Revista Ibero-Americana de Humanidades, Ciências e Educação — REASE

OPEN ACCESS

doi.org/10.51891/rease.v12i8.29665

GAMIFICATION IN ELEMENTARY SCHOOL FINAL YEARS: INNOVATIVE STRATEGIES FOR STRENGTHENING LEARNING

A GAMIFICAÇÃO NO ENSINO FUNDAMENTAL ANOS FINAIS: ESTRATÉGIAS INOVADORAS PARA O FORTALECIMENTO DA APRENDIZAGEM

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RESUMO: A educação contemporânea enfrenta o desafio de promover práticas pedagógicas capazes de atender às necessidades de estudantes inseridos em uma sociedade marcada pelo avanço das tecnologias digitais, pela rapidez no acesso às informações e pela constante transformação das formas de aprender. Nesse contexto, a gamificação emerge como uma metodologia inovadora que utiliza elementos característicos dos jogos, como desafios, níveis, recompensas, pontuações, feedback imediato e cooperação, para potencializar os processos de ensino e aprendizagem. Diferentemente do uso de jogos propriamente ditos, a gamificação consiste na aplicação de mecânicas e dinâmicas dos jogos em contextos educacionais, com o objetivo de aumentar a motivação, o engajamento e a participação ativa dos estudantes. O presente artigo tem como objetivo analisar, por meio de uma revisão narrativa da literatura, as contribuições da gamificação para o processo de ensino e aprendizagem no Ensino Fundamental II, destacando seus benefícios, desafios e possibilidades de aplicação no contexto escolar. A pesquisa fundamenta-se em produções científicas nacionais e internacionais, documentos oficiais da educação brasileira e estudos relacionados às metodologias ativas, às tecnologias digitais e às teorias da aprendizagem. Os estudos analisados evidenciam que a gamificação favorece o desenvolvimento da autonomia, da colaboração, do pensamento crítico, da criatividade e da resolução de problemas, além de contribuir para o fortalecimento da motivação intrínseca dos estudantes. Também se verificou que sua implementação requer planejamento pedagógico, formação docente e utilização consciente das tecnologias digitais, evitando que os elementos lúdicos sejam empregados apenas como mecanismos de recompensa desprovidos de intencionalidade educativa. Conclui-se que a gamificação constitui uma estratégia pedagógica promissora para o Ensino Fundamental II, desde que integrada ao currículo, alinhada às competências previstas na Base Nacional Comum Curricular (BNCC) e desenvolvida em consonância com os objetivos de aprendizagem estabelecidos pela escola. Sua utilização fortalece práticas pedagógicas inovadoras, favorecendo uma educação mais participativa, significativa e centrada no protagonismo estudantil.

Palavras-chave: Gamificação. Metodologias ativas. Tecnologias digitais.

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ABSTRACT: Contemporary education faces the challenge of developing teaching practices capable of meeting the needs of students living in a society characterized by rapid technological advancement, constant access to information, and new ways of learning. In this context, gamification has emerged as an innovative educational strategy that incorporates game elements such as challenges, levels, rewards, points, immediate feedback, and collaboration into educational environments to enhance teaching and learning processes. Unlike educational games themselves, gamification applies game mechanics and dynamics to non-game contexts in order to increase motivation, engagement, and active participation. This study aims to analyze, through a narrative literature review, the contributions of gamification to teaching and learning in lower secondary education (Ensino Fundamental II), highlighting its benefits, challenges, and educational possibilities. The research is based on national and international scientific literature, Brazilian educational policies, and studies on active methodologies, digital technologies, and learning theories. The findings indicate that gamification promotes autonomy, collaboration, critical thinking, creativity, and problem-solving skills while strengthening students' intrinsic motivation. However, its successful implementation depends on careful pedagogical planning, teacher training, and the intentional integration of digital technologies into the curriculum. It is concluded that gamification represents a promising pedagogical approach for lower secondary education when aligned with curricular objectives and the competencies established by the Brazilian National Common Curricular Base (BNCC), contributing to more meaningful, participatory, and student-centered learning experiences.

Keywords: Gamification. Active Learning. Digital Technologies. Learning.

