

Research articles

Developing soft skills through gamification: innovation in management education

Desenvolvendo *soft skills* por gamificação: inovação no ensino de gestão

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HOW TO CITE: CAZANE, A. L. *et al.* Developing soft skills through gamification: innovation in management education. *Revista Ibero-Americana de Estudos em Educação*, Araraquara, v. 21, e20383, 2026. e-ISSN: 1982-5587. DOI: <https://doi.org/10.21723/riaee.v21i00.2038302>

Abstract

This article analyzes the use of gamification as a pedagogical strategy for developing soft skills in higher education, focusing on the implementation of a gamified learning path grounded in the GameFlow model. This is a descriptive study with a mixed-methods approach, based on administering a questionnaire adapted from the GameFlow model to 35 students, whose responses were analyzed using Likert scales and agreement analysis, complemented by qualitative observations. The study involves four integrated courses within a higher education management program designed to develop competencies in leadership, communication, and teamwork. The results indicated agreement levels above 75% for most elements of the GameFlow model, with the highest scores for challenge and feedback, while the immersion dimension showed lower indices. The study adapts the GameFlow model to an educational context. The findings highlight the potential of gamification to promote engagement and active learning in distance education.

Keywords: gamification; soft skills; higher education; Gameflow model; pedagogical innovation.

Resumo

Este artigo tem como objetivo analisar o uso da gamificação como estratégia pedagógica para o desenvolvimento de soft skills no ensino superior, com foco na implementação de trilha gamificada baseada no modelo GameFlow. Trata-se de um estudo descritivo, de abordagem mista, baseado na aplicação de um questionário adaptado do modelo GameFlow a 35 estudantes, cujas respostas foram analisadas por escala Likert e análise de concordância, complementadas por observações qualitativas. O estudo envolve quatro disciplinas integradas em um curso superior de gestão voltadas ao desenvolvimento de competências como liderança, comunicação e trabalho em equipe. Os resultados indicaram níveis de concordância superiores a 75% na maioria dos elementos do modelo GameFlow, com destaque para desafio e feedback, enquanto a dimensão imersão apresentou índices mais baixos. O estudo adapta o modelo GameFlow ao contexto educacional. Os achados evidenciam o potencial da gamificação para promover engajamento e aprendizagem ativa em cursos a distância.

Palavras-chave: gamificação; *soft skills*; ensino superior; modelo GameFlow; inovação pedagógica.

INTRODUCTION

This article discusses the use of gamification as a pedagogical strategy to develop soft skills in higher education. It is based on the experience of implementing a gamified program structured according to the GameFlow model (Sweetser et al., 2017). The study emphasizes how innovative practices can transform the teaching of social and emotional skills in management courses.

Higher education institutions face the challenge of integrating the development of interpersonal and behavioral skills into their curricula in a structured and effective manner.

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Submitted: June 25, 2025

Reviewed: March 15, 2026

Approved: March 16, 2026

Financial support: nothing to declare.

Conflicts of interest: nothing to declare.

Ethics committee approval:
CAAE 79528324.9.0000.5496.

Data availability:
The research data are available within the body of the article.
Study conducted at Universidade de Marília (Unimar), Marília, SP, Brasil.



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Traditional academic training has prioritized technical competencies; however, the job market increasingly demands professionals with leadership, teamwork, effective communication, and problem-solving skills (Kuregyan; Khusainova, 2022). This challenge is further compounded in distance learning courses, where student engagement depends on active methodologies and interactive environments that encourage participation and motivation throughout the academic journey (Sendra et al., 2021).

Gamification, the application of game elements and dynamics in educational settings, has emerged as a tool to enhance engagement and the meaning of learning (Bernik, 2021). In management education, where simulating organizational scenarios and practicing managerial skills are essential, gamification shows great promise in improving the education of future managers.

