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Research article

The Value of Gamification as a tool for capturing student attention: a mixed method study

El valor de la gamificación como herramienta para captar la antención de los estudiantes: un estudio de métodos mixtos

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Abstract

Introduction: Gamification, the use of game design elements in non-game contexts, is a valuable tool for enhancing learning, particularly for students with special educational needs (SEN). This study explores its benefits in educational settings and its impact on classroom management. **Methodology:** The research, involving 200 primary school teachers, employs both quantitative and qualitative methods. The objectives are to gather teachers' perceptions of gamification and to correlate their activities with student evaluations. **Results:** Findings reveal that teachers require both technological and methodological support to effectively utilize these tools. Gamified activities increased student engagement and motivation, improved classroom management, and strengthened the sense of belonging among students.

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Discussions: Despite the increased workload for teachers, they consider the benefits for student learning and classroom dynamics to outweigh the challenges, supporting continued use of this strategy. The study highlights the importance of comprehensive support systems for teachers implementing gamification, covering both technical training and pedagogical development. **Conclusion: It** concludes that gamification is a promising approach for creating inclusive and dynamic educational environments.

Keywords: Gamification; Research; Innovation at school; Technologies; Active Learning; teacher training; Student's engagement; Inclusion.

Resumen
Introducción: La gamificación, uso de elementos de diseño de juegos en contextos no lúdicos, es una herramienta valiosa para mejorar el aprendizaje, especialmente para estudiantes con necesidades educativas especiales (NEE). Este estudio analiza sus beneficios en el ámbito educativo y su impacto en la gestión del aula. **Metodología**:La investigación, con participación de 200 docentes de primaria, combina métodos cuantitativos y cualitativos. Los objetivos son recoger las percepciones de los profesores sobre la gamificación y correlacionar sus actividades con las evaluaciones de los alumnos. **Resultados:** Los resultados muestran que los docentes requieren apoyo tecnológico y metodológico para usar estas herramientas de manera eficaz. Las actividades gamificadas incrementaron el compromiso y la motivación de los estudiantes, mejoraron la gestión del aula y fortalecieron el sentido de pertenencia. **Discusión**: A pesar del aumento en la carga de trabajo para los docentes, estos consideran que los beneficios en el aprendizaje y la dinámica del aula justifican su uso continuo. Este estudio destaca la importancia de un apoyo integral para la implementación de la gamificación, abarcando formación técnica y pedagógica. **Conclusiones**: Concluye que la gamificación es una estrategia prometedora para crear entornos educativos inclusivos y dinámicos.

Palabras clave: Gamificación; Investigación; Innovación en la escuela; Tecnologías; Aprendizaje activo; Formación del profesorado; Compromiso del alumno; Inclusión.

1. Introduction: theoretical framework

The effective integration of technology in education represents a significant challenge in contemporary society. Reflection on the use of new technologies for educational purposes and the educational implications of young people's media consumption has given rise to various research directions over time: from the analysis of best practices to the study of the effects conveyed by new media, from the examination of media functionality to the correlation analysis between media and the organization of knowledge (Baldassarre & Tamborra, 2020, p. 213). This has resulted in a broad debate characterized by differing and sometimes openly conflicting positions.

Starting from the study of the impact that new technologies have on educational processes, it is essential to emphasize the importance of students—referred to by Prensky as 'digital natives'—acquiring digital skills aimed at their formative, social, cultural, and emotional growth (Gee, 2013). The debate on the impact of new technologies on the learning processes of new generations has become one of the crucial themes in contemporary education. Approaching this issue is undoubtedly multidisciplinary, and to define its theoretical contours, one must engage with ongoing research and experiments. Unfortunately, numerous studies show that most teachers use technology marginally, without fully exploiting its potential (Petrucco & Grion, 2015; Sipilä, 2014). It is crucial to underscore that the introduction of technologies does not inherently guarantee a positive impact on educational practices

(Nirchi, 2021). On the contrary, they should serve as tools to foster collaborative experiences and promote the development of essential skills for our students' future (Sansone, Cesareni, Ligorio, Bortolotti, & Buglass, 2019).