1 INTRODUCTION

The social, cultural and technological transformations experienced in recent decades have profoundly changed the way children and adolescents build knowledge, establish social relationships and interact with the world. Continuous access to digital technologies, the internet and multiple forms of communication has transformed the profile of students in Basic Education, requiring new teaching strategies from the school capable of making learning more meaningful, participatory and connected to contemporary reality (ZANELATTO, 2024).

In Elementary School II, a stage that comprises students between approximately 11 and 14 years old, there is a period marked by important cognitive, emotional and social changes. In this phase, students begin to demonstrate greater intellectual autonomy, expand their capacity for argumentation, and develop new forms of interaction mediated by digital technologies. At the same time, many teachers face difficulties in maintaining student interest and participation in traditional methodologies focused on the transmission of contente (TEODÓSIO, 2024).

Given this scenario, there is a growing interest in active methodologies that favor student protagonism, encourage student participation, and promote contextualized learning. Among these methodologies, gamification stands out, understood as the use of elements,

mechanics and dynamics characteristic of games in environments that originally do not have a playful purpose. In education, this strategy seeks to increase student engagement, strengthen motivation, encourage cooperation, and encourage problem-solving through more interactive learning experiences (SOUZA, 2021).

It is important to note that gamification does not simply mean using games during classes. While educational games are specific teaching resources, gamification consists of applying elements such as challenges, levels, missions, rewards, immediate feedback, rankings, medals, and narratives to structure pedagogical activities in a more motivating way. In this way, curricular content can be organized into learning paths that value the active participation of students and the development of cognitive and socio-emotional skills (SOARES et al., 2024).

Several national and international studies point out that gamification can contribute to increasing student engagement, improving academic performance, strengthening collaborative learning, and developing skills provided for in the National Common Curriculum Base (BNCC), such as critical thinking, creativity, communication, digital culture, autonomy, and problem solving. In addition, when integrated with digital technologies, it expands the possibilities of personalization of teaching and continuous monitoring of learning (SOUZA, 2021).

However, the implementation of gamification also presents challenges. The adoption of this methodology requires pedagogical planning, continuing education of teachers, adequate technological infrastructure and understanding of its theoretical foundations. When used only as a reward or competition mechanism, without clearly defined educational objectives, gamification can lose its pedagogical potential and be reduced to superficial practices of extrinsic incentive (SIQUEIRA; RESSIGUIER, 2023).

Another relevant aspect refers to the role of the teacher. In gamified contexts, the teacher ceases to occupy exclusively the position of transmitter of knowledge to assume the role of mediator of learning, organizing challenges, monitoring the progress of students, promoting continuous feedback and stimulating the collective construction of knowledge. This change is in line with the principles of active methodologies and with the professional competencies required by contemporary education (SANTOS et al., 2024).

In addition, gamification presents significant convergence with assumptions of constructivist and socioconstructivist theories of learning. Valuing the active participation of the student, problem solving, collaboration and meaningful learning brings this methodology

closer to the contributions of Jean Piaget, Lev Vygotsky, Seymour Papert and Paulo Freire, who defend educational processes centered on the construction of knowledge through interaction, experience and critical reflection.

In this context, it is relevant to investigate how gamification can contribute to the strengthening of teaching and learning processes in Elementary School, considering the characteristics of this stage of schooling and the educational demands of the twenty-first century. In view of these considerations, this article aims to analyze, through a narrative review of the literature, the contributions of gamification to Elementary School II, discussing its theoretical foundations, benefits, limitations, application possibilities and challenges for its implementation in schools, seeking to understand how this methodology can favor a more innovative, participatory education aligned with the needs of contemporary students. Analyze the contributions of gamification to the teaching and learning process in Elementary School, identifying its benefits, challenges and possibilities of application as an innovative pedagogical strategy. The objectives of this work are: To present the theoretical foundations of gamification in education. Discuss the relationship between gamification, active methodologies and digital technologies. To analyze the impacts of gamification on the motivation, engagement, and learning of Elementary School II students. Reflect on the contributions of gamification to the development of the competencies provided for in the BNCC.

2 METHODOLOGY

The present study is characterized as a narrative review of the literature, with a qualitative approach, exploratory nature and descriptive-analytical objective. This type of research allows us to gather, analyze and discuss different theoretical perspectives about gamification in the educational context, enabling a broad understanding of the contributions, challenges and potentialities of this methodology in Elementary School II.