Recent studies have highlighted the potential of gamification and educational games to support the development of soft skills in higher education, especially regarding competencies such as communication, teamwork, and problem-solving (López-Serrano et al., 2025; Sanz-Ángulo et al., 2025). However, much of this research has focused on one-off interventions or isolated learning experiences based on specific games or short-term activities. Studies analyzing the structured application of gamification integrated into the curriculum, especially through learning pathways spanning different disciplines and using theoretical models to evaluate the gamified experience (such as GameFlow), remain scarce. Thus, the literature continues to emphasize the need to understand how structured, gamified approaches can contribute to engagement and the development of socio-emotional competencies in broader educational contexts.

The following central research question emerges: To what extent can the structured application of gamification, based on the GameFlow model, promote the development of soft skills in higher education management students? This question informs the analysis presented in this article, which aims to address a gap in the literature by empirically exploring the impact of this pedagogical approach on student engagement and socio-emotional development.

In this study, soft skill development was analyzed in terms of the socio-emotional competencies involved in the gamified program's activities, including leadership, communication, teamwork, active listening, problem-solving, and career planning. Although these competencies were not directly measured by the data collection instrument, indicators derived from the GameFlow model, such as challenge, clarity of objectives, feedback, control, and immersion, enabled the assessment of dimensions of the learning experience associated with student engagement, active participation, and self-regulation. The literature recognizes these factors as relevant pedagogical conditions for the mobilization and development of soft skills in gamified educational environments.

This article aims to prompt reflection on the role of innovative methodologies in developing soft skills and contribute to improving educational practices in management by sharing this teaching experience.

The article is organized into six sections, in addition to this introduction. The first section presents the theoretical foundations of gamification as a pedagogical strategy, with an emphasis on the GameFlow model. The second section explores soft skills and their importance in business education, highlighting the challenges of integrating them into higher education. The third section describes the developed gamified track and details its application across four interconnected courses. The fourth section presents the methodological procedures adopted. The fifth section compiles the main quantitative and qualitative results from the evaluation of the track. The discussion section interprets these findings in light of the literature and highlights their implications for practice. Finally, the section provides final considerations that summarize the study's contributions and suggest avenues for future research.

GAMIFICATION AS A PEDAGOGICAL STRATEGY: THE GAMEFLOW MODEL

Gamification has become a popular approach in higher education, especially for courses requiring high levels of student engagement and interaction. By incorporating game elements

into educational settings, the learning experience becomes a dynamic and motivating process that combines progressive challenges, continuous feedback, and rewards to encourage active student participation (Deterding et al., 2011).

This approach is especially relevant in management, where managers must develop technical competencies and behavioral skills such as leadership, decision-making, and communication. Structured gamification models, such as GameFlow, evaluate the effectiveness of gamified experiences, ensuring the applied elements promote meaningful learning (Sweetser et al., 2017).

Developed by Sweetser and Wyeth (2005), GameFlow structures the user experience based on eight dimensions: concentration, challenge, skills, control, goals, feedback, immersion, and social interaction. In higher education, these dimensions can be adapted to measure the impact of gamification on student engagement. Recent studies indicate that balanced challenges, immediate feedback, and clear goals are critical for active learning and the development of social-emotional competencies in gamified educational environments (Sendra et al., 2021; Winanti et al., 2021).

Although gamification has transformative potential, its application in higher education requires a strategic approach that aligns with educational objectives. Simply incorporating game mechanics without adequate pedagogical planning can result in a superficial and ineffective learning experience. In management courses, for example, gamified activities must simulate real-world situations within an organizational environment. This allows students to develop practical skills in a context that is both playful and challenging.

Furthermore, immersion, often considered a central element of gamification, may play a different role in educational contexts. Studies indicate that total immersion may not be the primary objective of educational games, since learning must be connected to students' reality rather than to a fictional environment disconnected from professional practice (Althoff; White; Horvitz, 2016; Caserman et al., 2020). This discussion underscores the importance of adapting the GameFlow criteria to educational settings to ensure that gamification serves as a learning tool rather than merely as a source of entertainment.