The role of new media in modern education is to provide innovative tools to enrich the teaching and learning experience, supporting teachers in personalizing content accessible especially to students with Special Educational Needs. It is essential that technology is used not only to support traditional methods but, as mentioned earlier, as a tool to foster inclusive experiences, co-constructing knowledge and key competencies, and promoting skills crucial for the future of young global citizens (Sansone, Cesareni, Ligorio, Bortolotti, & Buglass, 2019). In this context, a proactive approach is essential, utilizing technology as a mediator to promote dynamic and interactive learning, encouraging active student participation, and better preparing them to face the challenges of the modern world (Trevisan, 2023).

Teachers encounter various limitations in the adoption and effective use of technology in the classroom, due to a combination of factors, as highlighted by numerous sector studies. Among these are the lack of access to adequate devices and technological resources and targeted training (De Simone, 2023). Often, schools do not have the necessary budget to purchase cutting-edge technological tools or to provide specific training for teachers on integrating these tools. A study by Fatimah and Santiana (2017) found that many teachers are not sufficiently trained in using web-based educational media such as Prezi, Glogster, Edmodo, Toondoo, Goanimate, and others. According to Tarman, Kilinç, and Aydin (2019), limited internet access and insufficient technical support are also among the main obstacles to the effective integration of technology in classrooms. Socio-demographic factors can also influence the adoption of technologies in classrooms. For example, a study conducted in Malaysia found that variables such as gender, age, teaching experience, the subject taught, and training in the use of new media influence their effective use; the lack of familiarity with these technologies leads to their poor integration into educational processes. Additionally, teachers may have little familiarity with new technologies due to reluctance to embrace new teaching methodologies that incorporate technology. This resistance to change may stem from concerns about the effectiveness of technology in improving student learning outcomes or the additional time and resources required to prepare technology-based lessons (Kareem, Thomas & Nandini, 2022; Isidori, Evangelista, Giammario, & Muselli, 2023).

In the present-day school—which Bauman would describe as "liquid," able to adapt to the dynamics of a complex and rapidly changing society—digital technology constitutes a fluid construction between pedagogy, didactics, and innovation. The substantial difference between traditional means and the horizons opened by new digital technologies does not lie in the digital or virtual languages but in interactivity, understood as interaction between person and machine and between person and person; in the attractiveness towards content that would not have the same effects in traditional teaching. The web itself, often criticized by more conservative teachers, allows for communication, information acquisition, and play, thus enabling learning in different ways.

2. Gamification as an inclusive didactic tool

In recent years, the role of technology in promoting well-being and resilience in educational settings has also become a focal point for educators and policymakers. The integration of technology into teaching and learning practices offers numerous opportunities to enhance student well-being, particularly when it is embedded within thoughtful and inclusive pedagogical approaches. By utilizing technology to promote engagement, inclusivity, and

active participation, schools can foster environments that support the well-being of all students, without exception.

Burns and Weinberg (2017) underscore the importance of resilience in schools, emphasizing that technology can play a crucial role in supporting students' mental and emotional well-being. They highlight the growing need for schools to adopt strategies that not only teach academic content but also equip students with the skills necessary to cope with stress, adversity, and change. By integrating technology in ways that encourage self-reflection, emotional regulation, and problem-solving, educators can create supportive classroom environments where students feel empowered to manage their well-being. For instance, digital tools such as mindfulness apps, online discussion platforms, and interactive learning technologies can be employed to promote social-emotional learning, helping students build the resilience needed to thrive both in school and beyond.

Technology can also serve as a tool to promote inclusivity and well-being in the classroom. A pedagogical approach that leverages technology for inclusion is essential to ensuring that all students, regardless of their backgrounds or abilities, are able to fully participate in the learning process (Carruba, 2023). By tailoring technological interventions to meet the diverse needs of students, educators can foster a more equitable learning environment where well-being is prioritized. For example, assistive technologies such as speech-to-text programs, screen readers, and interactive digital textbooks can be used to accommodate students with disabilities, ensuring they have the same opportunities to succeed as their peers. Furthermore, the use of adaptive learning platforms enables personalized instruction, allowing students to progress at their own pace and receive support tailored to their individual learning needs.