The narrative review was chosen because it favors the integration of different conceptual approaches, allowing the critical analysis of the main scientific productions related to the theme. Unlike systematic reviews, this type of investigation seeks to understand the evolution of scientific knowledge, identify trends, and establish relationships between different studies, contributing to the construction of grounded reflections on a given phenomenon.

For the preparation of this article, scientific publications available in nationally and internationally recognized databases were consulted, including SciELO, CAPES Journal

Portal, Google Scholar, ERIC (Education Resources Information Center) and ScienceDirect. Official documents produced by the Ministry of Education (MEC), especially the National Common Curriculum Base (BNCC), as well as classic books related to active methodologies, educational technologies, learning, and gamification were also analyzed.

The inclusion criteria included scientific articles, books, dissertations, theses, and official documents published primarily between the years 2019 and 2025, as they represent the period of greatest growth in research related to educational gamification and active methodologies. However, classic works by authors that theoretically support meaningful learning, constructivism, socioconstructivism and the use of technologies in education were also included.

The selected studies were submitted to the stages of exploratory reading, analytical reading and critical interpretation, seeking to identify convergences, divergences and gaps present in the scientific production. Subsequently, the contents were organized into thematic categories related to the fundamentals of gamification, motivation, learning, BNCC competencies, teacher training, digital technologies and challenges of implementing gamification in schools. This methodology makes it possible to understand gamification not only as a technological resource, but as a pedagogical strategy based on scientific principles capable of contributing to the improvement of teaching and learning processes.

3 THEORETICAL FOUNDATION

In recent decades, the concept of gamification has come to occupy a prominent position in research on educational innovation. The growth of digital technologies, associated with changes in the profile of students, has driven the development of strategies capable of making educational processes more motivating, participatory and aligned with the demands of contemporary Society (SANTOS et al., 2024).

The term gamification refers to the use of elements, mechanics and dynamics characteristic of games in contexts that originally do not have a playful purpose. Its objective is to stimulate engagement, increase motivation and favor behavior changes through the organization of activities structured in challenges, missions, rewards and continuous feedback. According to Karl Kapp (2012), one of the leading researchers in the field, gamification consists of the intentional use of elements present in games to promote learning, problem solving, and development of skills in different organizational and educational contexts. This definition

highlights that gamifying does not mean turning the classroom into a game, but incorporating strategies capable of making the learning process more meaningful (SILVA; MASARO; PAULA, 2024).

In education, gamification uses resources such as: progressive challenges; learning levels; missions; medals; scores; rankings; narratives; immediate feedback; symbolic rewards and cooperation between students. These elements favor the involvement of students in school activities, stimulating protagonism and active participation during the process of knowledge construction. Although often used interchangeably, the concepts of gamification, educational games, and game-based learning have important diferences (SILVA FILHO, 2023).

Educational games consist of didactic resources developed specifically to teach certain content through the dynamics of the game itself. In these cases, the game represents the main learning instrument. Game-Based Learning (GBL) uses complete games, digital or analog, as a methodological strategy to favor the development of specific knowledge and skills (SARAIVA, 2022).

Gamification, on the other hand, does not require the use of games per se. It consists of the reorganization of school activities using typical elements of games to increase student interest, engagement, and motivation. For example, a Science didactic sequence can be organized as an investigative mission, in which students accumulate points by solving challenges, advance in level as they demonstrate mastery of the content, and receive immediate feedback on their performance. In this case, there is not necessarily a game, but a pedagogical structure inspired by its logic (SARAIVA et al., 2023).

This distinction is essential to avoid misinterpretations and understand that gamification represents a methodology for organizing learning, and not just the use of games in the classroom. The success of gamification does not depend exclusively on the technological resources used, but mainly on its pedagogical foundations. Several theories of learning offer scientific support for this methodology. According to Jean Piaget, knowledge is actively constructed by the subject through interaction with the environment. Learning occurs when the student faces challenging situations that cause cognitive imbalances, requiring reorganization of mental schemes (RUIZ-BAÑULS, 2021).