Thus, when applied to teaching, gamification must balance playful elements with real challenges from the corporate world. This allows students to experience typical professional scenarios, make strategic decisions, and develop essential job market performance competencies.

SOFT SKILLS AND THEIR RELEVANCE TO BUSINESS EDUCATION

Soft skills, also known as socio-emotional competencies, are widely recognized as critical factors in determining employability and professional success in the 21st century. While hard skills are essential for performing specific tasks, soft skills distinguish professionals in an increasingly dynamic and automated job market (Kuregyan; Khusainova, 2022).

In business education, soft skills play a central role because managerial positions require strategic vision, leadership, problem-solving, and emotional intelligence. Studies indicate that professionals with high interpersonal skills tend to reach leadership positions more quickly and demonstrate greater resilience in complex organizational environments (Strazzeri, 2019).

However, one of the greatest challenges for higher education institutions is the structured integration of soft skills into academic curricula. Traditionally, Brazilian higher education has prioritized transmitting technical content, while developing behavioral competencies has been restricted to extracurricular experiences or isolated initiatives by professors (Welch, 2021). This educational gap can directly affect students' preparation for the job market, as companies report difficulty hiring professionals with effective communication, adaptive leadership, and teamwork skills (Deterding et al., 2011). A systematic review by Ducatti et al. (2025) confirms that, despite growing interest in gamification in higher education, few experiences integrate soft-skill development in a continuous, curricular manner through structured pedagogical approaches.

In this scenario, gamification emerges as a promising pedagogical approach for developing these competencies. Unlike traditional approaches, which often limit learning to a passive model, gamification enables students to develop soft skills by facing simulated challenges, collaborating in teams, and making decisions that reflect real-world professional scenarios. Furthermore, gamification promotes self-assessment and constant feedback, enabling students to reflect on their abilities and pinpoint areas for improvement throughout the learning process (Sendra et al., 2021).

In business education, training in soft skills must go beyond theoretical exercises and incorporate active learning methodologies such as problem-based learning, organizational simulations, and group dynamics. These strategies enable students to develop a repertoire of behavioral competencies fundamental to their professional careers.

Educational literature has emphasized the strong association between the development of soft skills and the adoption of active learning methodologies. Unlike content-delivery-centered pedagogical approaches, these methodologies engage students in participatory learning experiences in which they solve problems, make decisions, collaborate in teams, and reflect on their practice (Sanz-Ángulo et al., 2025). In this context, strategies such as problem-based learning, simulations, and collaborative activities have been recognized as tools that can foster the development of socio-emotional competencies by making the educational process more like real-world professional practice.

Recent research has reinforced the relationship between active learning methodologies and the development of soft skills in higher education. Studies indicate that combining digital resources, cooperative learning, and gamification elements in pedagogical approaches can increase student engagement and the perceived development of communication, teamwork, critical thinking, and problem-solving skills (Sanz-Ángulo et al., 2025; López-Serrano et al., 2025). These findings reinforce the potential of interactive, challenge-based learning experiences to support the development of socio-emotional competencies relevant to the professional context.

Furthermore, the growing use of hybrid and distance learning methods underscores the need for innovative approaches to develop these skills. While face-to-face interaction often facilitates the spontaneous development of these skills, the virtual environment requires deliberate efforts to create opportunities for social engagement and collaboration (Campos, 2020). When well-structured, gamification can bridge this gap by creating interactive experiences that promote teamwork and the development of emotional intelligence, thereby preparing students for the challenges of the job market.

Therefore, business education must recognize soft skills as a cornerstone of training future managers and adopt strategies to enable the practical, meaningful development of these competencies. When integrated into a consistent pedagogical plan, gamification offers a valuable opportunity to transform how these skills are taught in higher education.

A GAMIFIED PATHWAY FOR DEVELOPING SOFT SKILLS IN HIGHER EDUCATION

The gamified track was implemented across four integrated courses throughout 2023 and 2024. These courses were designed to develop soft skills and prepare students for professional and personal challenges. Below, we detail each course, its main activities, and the gamified elements used.