The significance of a pedagogical approach that emphasizes inclusion and well-being is further explored by Elena, Gaggioli, and Maria (2023), who examine the use of gamification in higher education as a means of promoting engagement and inclusion. Their study illustrates how active learning strategies, such as gamification, can foster a sense of belonging and inclusion among students, ultimately leading to improved well-being. Gamification, which involves incorporating elements of game design into educational activities, can make learning more interactive and enjoyable, thereby reducing anxiety and promoting positive emotions in the classroom. By fostering collaboration, competition, and creativity, gamified learning experiences can help students feel more connected to their peers and more engaged in their studies, contributing to a sense of well-being that is essential for academic success.

A common theme across these studies is the recognition that technology, when used thoughtfully and in conjunction with inclusive pedagogical practices, has the potential to significantly enhance student well-being. The pedagogical approach is critical in ensuring that technology is employed in ways that promote inclusion, engagement, and emotional support for all students. Without such an approach, there is a risk that technology could exacerbate existing inequalities or create new barriers to learning. Therefore, educators must adopt a holistic perspective, considering not only the technological tools available to them but also the diverse needs of their students.

In conclusion, the integration of technology in education offers significant potential to promote well-being and resilience among students. However, the success of such efforts depends on the adoption of pedagogical approaches that prioritize inclusivity and engagement. A focus on the well-being of all students, regardless of their abilities or backgrounds, must be central to any educational strategy that seeks to leverage technology for positive outcomes (Carruba, 2023; Burns & Weinberg, 2017; Gabbi, Gaggioli, & Ranieri, 2023). By doing so, educators can

create learning environments where all students feel supported, valued, and capable of achieving their full potential.

The limited adoption of technology in education highlights the need for innovative teaching methods that can increase student engagement and learning outcomes. One such method is gamification, an emerging educational strategy that involves applying game design elements in non-gaming contexts to motivate and enhance learning experiences. Gamification integrates various game mechanics, such as badges, points, scores, and leaderboards, which, according to research, can significantly boost students' motivation (Hamari & Koivisto, 2015) and improve academic performance across different educational settings. These game elements, when implemented effectively, help foster both intrinsic and extrinsic motivation, which is essential for long-term engagement and success (Manzano-León et al., 2021).

Gamification's potential goes beyond surface-level engagement, especially when considering its effectiveness in helping students develop a wide range of skills. As highlighted by Anastasiadis and colleagues (2018), digital educational games, including serious games designed for learning, can serve as powerful tools to promote students' well-being, self-esteem, and the development of soft skills. These games are particularly effective at enhancing students' critical thinking, decision-making, and problem-solving abilities, which are crucial competencies for academic success and lifelong learning.

One of the key strengths of gamification lies in the flexibility it offers within the learning environment. Gamified learning experiences typically present students with numerous choices, enabling them to explore different pathways and make decisions that directly impact their learning outcomes (Fiorese et al., 2022). This type of environment fosters autonomy, which is essential for student engagement, as learners can navigate their own learning journeys at their own pace. The emphasis on choice and adaptability encourages students to take ownership of their learning, promoting a sense of control that is often missing in traditional educational settings.

Immersion is another central feature of gamification that supports personalized learning. As students interact with educational games, each decision they make contributes to shaping a unique learner profile. This profile reflects their individual progress, strengths, and areas for improvement, allowing for a more tailored and effective learning experience. The immersive nature of gamified environments engages students not only with the content but also with the learning process itself. By actively participating in the game and making meaningful choices, students are encouraged to reflect on their actions, deepening their understanding and retention of the material.

Motivation is one of the most important outcomes of gamification, as it transforms educational tasks into more engaging and stimulating activities. By incorporating game elements, educators can shift students' focus from passive reception of information to active participation in their learning. The competitive and reward-based aspects of gamification tap into students' intrinsic desire to achieve goals and earn recognition, fostering a strong sense of purpose and engagement (Hamari et al., 2014). This increased motivation is especially valuable for students who may struggle with traditional teaching methods, helping them remain focused and enthusiastic about learning.

Another critical advantage of gamification is its ability to provide personalized learning experiences. As Gee (2003) explains, well-designed educational games offer challenges that are calibrated to meet each student's skill level. This dynamic ensures that students are neither overwhelmed by tasks that are too difficult nor bored by tasks that are too simple, striking a

balance that supports optimal learning. By adjusting to the individual abilities of each learner, gamification creates an environment where progressive learning is possible, ensuring that students continue to make meaningful academic progress at their own pace.