In gamification, the progressive challenges, the proposed problems and the different learning phases stimulate exactly this process of active knowledge construction. Vygotsky emphasizes that intellectual development occurs through social interactions and mediation

carried out by more experienced people. Gamified learning favors: teamwork; collaborative problem solving; communication; interaction between students; teacher's mediation. These elements bring gamification closer to the principles of the Zone of Proximal Development (ZDP), favoring learning that would be difficult to achieve individually. For Ausubel, learning occurs when new knowledge establishes relationships with previous knowledge that already exists in the student's cognitive structure. Gamification favors this process by organizing content into progressive challenges, allowing new concepts to be incorporated gradually, respecting the students' learning pace (PFLEGER, 2023).

In addition, constant feedback allows you to identify difficulties and reorganize pedagogical strategies throughout the training process. Papert argues that learning becomes more meaningful when students build products, solve real problems, and actively participate in the production of knowledge. This perspective is directly close to gamification, especially when interdisciplinary projects, investigative challenges, narrative creation, game development, and the use of digital technologies as learning tools are developed (NUNES, 2024).

Although Paulo Freire never dealt directly with gamification, his principles dialogue deeply with this methodology. Valuing the students' protagonism, autonomy, dialogue, and collective construction of knowledge brings gamification closer to a problematizing and emancipatory education. When well planned, gamification does not reduce learning to reward mechanisms, but favors experiences that stimulate reflection, participation, and commitment to the transformation of reality. Gamification is part of the set of active methodologies by placing the student at the center of the educational process. While traditional teaching prioritizes the transmission of content by the teacher, active methodologies value: participation; investigation; problem solving; collaboration; autonomy; creativity and decision-making. In this context, gamification is close to other contemporary methodologies, such as: Problem-Based Learning (PBL); Project-Based Learning; Flipped Classroom; Hybrid Teaching; Rotation by Stations and Educational Design Thinking (MOTA, 2023).

The integration between these methodologies significantly expands the potential of learning, favoring the development of cognitive and socio-emotional skills provided for by the BNCC. Elementary School II, corresponding to the final years of Basic Education (6th to 9th grade), is characterized as a stage of intense cognitive, emotional and social transformations. During this period, students develop greater capacity for abstraction, expand critical thinking, and consolidate skills related to autonomy, argumentation, and problem solving. At the same

time, they experience changes typical of adolescence, which directly influence their motivation, behavior and way of learning (MONTEIRO, 2023).

The new generations have grown up in a society strongly marked by the presence of digital technologies. Smartphones, social networks, electronic games, interactive videos and digital platforms have become part of the daily lives of students, modifying their communication habits, access to information and knowledge construction. Given this scenario, the school faces the challenge of making teaching processes more meaningful and compatible with the characteristics of the so-called "digital natives", without giving up critical and reflective training (MARINHO, 2023).

Several studies show that exclusively expository methodologies tend to reduce students' interest, especially when they disregard their previous knowledge, their experiences and their different learning styles. In this context, gamification presents itself as a strategy capable of bringing the school environment closer to the reality experienced by students, favoring greater involvement in the proposed activities. By incorporating characteristic elements of games into pedagogical planning, gamification transforms the learning process into a more dynamic, participatory and challenging experience, stimulating curiosity, creativity and student protagonism (MARCONDES et al., 2024).

Motivation is one of the main factors that influence students' academic performance. Motivated students tend to participate more actively in classes, persist in the face of difficulties, develop greater autonomy and present better learning results. From the perspective of educational psychology, motivation can be understood under two main dimensions: extrinsic motivation and intrinsic motivation. The first is related to external factors, such as grades, rewards, praise, and recognition. Intrinsic motivation, on the other hand, refers to the student's genuine interest in learning, satisfaction in solving problems, and the pleasure of building new knowledge (LOIOLA, 2020).

When properly planned, gamification can integrate these two dimensions. Elements such as medals, points, levels and certificates work as initial stimuli, arousing the interest of students. However, the true potential of gamification lies in building experiences that arouse curiosity, a sense of competence, autonomy, and the desire to overcome challenges. In this sense, the theory of self-determination, proposed by Edward Deci and Richard Ryan, offers an important foundation for gamification by highlighting that human motivation is strengthened when three basic psychological needs are met: autonomy, competence, and belonging. Well-

structured gamified environments favor these three dimensions, allowing students to make choices, perceive their evolution, and work collaboratively with their peers (GRIFFIN, 2024).