Each course was designed with specific objectives, practical activities, and gamification elements to maximize students' learning and personal and professional development. The gamified track offers students a journey of self-discovery and empowerment that encompasses both technical and socio-emotional aspects.

The first course, Life Project and Soft Skills 1 (PVSS 1), aimed to help students better understand their professional fields and promote self-awareness. Through activities such as creating digital avatars, building LinkedIn profiles, and analyzing personal strengths based on character strengths theory, students reflected on their potential while balancing technical and socio-emotional aspects. Integrating gamification through a scoring system and a personalized narrative that tracked avatar development added immersion and motivation, allowing students to experience their achievements engagingly.

Subsequently, the Life Project and Soft Skills 2 (PVSS 2) course was designed to foster the development of practical competencies and essential skills for leveraging feedback as a growth tool. One of the central activities was the “Mole Game,” a dynamic exercise that simulated real-time feedback scenarios, providing an immersive learning and reflection experience. Students were also encouraged to seek out mini-courses related to their interests to promote continuous learning. The gamified structure consisted of progressive phases, with each challenge representing a new learning experience and providing immediate feedback after each stage. This model encouraged engagement and strengthened each student’s ability to offer and receive feedback constructively.

The Life Project and Soft Skills 3 (PVSS 3) course curriculum focused on developing leadership and motivation skills. Analyzing historical and contemporary leadership figures allowed students to reflect on different styles of influence. Additionally, creating the “Boss Profile,” an exercise that encouraged students to identify their leadership competencies and styles of influence, provided important insight into their capabilities. To encourage the practical application of these concepts, a mission-based system was introduced in which students played roles in fictional scenarios that addressed challenges typical of organizational and community contexts. This gamified dynamic reinforced the theory and enabled students to apply their decision-making and leadership skills in real-world environments.

In the final stage of the program, Life Project and Soft Skills 4 (PVSS 4), students were guided to develop good habits and hone their talents, with an emphasis on career planning. Throughout the course, activities such as case studies, thematic quizzes, and the creation of an Individual Development Plan (IDP) were essential for consolidating learning. The narrative connected the content of previous courses, offering an integrative and reflective perspective. The main objective was to enable students to synthesize what they had learned and feel prepared to plan and achieve their personal and professional goals.

Chart 1 below provides an overview of the structure and objectives of the four courses that comprise the gamified track, summarizing the main pedagogical strategies, gamification elements, and social-emotional competencies developed at each stage.

Reflecting on this gamified learning path reveals how it fosters a continuous journey of self-discovery and growth. The activities engage students in an immersive process in which continuous feedback and progressive challenges reinforce the covered concepts and strengthen their ability to adapt and persevere.

Each module is clearly designed as a fundamental step in a larger journey. In PVSS 1, students were encouraged to understand their fields of expertise and reflect on their strengths through activities such as creating digital avatars and LinkedIn profiles and conducting an in-depth analysis of their character strengths. PVSS 2 focused on developing professional competencies through gamified activities like the “Mole Game” and researching mini-courses, enabling students to expand their knowledge in specific areas of interest. PVSS 3 focused on leadership and motivation with missions that simulated real-life decision-making scenarios. PVSS 4 focused on career planning and personal development with the creation of the PDI as the final milestone to consolidate all learning.

This journey fosters the development of technical and leadership skills and promotes constant reflection on each student’s progress, encouraging them to take charge of their own path.

Certain gamification elements were essential to ensuring students’ sustained engagement throughout the program, alongside the integrated pedagogical structure. The following stand out as key resources:

- **Scoring and Rewards System:** Each task awarded points and unlocked symbolic achievements, fostering a sense of progress and encouraging students to keep striving.
- **Collaborative Challenges:** Group activities, such as the “Mole Game,” strengthened communication, cooperation, and collaborative problem-solving skills.
- **Engaging and progressive narrative:** Subjects were connected by a storyline that gave meaning to the learning journey, promoting student agency and emotional engagement.
- **Immediate feedback:** At the end of each phase or activity, students received detailed feedback on their performance, fostering self-reflection and goal-oriented learning.