A distinguishing feature of gamified learning is the immediate feedback that students receive. In traditional educational models, feedback is often delayed, which can diminish its effectiveness. However, in gamified environments, students are provided with real-time information about their performance, enabling them to quickly identify mistakes and correct them (Deterding et al., 2011). This constant stream of feedback is particularly advantageous for students with Special Educational Needs (SEN), who often require more immediate support and guidance to stay on track. The ongoing feedback provided in gamified systems not only enhances students' learning experiences but also helps them build confidence as they see their progress reflected in real time.

Beyond cognitive and academic benefits, gamification also fosters the development of essential social skills. The collaborative nature of many gamified activities encourages students to work together, engage in meaningful communication, and develop problem-solving skills in group settings (Sailer et al., 2017). Group games, in particular, promote cooperation, as students must rely on each other to succeed. This collaborative aspect not only helps students improve their teamwork abilities but also strengthens peer relationships, which are crucial for personal growth and development. As students interact with their peers in gamified contexts, they build interpersonal skills that are increasingly valuable in both academic and professional settings.

The benefits of gamification extend to students with Special Educational Needs, offering them personalized and motivating learning opportunities that traditional teaching methods may not provide. For these students, who often face additional challenges in the classroom, gamification presents a more inclusive and supportive approach to learning. Students with SEN, including those with learning disabilities, attention disorders, and cognitive impairments, can significantly benefit from the adaptive nature of gamified learning environments. Gamification allows for customization and flexibility, which are key to meeting the diverse needs of these learners (Sanchez, 2011).

Inclusivity is a defining feature of gamified learning, as it ensures that students with SEN can access the same learning opportunities as their peers. Many gamified platforms allow for the customization of content, enabling educators to tailor the learning experience to the individual needs and abilities of each student. This adaptability not only promotes equity in the classroom but also helps students with SEN feel more engaged and motivated, as they are presented with challenges that are appropriate for their unique learning profiles.
One of the most significant advantages of gamification for students with SEN is its ability to reduce anxiety, which is often a major barrier to learning. Traditional classroom settings can be stressful for these students, who may feel overwhelmed by rigid expectations and high-stakes assessments. Gamified learning environments, however, offer a more relaxed and playful atmosphere, where mistakes are viewed as part of the learning process rather than reasons for negative judgment (Fleming et al., 2017). This shift in perspective helps to alleviate the pressure that students with SEN often experience, allowing them to engage more fully and confidently in their educational activities.

In addition to reducing anxiety, gamification can also boost the self-esteem of students with SEN. Educational games provide opportunities for students to achieve success and earn recognition, which can be especially important for those who may struggle in more traditional learning environments. When students with SEN experience success in gamified contexts, it

reinforces their sense of self-worth and encourages a more positive attitude towards learning (Kiili, 2005). This increase in self-esteem not only enhances their academic performance but also contributes to their overall well-being.

The use of gamification as a tool for inclusive education is more than a temporary trend; it is a response to the evolving needs of modern classrooms. Internationally, there is a growing recognition of the importance of integrating new technologies into education to promote equity and inclusivity. At its core, the goal of using technologies like gamification is to provide all students with equitable access to learning opportunities, regardless of their individual needs (UNESCO Institute for Information Technologies in Education & European Agency for Development in Special Needs Education, 2011). This approach is also reflected in Italy's national educational reforms, which emphasize the need for digital inclusion in schools.

In Italy, Law No. 107/2015, known as the "Buona Scuola" (Good School) reform, highlights the importance of integrating technology into teaching to foster active, reflective, and practical learning experiences. The National Digital School Plan, developed by the Ministry of Education, Universities, and Research (MIUR), outlines a comprehensive strategy for modernizing the Italian educational system. This plan focuses not only on providing digital tools and resources but also on transforming the way learning is approached in classrooms. The aim is to create dynamic, interactive learning environments that promote student engagement and active participation.

Digital inclusion is critical in this context, as it allows educators to address the diverse challenges that students face, particularly those with SEN. By creating more engaging and responsive learning environments, gamification helps students take a more active role in their education, transforming them from passive learners into motivated, engaged participants.