The National Common Curriculum Base (BNCC) establishes ten general competencies that should guide the training of Basic Education students. These competencies cover cognitive, socio-emotional, ethical, and technological aspects, seeking to prepare students for the challenges of contemporary society. Gamification has a significant convergence with these skills, especially by stimulating pedagogical practices centered on the active participation of the student, problem solving and collaborative learning (GOMES, 2024).

The challenges proposed in gamified environments encourage the active construction of knowledge, allowing students to use different sources of information to solve problems and achieve learning objectives. Scientific, critical and creative thinking: Investigative missions, interdisciplinary challenges and resolution of problem-situations favor the development of logical reasoning, creativity and argumentation skills. Digital culture: The use of digital platforms, educational applications, electronic games and technological resources contributes to the development of skills related to the critical and responsible use of technologies. Communication: Most gamified activities involve teamwork, strategy negotiation, presentations, and collaborative knowledge production, strengthening different forms of communication. Work and life Project: By organizing learning paths based on goals, challenges, and planning, gamification encourages responsibility, persistence, and personal organization. Responsibility and citizenship: When based on ethical and collaborative principles, gamification favors respect for rules, cooperation, empathy, and the peaceful resolution of conflicts (VIANNA, 2013).

In this way, gamification contributes not only to the teaching of curricular content, but also to the development of the essential skills provided for in the BNCC. Although gamification can be developed using simple resources, such as cards, printed challenges, or face-to-face activities, the advancement of digital technologies has significantly expanded its application possibilities. Several educational platforms offer specific tools for creating gamified experiences, allowing teachers to monitor student performance in real time, provide immediate feedback, and organize more interactive activities. Among the most used resources are: interactive quiz platforms; virtual learning environments; educational challenge apps; scoring systems and levels; educational digital games; augmented reality; virtual reality and artificial intelligence applied to education. These tools favor greater personalization of learning, allowing

each student to advance according to their development pace. However, several authors warn that technology should not be understood as the purpose of the educational process, but as a pedagogical instrument. The quality of learning continues to depend on teacher planning, pedagogical intentionality, and the ability to integrate technological resources with educational objectives (FERREIRA, 2023).

The adoption of gamification implies profound changes in the teaching practice. Instead of occupying exclusively the role of content transmitter, the teacher starts to act as a mediator, advisor and designer of learning experiences. Their main responsibility is to plan activities capable of arousing the interest of students, establishing challenges compatible with curricular objectives, continuously monitoring the progress of the class and offering meaningful feedback throughout the educational process. In addition, the teacher needs to develop skills related to the pedagogical use of digital technologies, interdisciplinary planning and formative assessment. The elaboration of a gamified sequence requires creativity, mastery of the contents, knowledge of the characteristics of the students and understanding of the principles that underlie this methodology (EUGENIO, 2023).

Another important aspect refers to the mediation of social relations. In gamified environments, the teacher encourages cooperation, organizes teams, promotes conflict resolution, and encourages practices of mutual respect, preventing competitive elements from generating exclusion or demotivation among students. Thus, continuing education becomes an indispensable condition for teachers to develop confidence in the use of gamification and to be able to explore its full pedagogical potential. Gamification can be adapted to different curricular components, contributing to making classes more dynamic and contextualized. In the Science discipline, students can participate in investigative missions related to ecosystems, the human body or chemical transformations, accumulating points as they solve scientific problems (DETERDING, 2011). In Mathematics, progressive challenges organized into levels of difficulty can stimulate logical reasoning and problem solving, valuing both the process and the result (DICHEV; DICHEVA, 2023).

In Portuguese language classes, the creation of interactive narratives, argumentation games and textual interpretation challenges favor the development of critical reading and written production. In History and Geography, the construction of missions based on historical events, maps, case studies and simulations allows students to understand social phenomena in a more meaningful way. These examples demonstrate that gamification is a flexible

methodology, capable of integrating different areas of knowledge and favoring interdisciplinary practices aligned with the competencies of the BNCC. By incorporating elements of games into pedagogical planning, this strategy favors the construction of more dynamic, collaborative, and student-centered learning environments. Different national and international surveys point out that the planned use of gamification can contribute to the development of cognitive, socio-emotional, and technological skills, expanding students' interest and promoting better educational results (CASTRO, 2021).