Chart 1. Overview of the courses in the gamified soft skills track.

Subject	Main Objective	Teaching Strategies	Gamified Elements	Soft Skills Developed
LPSS 1 – Life Planning and Soft Skills 1	Encourage self-awareness and reflection on career paths	Avatar creation, LinkedIn profile setup, character strengths analysis	Customized narrative, scoring system	Self-awareness, professional identity
LPSS 2 – Life Planning and Soft Skills 2	Develop skills for giving and receiving constructive feedback	“Mole Game” activity, search for external mini-courses, self-assessments	Progressive stages with immediate feedback	Communication, active listening, openness to feedback
LPSS 3 – Life Planning and Soft Skills 3	Work on leadership and motivation in organizational contexts	Leadership analysis, creation of the “Boss Profile,” and role-playing in simulated challenges	Team missions, simulated decision-making	Leadership, initiative, problem-solving
LPSS 4 – Life Planning and Soft Skills 4	Plan for your professional future and build your skills	Development of the Individual Development Plan (IDP), quizzes, and case studies	Integrated narrative, final score, interdisciplinary connections	Career planning, systemic perspective, personal goals

Source: Authors, 2025.

These gamified components were aligned with educational objectives, serving not as mere cosmetic additions but as strategic tools for teaching and learning. Their integration resulted in a more dynamic, interactive educational environment focused on the students’ holistic development.

METHOD

This study is characterized as descriptive applied research employing a mixed-methods approach (quantitative and qualitative). The gamified pathway was validated using a GameFlow-based questionnaire that measures key aspects critical to the success of gamified activities, such as engagement, motivation, social interaction, and immersion. Although the model was originally developed to evaluate entertainment games, it has proven highly effective in an educational context because its components enable analysis of players’ experiences with educational games. The model was chosen for its comprehensiveness and ability to identify factors that impact student satisfaction and engagement (Dias et al., 2013; Fu; Su; Yu, 2009; Jegers, 2007; Vanden Bempt et al., 2022).

The adapted questionnaire by Felix et al. (2020) consists of seven elements: concentration, challenge, player skills, control, goals, feedback, and immersion. For each element, statements were presented followed by a Likert scale ranging from “strongly disagree” to “strongly agree,” enabling a detailed assessment of how students perceived themselves in relation to different aspects of the gamified learning experience.

The “social interaction” dimension, present in some applications of the GameFlow model, was excluded from this study because the gamified track did not include activities that involved direct student interaction. While some activities were structured as collaborative challenges within an organizational context, they were carried out individually in the virtual learning environment with no effective collaborative dynamics among participants.

Data collection took place from November 11 to 23, 2023, at the end of the gamified track cycle. 35 students enrolled in a distance-learning undergraduate management program participated.

The program was linked to the four courses that comprised the gamified track. Participants' responses were analyzed according to the agreement scales established in the questionnaire and categorized into five levels: "strongly disagree," "disagree," "neither agree nor disagree," "agree," and "strongly agree."

The questionnaire was made available to students in a virtual learning environment at the end of the gamified track cycle. Participation was voluntary and contingent upon agreeing to the Informed Consent Form (ICF). Participants completed the questionnaire online after finishing the activities outlined in the track.

To validate the questionnaire items, the percentage of agreement among students was calculated based on how often participants agreed with the statements presented. Items were considered validated when the percentage of agreement reached at least 70%, as recommended by Braccialli et al. (2019).

In addition to quantitative responses, qualitative observations were collected regarding students' perceptions of the gamified teaching methodology. These observations were analyzed to identify recurring patterns and themes. Content analysis was employed to examine these observations, providing a richer, more detailed understanding of students' perceptions of the learning experience.

The quantitative and qualitative results were integrated to provide a comprehensive view of the gamified approach's effectiveness. The analysis primarily assessed how the model contributed to student engagement, motivation, and the development of essential social-emotional competencies in a higher education context.