Gamification offers a powerful tool for enhancing the educational experiences of all students, but especially those with Special Educational Needs. By incorporating game design elements into learning, educators can create more motivating, inclusive, and effective environments. Gamification increases students' motivation to learn, provides opportunities for personalized learning, delivers immediate feedback, and fosters both cognitive and social skill development. For students with SEN, gamification can reduce anxiety, boost self-esteem, and offer a more accessible and engaging learning experience. As educational practices continue to evolve, the integration of gamification and other digital tools will be crucial in promoting equity and inclusion, ensuring that all students have the opportunity to succeed.

3. Methodology and results

The exploratory investigation stems from the need to understand the actual benefits of gamification in educational contexts, particularly for students with Special Educational Needs (SEN). Additionally, it reflects on how gamification can assist teachers in creating innovative educational activities and improving classroom management.

The investigation was conducted using a Mixed Method approach with a convenience sample of 200 primary school teachers (F=182; M=18) who participated in a 30-hour training course on gamification related to inclusive methodologies during the 2023/2024 academic year. The course was structured in three phases: the first phase consisted of 10 hours of theoretical training on methodologies, tools, and learning environments for innovative, active, and inclusive teaching; the second phase included 20 hours of practical training on gamification and specific digital tools—such as Learningapps, Wordwall, Mindomo, Padlet, Bookcreator,

Quizziz, Kahoot, Socrative—related to active methodologies like Cooperative and Collaborative Learning, Flipped Classroom, Jigsaw, etc.; the third and final phase (hours not counted within the course) involved the school-based experimentation of activities designed with the various proposed digital tools. This training program, centered on the logic of learning by doing, was structured through a gradual and progressive introduction of tools and methodologies. This allowed participating teachers to personally experience the potential of both, first creating digital content and then testing it with their students in school.

The objectives of this exploratory study are twofold:

1. To gather teachers' perceptions and attitudes towards the use of gamification tools.

2. To correlate teachers' gamification activities with the assessments of students who used the tools created by their teachers during the training course.

As previously mentioned, the research employed a combination of quantitative and qualitative methods. Data were collected through two online questionnaires administered via Google Forms:

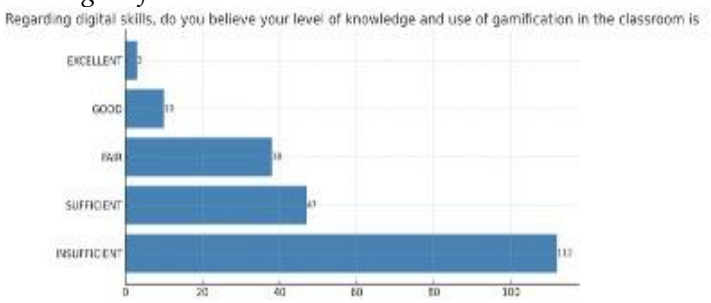
An entry questionnaire with 5 closed-ended Likert scale questions administered anonymously to explore prior knowledge regarding active methodologies and the use of digital tools.
A final questionnaire at the end of the training course with 15 closed-ended Likert scale questions and 5 open-ended questions to assess the competencies acquired in digital content creation, any changes in perceptions regarding the potential of gamification and related methodologies, and the feedback received from students after experimenting with the digital content during lessons.

The questionnaire responses were subjected to qualitative and quantitative analyses and comparisons between pre- and post-course responses.
From the initial questionnaire (Table 1), it emerged that 56% of teachers reported their level of knowledge and use of gamification in the classroom as insufficient (112), 24% as sufficient (47), and 1% as good (2) and excellent (1). Additionally, 82% of teachers (164) stated that they do not use active methodologies related to digital tools in the classroom (Table 2).

Open-ended responses indicated a need for targeted and contextualized training on the methodologies to apply and the tools to use, especially in the presence of SEN students.

Table 1.

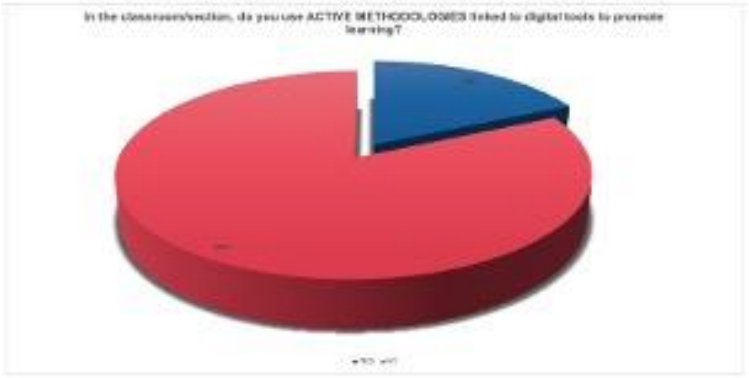
Teachers' competence about gamification



Source: Own elaboration (2024).

