. [28] and Prieto-Andreu et al. [1] point out improvements in cognitive performance, suggesting that gamification can have a positive impact on the students’ mental abilities. Arias and Mon [30] emphasize autonomy in learning, indicating that gamification can encourage greater independence in students. In addition, the engagement and motivation of students are aspects highlighted by Camacho-Sánchez et al. [26], Lampropoulos et al. [29], Manzano-León et al. [32], Subhash and Cudney [33], and Zainuddin et al. [16], demonstrating the ability of gamification to involve and motivate students in their educational process. These collective findings suggest that gamification offers a wide range of benefits that can significantly enhance the learning experience in different aspects.

The application of gamification in the educational context is enriched by the contributions of studies such as those by Ortiz-Colón et al. [54], Magadan-Díaz and Rivas-Garcia [47], Aquilino [55], and García-Casaus et al. [53]. These researchers agree that gamification focuses on motivation and generates notable improvements in classroom collaboration. Additionally, they highlight the importance of emotions, attitudes, cooperation, and interaction among peers, aspects that significantly favor the teaching-learning process. This focus on the social and emotional dimension of learning underlines the ability of gamification to create a more positive and collaborative atmosphere in the classroom, which can enhance student motivation and engagement. Finally, gamification is a multifaceted educational strategy that, when effectively implemented, can improve motivation, academic performance, collaboration, and the emotional environment in the classroom. These benefits, supported by various investigations, suggest that gamification can be a valuable tool in enhancing the teaching-learning process in various areas of knowledge.

5. Conclusions

The examined SLRs highlight that the incorporation of game elements in education, such as competition among peers, teamwork, and dashboards, effectively promotes the learning of novel information. Healthy competition motivates students to strive and provides immediate feedback on their performance. Teamwork fosters collaborative skills, such as communication and conflict resolution, as they work together to achieve common goals. Dashboards allow students to track their progress, set personal goals, and stay focused on their learning objectives. These game elements make learning more interactive, engaging, and social, thereby facilitating the acquisition of new information and the development of important skills.

One of the benefits of gamification in the teaching-learning process is not only that it significantly increases student motivation and engagement, but it also fosters collaboration, improves knowledge retention, and develops key skills such as problem-solving.
and decision-making. By introducing playful elements like rewards, challenges, and competitions, an interactive and life-relevant educational environment is created for students. This makes learning more attractive and participatory, leveraging the human tendency to seek achievements and overcome challenges. Gamification establishes clear goals, offers tangible or virtual rewards, and provides instant feedback, creating an environment that inspires students to strive and stay motivated, thereby promoting a more effective and meaningful educational process.

In addition to fostering motivation, gamification enhances knowledge retention by promoting active learning, where students directly engage in tasks and challenges related to course content, thus consolidating their learning. Repetition and practice in educational games reinforce understanding and memory of information, while immediate feedback allows students to quickly correct mistakes and adjust their learning strategies in real-time, contributing to better retention and a more effective and meaningful educational process.

Gamification also makes learning more relevant and contextualized, integrating educational content into meaningful game situations. This helps students see the practical application of what they are learning, increasing the likelihood of remembering and applying that knowledge in the future. Additionally, by increasing motivation and engagement, gamification leads to greater attention and concentration during learning, which favors long-term retention. In summary, gamification is a valuable tool for improving knowledge retention by making learning more interactive, relevant, and motivating.

Motivation plays a key role in student academic performance, as it influences their ability to learn and assimilate information effectively and it is closely linked to the setting of educational goals. Motivated students tend to have clear academic goals, achieve better grades, and focus on achieving success in their studies through effective task completion and a greater understanding of the concepts.

Teachers implement various strategies to incorporate play into their classrooms and take advantage of the motivational and educational benefits. They use narrative or contexts around game activities to turn lessons into interesting stories or real-life scenarios, thus ensuring that the content is more attractive and relevant for students. They also use digital platforms and interactive technologies, such as educational apps, online games, or specific platforms designed to create game-like experiences. Creativity and adaptability are key to successfully implementing gamification in the classroom, allowing teachers to create a playful learning environment that motivates students, encourages participation, and improves academic performance. In most of the studies reviewed, teachers apply a combination of these strategies to achieve these results.

6. Limitations and Future Lines of Research

Research on the use of gamification presents several limitations that must be considered when interpreting results and when designing and implementing strategies based on this active methodology. Among them, the context stands out since many studies focus on specific situations, making it difficult to generalize the results to other environments. In addition, the gamification effectiveness can vary depending on the type of task, the population studied and the cultural context.

Many of the studies conducted on gamification in educational contexts or academic performance have a short duration, which makes it difficult to determine whether the positive effects observed in participants are maintained over time. In other words, although gamification may show promising short-term results, such as an increase in motivation or improved behavior, it is unclear whether these effects persist once gamification is no longer used or after a longer period has passed. This limitation in the research is important, as it is necessary to demonstrate that the benefits of gamification are not merely temporary to consider it an effective and sustainable strategy. Assessing long-term effects would require more extensive follow-up studies and possibly the design of gamification interventions that can be integrated continuously or recurrently in the context in which they are applied.
Anderson et al. [56], Nicholson [57], and Dicheva et al. [58] agree on the importance of balancing game elements with educational objectives in gamification. Anderson et al. [56] express their concern about the possibility that competition for points and rewards in educational games may divert students’ attention from a deep understanding of the content. Nicholson [57] supports meaningful gamification that fosters intrinsic motivation and engagement with learning, while Dicheva et al. [58] highlight the need to complement and enrich the learning process with game elements. Furthermore, they emphasize the importance of personalization and adaptability of educational gamification environments to address different learning preferences and keep students engaged. They also agree on the need for continuous assessment of the effectiveness of gamification in education to ensure that the desired outcomes in terms of engagement and learning are achieved.

To address these limitations, it is essential to develop more solid research and a better understanding of how to use gamification effectively in different contexts. Future research in gamification could explore various areas to improve understanding and application of this strategy in varied environments. Possible research areas include longitudinal studies to evaluate the long-term effects on motivation, learning, and performance, as well as to identify factors that contribute to the persistence of positive effects.

Other potential research areas could focus on the integration of emerging technologies, such as artificial intelligence or virtual reality, to create more immersive and personalized experiences. Likewise, strategies to foster intrinsic motivation and design game-like experiences that cultivate a long-term continuous interest in the task could be explored. It would also be valuable to consider how to create and evaluate specific tools and platforms to implement gamification strategies that facilitate their adoption and adaptation in different contexts.

Finally, as technology advances and the practical application of gamification expands, new challenges and research opportunities will emerge in both educational and workplace settings.


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