Among the benefits most frequently identified in the literature are increased motivation, strengthening engagement, improving academic performance, developing autonomy, and encouraging collaborative work. These aspects show that gamification goes beyond the playful dimension, constituting a pedagogical strategy based on scientific principles related to active learning. One of the main benefits of gamification is the increase in student motivation. Educational environments organized in the form of challenges, missions and progressive objectives arouse greater interest in learning, favoring continuous participation in the proposed activities (ALMEIDA; BRUNO, 2023).

By receiving immediate feedback on their performance, students can monitor their evolution, identify difficulties, and perceive the progress achieved throughout the educational process. This characteristic strengthens the feeling of competence, an element considered essential by contemporary theories of motivation. In addition, the use of narratives, characters, levels, and symbolic rewards contributes to transforming activities traditionally considered repetitive into more engaging experiences. However, several authors warn that such elements should be subordinated to pedagogical objectives, preventing learning from being reduced to simply obtaining points or awards (ARAÚJO et al., 2024).

When planned intentionally, gamification mainly favors intrinsic motivation, stimulating the pleasure of learning, intellectual curiosity, and the desire to overcome progressively more complex challenges. Another aspect widely discussed in the literature refers to the strengthening of students' autonomy. Gamified methodologies encourage students to make decisions, organize strategies, manage their own time, and take greater responsibility for the learning path (ZANELATTO, 2024).

In Elementary School II, this characteristic has special relevance, considering that students are in a phase of development marked by the construction of identity, the strengthening of independence and the expansion of the capacity for self-regulation. By

allowing different paths to solve challenges, gamification stimulates student protagonism and breaks with teaching models that are excessively focused on the teacher's performance. The student ceases to be a mere receiver of information to become an active participant in the construction of knowledge (TEODÓSIO, 2024).

This change is supported by active methodologies and constructivist theories, which recognize learning as a result of the interaction between subject, knowledge, and social context. In addition to the curricular contents, contemporary education seeks to develop competencies related to the emotional, social and ethical dimensions of human formation. In this context, gamification makes important contributions to the strengthening of the so-called socio-emotional skills. Gamified activities often involve cooperation, negotiation, communication, leadership, conflict resolution, and collective decision-making. These experiences favor the development of empathy, respect for differences, responsibility, and the ability to work in a team. Another relevant aspect refers to the development of resilience. By facing progressive challenges, receiving constant feedback, and learning from their mistakes, students come to understand error as a natural part of the learning process, strengthening their ability to persist in the face of difficulties (SOUZA, 2021).

These skills are fundamental for the integral training provided for by the National Common Curriculum Base (BNCC), which recognizes the importance of education beyond the transmission of content. Gamification favors meaningful learning by integrating curricular content with contextualized situations, investigative challenges, and real problems. Instead of memorizing isolated information, students are invited to use prior knowledge to solve situations that require analysis, interpretation, and decision-making (SIQUEIRA; RESSIGUIER, 2023).

This approach contributes to making sense to the students, increasing the possibilities of retaining knowledge and its application in different contexts. When articulated with interdisciplinary projects, scientific experimentation, and problem solving, gamification strengthens the construction of lasting knowledge and expands students' ability to establish relationships between different areas of knowledge. Despite the numerous contributions identified by the literature, the implementation of gamification also faces challenges that need to be considered by education professionals (SANTOS et al., 2024).

The inappropriate use of this methodology can compromise its results and reduce its pedagogical potential. For this reason, it is essential to understand that gamification does not

only mean using games, distributing points or promoting competitions in the classroom Among the main challenges is teacher training. Many professionals have not yet had the opportunity to study active methodologies during their initial training, which can generate insecurity in the elaboration of gamified activities. In addition to mastering curricular content, gamification requires knowledge related to pedagogical planning, formative assessment, digital technologies, and learning management (SILVA; MASARO; PAULA, 2024).