The sample size, as well as the restriction to a single course and institutional context, are considered methodological limitations. Therefore, the results should be interpreted as exploratory evidence regarding the gamified experience. It is not possible to generalize the findings to other educational contexts without conducting additional studies.

This study was conducted in accordance with the ethical principles established for research involving human subjects, and it was approved by the Research Ethics Committee (REC) under protocol CAAE 79528324.9.0000.5496. Ethical approval ensured that all procedures respected the participants' rights, including confidentiality, autonomy, and the protection of personal information.

RESULTS

The evaluation of the gamified learning path was based on responses from 35 students who agreed to participate in the study by signing the Informed Consent Form (ICF). The analyzed data enabled us to measure the effectiveness of the gamified approach by taking into account the elements of the *GameFlow* model: engagement, challenge, skills, control, goals, feedback, and immersion.

The results showed overall agreement above 75% for most elements, indicating a positive perception of the gamified learning experience:

- **Objetivos e feedback:** os estudantes identificaram claramente os propósitos das atividades e receberam feedback contínuo sobre seu desempenho. Isso reforçou a motivação e possibilitou ajustes no aprendizado ao longo do processo.
- **Focus and challenges:** Participants reported that the challenges were well distributed along the trail, striking a balance between complexity and accessibility. The progressive structure of the activities allowed each student to advance at their own pace without feeling overwhelmed.
- **Skills and control:** The gamified interface was considered intuitive, and the game mechanics provided autonomy in navigating and completing tasks. Students felt they were in control of their learning journey.
- **Objectives and feedback:** Students clearly identified the purposes of the activities and received continuous feedback on their performance. This reinforced motivation and enabled adjustments to their learning throughout the process.

Chart 2 shows the agreement percentages for each item evaluated based on the *GameFlow* model. It is worth noting that the highest scores were assigned to items related to “Challenge” and “Feedback,” while the lowest scores were observed for items related to “Immersion.” Overall, the quantitative data suggest that students had positive perceptions of the gamified learning path, particularly regarding the elements of challenge, feedback, and control.

Chart 2. Analysis of Gamification Elements Based on the *GameFlow* Model.

Items evaluated	DT	D	NCND	C	CT	(%)
C. Concentration						
C1. I did not feel overwhelmed by the game’s challenges (tasks).	14	13	4	1	3	77,14
C2. I realized that the amount of information to be processed was substantial, but appropriate for my abilities (cognition, perception, and memory).	11	16	5	2	1	77,14
C. Challenge						
C1. I felt capable of completing the challenges (activities) that were presented.	15	17	2	1	0	91,43
C2. While I was playing, I noticed different levels of difficulty in the game.	8	19	5	1	2	77,14
C3. I felt that the new challenges were introduced at a pace appropriate for learning.	10	17	4	2	2	77,14
S. Skills						
S1. For me, learning the game wasn’t boring or monotonous—it was actually fun.	12	12	6	2	3	68,57
S2. I was rewarded for my effort and for the knowledge I gained while playing.	6	21	3	3	2	77,14
S3. I didn’t have any trouble learning how to play the game, since the on-screen interactions and the challenges are easy to understand.	12	18	1	3	1	85,71
C. Control						
C1. I felt in control when using the screens, buttons, menus, and other interactive elements appropriately.	8	22	4	1	0	85,71
O. Objective						
O1. I figured out the main objective of the game right at the start.	8	20	4	2	1	80
F. Feedback						
F1. I received progress updates in the game while playing.	15	15	3	2	0	85,71
F2. I received immediate feedback on my actions in the game as I played.	13	18	2	1	2	85,71
F3. My in-game status and score were always visible.	11	19	2	1	2	85,71
I. Immersion						
I1. I became emotionally invested in the game.	7	15	6	5	2	62,86
I2. I lost track of time while playing, to the point where I didn’t notice it passing or what was happening around me.	4	10	6	11	4	40

Source: authors, 2025.