Table 2.

Active Methodologies and digital tools



Source: Own elaboration (2024).

Upon completion of the training course, the second questionnaire was administered, which revealed some interesting insights. A total of 120 teachers consider targeted and ongoing training to be extremely necessary (Table 3), and they expressed a need—despite having been able to independently create digital content during the training—for technological support to effectively use gamification tools (Table 4).

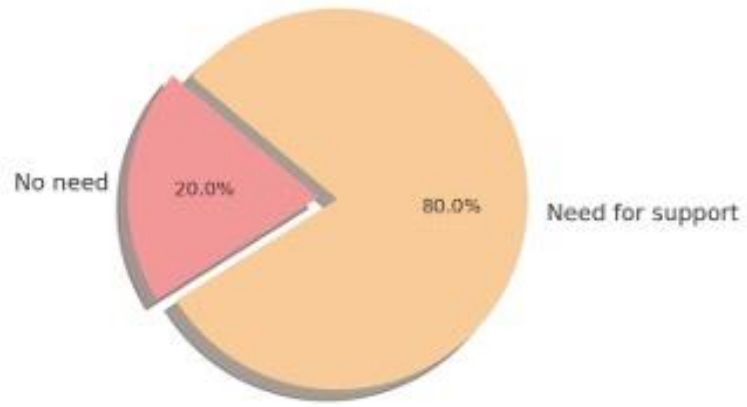
Table 3.

Teachers' Training

Source: Own elaboration (2024).

Table 4.

Teachers' need about technological support



Source: Own elaboration (2024).

Regarding their perception of structuring digital content, 45% of teachers reported being able to generate creative content, 35% were satisfied with the content they created, and 20% felt they generated content appropriate for the target audience (Table 5) about Teachers' perceptions od digital contents.

Table 5

Teachers' perceptions on digital contents

Perception in structuring the content created	Teachers
Creative	45%
Well done	35%
Adequate for the classrooms	20%

Source: Own elaboration (2024).

As for the feedback obtained from students, it is interesting to note that 50% of students found a gamification-based teaching approach very positive, 40% found it positive, and only 1% found it negative (Table 6) about the Evaluation process in digital contents.

Table 6.

Evaluation process on digital contents

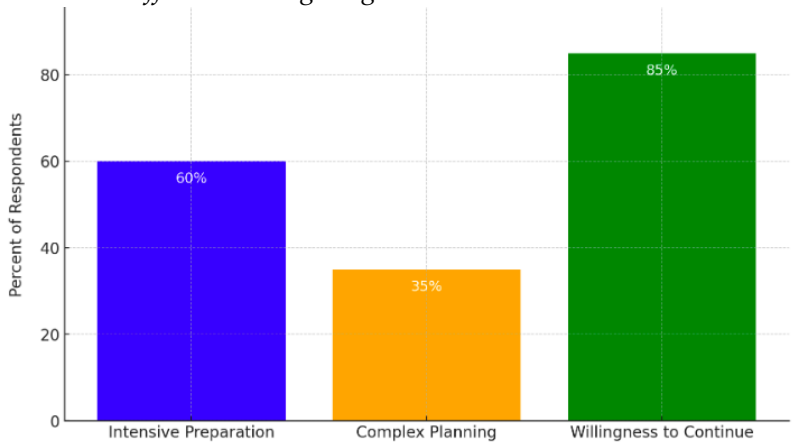
Evaluation	Students
High Positive	50%
Positive	40%
Neutral	9%
Negative	1%

Source: Own elaboration (2024).

Despite finding the activities demanding, teachers are willing to continue using gamification in the classroom because it benefits the teaching/learning process (Table 7).

Table 7

Teachers' perceptions on the difficult to design digital activities



Source: Own elaboration (2024).