Thus, continuing education policies become fundamental to prepare teachers for the critical and conscious use of this methodology. Although gamification can be developed without digital resources, many of its possibilities are enhanced by the use of technologies. However, several Brazilian schools still face difficulties related to internet access, computer availability, equipment maintenance, and the provision of educational platforms. These limitations can make it difficult to implement gamified practices, especially in contexts of greater social vulnerability. Thus, it is necessary to develop strategies that allow the use of the principles of gamification also in face-to-face activities, using low-cost resources and materials available in the school itself. Another challenge refers to the planning of activities: an efficient gamified proposal requires a clear definition of learning objectives, adequate selection of content, elaboration of challenges compatible with the level of development of students and construction of evaluation criteria consistent with the intended competencies (SILVA FILHO, 2023).

When these elements are not carefully planned, there is a risk of transforming gamification into a mere recreational activity, without an effective contribution to learning. Planning should also consider aspects related to inclusion, diversity, and the individual characteristics of students, ensuring opportunities for participation for all. Although competitive elements can increase students' interest, their inappropriate use can generate exclusion, anxiety and demotivation. Permanent rankings, excessive awards, and constant comparisons between students can harm those who have the greatest learning difficulties. For this reason, several researchers recommend prioritizing cooperative strategies, team challenges, and rewards aimed at individual progress, valuing the development of all students (SARAIVA et al., 2023).

Evaluation is one of the most important components of pedagogical practice and also undergoes significant transformations when integrated with gamification. Traditionally, evaluation was associated with the application of tests and the attribution of grades. However,

active methodologies propose more continuous, participatory and formative evaluation models. In gamification, immediate feedback allows you to continuously monitor student development, identify difficulties, and carry out pedagogical interventions throughout the learning process. In addition to traditional assessments, different instruments can be used, such as: investigative challenges; individual and collective missions; problem solving; digital portfolios; self-assessment; peer review; performance items and interdisciplinary projects (RUIZ-BAÑULS, 2021).

This diversity of strategies favors a broader understanding of learning, valuing not only the final results, but also the processes developed by the students. An increasingly discussed aspect refers to the need to develop inclusive gamified practices. Inclusive education presupposes that all students have opportunities to participate in school activities, regardless of their physical, cognitive, cultural, or social characteristics. In this sense, gamification must respect different learning rhythms, offer multiple forms of participation, and use resources accessible to students with disabilities. The easing of challenges, the use of multimodal resources, the adaptation of rules and the valorization of collaborative work are important strategies to ensure greater equity (PFLEGER, 2023).

When planned inclusively, gamification contributes to strengthening participation, reducing pedagogical barriers, and promoting more democratic school environments. The analysis of the literature shows that gamification has been consolidated as a relevant pedagogical strategy to respond to the educational demands of the twenty-first century, especially in Elementary School II. In a context characterized by the wide presence of digital technologies, the speed in the circulation of information and changes in the profile of students, it is essential that the school develops methodologies capable of promoting greater involvement of students with the process of learning (NUNES, 2024).

The reviewed studies indicate that gamification favors the development of cognitive, socio-emotional and technological skills, contributing to making teaching more meaningful and participatory. However, they also show that their effectiveness depends on pedagogical intentionality, the planning of activities and teacher training. Thus, gamification should not be understood as an isolated solution to educational problems, but as a methodology that, when articulated with other innovative practices, enhances the teaching and learning processes. Another recurring aspect in the research refers to the role of the student. In traditional models, the student often occupies a passive position, limited to the reception of content and the

reproduction of information. In contrast, gamification encourages student protagonism, encouraging active participation, decision-making, problem-solving, and collaborative knowledge construction. This change is in line with the principles of active methodologies and with the competencies provided for in the National Common Curricular Base (BNCC) (BRASIL, 2025).

In addition, it was found that gamified environments favor meaningful learning by relating curricular content with contextualized challenges, encouraging students to apply their knowledge in concrete situations. This characteristic brings gamification closer to constructivist and socioconstructivist conceptions of learning, reinforcing its potential to promote more dynamic and contextualized educational experiences. Pedagogical innovation is not limited to the use of digital technologies, but involves the transformation of teaching practices, forms of curricular organization and the relationships established between teachers and students. In this sense, gamification represents a methodological change that seeks to make learning more participatory, collaborative, and centered on the integral development of the student (MOTA, 2023).