According to the teachers, working with large classes that increasingly include students with Special Educational Needs (SEN) is challenging, especially when they feel burdened with numerous educational, didactic, relational, and emotional responsibilities. They therefore believe that greater collaboration among colleagues and training that considers both practical and methodological-didactic aspects of using gamification are necessary.

This study has highlighted several crucial aspects of implementing gamification by primary school teachers. The findings discussed align with those emerging from the literature analysis on the topic. Using digital devices in teaching activates students' creative and problem-solving processes, increasing their motivation to study, even if only temporarily. Positive outcomes are more evident when teachers can incorporate these tools into well-organized teaching activities. This inevitably implies an intensification of the procedures for designing educational activities.

Below are some reflections on the most interesting aspects identified from the data analysis:
Technological Support: Teachers need substantial technological support to effectively use gamification tools, including both training and ongoing assistance. Blanco and colleagues, in a 2012 study, highlighted this same issue and proposed a framework to simplify teachers' tasks related to gamification integration, reducing their workload during this process (Blanco et al., 2012).

Methodological and Pedagogical Orientation: Beyond ICT training, teachers need methodological/didactic guidance mediated by tools to adopt a more inclusive approach that improves classroom management. Pedagogically, it is essential for teachers to learn how to design valid gamification activities that meet the diverse needs of their students.

Creativity and Structure: The gamification activities produced by teachers after the training were evaluated by the teachers themselves as creative, well-structured, and suitably adapted to their class groups. However, they noted the need to learn about increasingly interactive and engaging tools supported by AI. An interesting study by Leelavathi and Surendhranatha

(2024) explored how some digital tools can promote critical thinking and creativity in educational contexts (Leelavathi & Surendhranatha, 2024).

Student Engagement and Motivation: Students were highly engaged and motivated by the gamified activities. Their evaluations were very positive, noting that despite the activities being complex, gamification made the cognitive load more manageable. This aligns with the findings of Maclean-Blevins and Muilenburg (2013), who demonstrated that the use of digital tools can support student self-regulation, reward positive behaviors, and help students monitor their progress (Maclean-Blevins & Muilenburg, 2013).

Classroom Management: Gamified activities fostered greater engagement, motivation, and a strong sense of group cohesion among students. This method allowed for better focus on tasks and increased students' sense of belonging to the group, creating a positive classroom climate. Teacher Workload: Although the preparation and planning required for gamification were demanding, teachers expressed a willingness to continue using gamification for its effectiveness in promoting learning, relationships, interaction, and inclusion of students, especially those with Special Educational Needs, and improving classroom management.

4. Discussion and conclusion

In conclusion, for the use of technology in education to be effective, teachers must be adequately trained in integrating technological tools and instructional methods such as gamification. Recommendations on key competencies include promoting a more proactive mindset in the use of technology, and encouraging teachers to experiment with and adopt innovative methods and tools. Furthermore, teachers must understand the potential of technology, particularly gamification, as a method and tool for facilitating collaborative learning and skill development, rather than merely using it as a mediator within traditional methods.

Certainly, the limited adoption of technologies in teaching by educators can be attributed to a combination of factors related to training, external barriers, socio-demographic factors, and motivational challenges. Understanding these barriers is crucial for developing effective strategies that can support teachers in integrating technologies into their teaching practices. Recognizing that effective use of ICT in education involves deeply cognitive and design-based structures, teachers are engaged in constructing a new design process in which, alongside the classic elements—content, objectives, assessment—there are: the critical selection of models, methodologies, and techniques linked to technologies, learning modes, and the multiple modes of representation of meaning enabled by technologies (Cope & Kalantzis, 2000), and the forms of knowledge they prompt (Harris & Hofer, 2009). Teachers are thus required to become “teacher designers” capable of making appropriate choices to meet the educational demands of contemporary society and the expected learner profiles.

Gamification represents an innovative and effective approach to enhancing the educational experience, especially for students with special educational needs. By integrating game design elements into school activities, as demonstrated, it is possible to create a more motivating, personalized, and inclusive learning environment. However, it is crucial that teachers understand the specific needs of their students and design gamified experiences that are appropriate and meaningful.

This article, through action research, aims to highlight how the teaching-learning process mediated by the conscious use of technologies, particularly gamification, can contribute to creating not only inclusive settings but also meaningful learning experiences.

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