The characteristic elements of gamification, such as challenges, narratives, missions, continuous feedback and progression by levels, contribute to reorganizing the educational process in a more engaging way. However, its effectiveness depends on integration with clearly defined pedagogical objectives. The simple insertion of scores, medals or rankings, without a consistent methodological proposal, does not guarantee better learning results. The literature also highlights that the innovation promoted by gamification favors interdisciplinarity, allowing different curricular components to be integrated into investigative projects, case studies, and challenges that require knowledge from different areas. This approach strengthens contextualized learning and expands the possibilities for developing the competencies provided for by the BNCC (MONTEIRO, 2023).

The advancement of Artificial Intelligence (AI) opens up new perspectives for gamification in the educational context. Intelligent systems can personalize learning pathways, adapt the difficulty level of activities, provide immediate feedback, and identify specific student difficulties, allowing for more precise pedagogical interventions. In Elementary School, the combination of gamification and AI can favor the construction of adaptive environments, in which each student advances according to their learning pace. This personalization contributes

to reducing inequalities, strengthening autonomy, and increasing student engagement (MARINHO, 2023).

However, the incorporation of these technologies requires care related to ethics, data protection, and the responsible use of student information. The teacher continues to play a central role in the mediation of the educational process, with technology being a complementary resource and not a substitute for pedagogical action. One of the main factors for the success of gamification is teacher training. The literature shows that many professors show interest in using innovative methodologies, but face difficulties related to lack of training, reduced time for planning and infrastructure limitations (MARCONDES et al., 2023).

Continuing education should include not only the use of digital tools, but also the theoretical foundations of gamification, activity planning, learning assessment, and the integration of this methodology into the school curriculum. Professional development programs that encourage the exchange of experiences between teachers, the collaborative production of teaching materials, and reflection on pedagogical practice tend to favor a more consistent implementation of gamification. In addition, it is important for educational institutions to promote a culture of innovation, offering technical support, adequate resources, and spaces for experimenting with new methodologies. The valorization of the teaching work is an indispensable element for the consolidation of innovative pedagogical practices (LOIOLA, 2020).

The trends identified in the literature indicate that gamification will continue to expand its presence in Brazilian schools, especially due to the expansion of digital technologies and the strengthening of active methodologies. It is expected that, in the coming years, this strategy will be increasingly integrated with adaptive platforms, virtual learning environments, and resources based on Artificial Intelligence. There is also a growing interest in the use of gamification in interdisciplinary projects, inclusive education, hybrid teaching and the development of socio-emotional skills. These possibilities reinforce its potential to contribute to a more personalized, collaborative education that is aligned with the needs of contemporary Society (GRIFFIN, 2024).

However, for this expansion to occur effectively, it will be necessary to invest in public policies aimed at teacher training, improvement of the technological infrastructure of schools, and the development of research that evaluates the impacts of gamification in different educational contexts.

4 FINAL CONSIDERATIONS

The present study aimed to analyze the contributions of gamification to the teaching and learning process in Elementary School II, through a narrative review of the literature. The analysis of scientific productions allowed us to understand that gamification is an innovative pedagogical strategy, capable of promoting greater motivation, engagement and participation of students, favoring the development of cognitive, socio-emotional and technological skills.

It was found that gamification, when planned intentionally and articulated with curricular objectives, contributes to the construction of more meaningful learning, bringing the school closer to the characteristics of contemporary students. Its relationship with active methodologies, digital technologies, and the competencies provided for in the BNCC shows its potential to strengthen pedagogical practices centered on student protagonism and collaborative learning.

However, important challenges were also identified related to teacher training, technological infrastructure, pedagogical planning and the risk of superficial use of game elements. These aspects demonstrate that gamification should not be understood as an end in itself, but as a methodology that requires theoretical foundation, consistent planning, and continuous evaluation.

It is concluded that gamification represents a relevant alternative to face the educational challenges of the twenty-first century, especially in Elementary School II, by favoring innovative, inclusive pedagogical practices aligned with the demands of digital culture. However, its success depends on the commitment of school institutions to the continuing education of teachers, the integration between technology and curriculum and the construction of educational environments that value the active participation of students. Finally, it is hoped that this study will contribute to broaden the debate on the use of gamification in basic education, encouraging new research that investigates its impacts on different curricular components, school contexts and educational realities, strengthening the national scientific production on the subject.

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