While most indicators showed agreement levels above 75%, some items fell below this threshold. Item H1, which asked about the perception that learning the game was fun, received 68.57% agreement. This suggests that although the experience was considered functional and intuitive, the playful component may not have been perceived as such by all participants.

Even lower results were observed in items associated with the immersion dimension (I1 and I2), particularly regarding losing track of time during the game (40%). These results suggest that the gamified learning path was viewed more as a structured educational tool than as a fully immersive experience. This perception may be related to the activity's educational context, in which students are aware of the academic objectives.

The qualitative perceptions collected from students complement the quantitative data, broadening the understanding of the results. The main points raised are as follows:

- Engagement and innovation: Students rated the track as innovative, dynamic, and more engaging than traditional approaches.
- Suggestions for improvement: The need for more robust introductory tutorials and a more direct integration between gamified activities and course content was highlighted.
- Flexibility and applicability: Students who balance work and studies reported that the gamified approach helped them organize their routine and facilitated the learning of soft skills.

Next, these results are discussed in light of the literature, taking into account the participants' qualitative perceptions and the pedagogical implications observed during the experiment.

DISCUSSION

Analysis of the data revealed that the gamified learning path provided students with an active learning experience characterized by high engagement and a strong sense of educational value. These results highlight the potential of gamification as an innovative approach to developing social and emotional skills, particularly in management programs at the university level.

This finding aligns with Ducatti et al.'s (2025) systematic review, which identified communication, collaboration, empathy, leadership, and critical thinking as the primary soft skills promoted by gamification in higher education. The present study observed a positive impact, especially in competencies such as leadership, teamwork, active listening, and career planning. This reinforces the empirical applicability of trends identified in previous studies.

In addition to converging results, this study advances the field by proposing a longitudinal, integrated gamification structure distributed across four complementary courses. This differs from the studies reviewed by Ducatti et al. (2025), which predominantly involved one-off activities such as escape rooms, quizzes, and off-the-shelf games. Using the GameFlow model as a theoretical and methodological basis for activity planning provides structured pedagogical continuity. This aspect is still poorly documented in the scientific literature in this field.

Another distinguishing feature is the intentional application of pedagogical elements, emphasizing immediate feedback, progressive challenges, integrated narratives, and symbolic rewards. Previous studies have shown that these resources effectively stimulate motivation and active learning (Sweetser et al., 2017; Sendra et al., 2021), but this study demonstrates how to organize them within a teaching-learning pathway systematically.

Despite the largely positive evaluation of gamified elements, the immersion factor received the lowest level of agreement. This finding underscores an important point: while total immersion is desirable in entertainment games, it may not be suitable for educational contexts that require a focus on the practical application of knowledge (Militello; Hanna; Nigg, 2018; Caserman et al., 2020). Thus, lower perceived immersion does not compromise the track's effectiveness; rather, it highlights the need for a balanced integration of playfulness and educational intent.

The students' qualitative perceptions confirm these findings. Gamification was evaluated as an innovative, motivating, and flexible practice, particularly among students balancing studies and work. At the same time, suggestions for improvement emerged, underscoring the importance of continually reviewing the learning experience. These suggestions include adding more detailed tutorials and achieving a clearer alignment between gamified content and the courses' specific objectives.

As Ducatti et al. (2025) discuss in their review, one gap in the scientific literature on gamification and soft skills is the scarcity of longitudinal and interdisciplinary studies. The experience described in this article helps fill this gap by showing how to plan a long-term, integrated intervention with a simultaneous focus on technical and behavioral content.

Although the results indicate largely positive perceptions of the gamified experience, certain limitations must be considered when interpreting the findings. First, the study was conducted with a sample restricted to students from a single course and institutional context, which limits the generalizability of the results to other educational settings. Additionally, the analysis primarily relies on participants' perceptions of the learning experience, omitting objective or longitudinally validated measures of social-emotional competency development. Therefore, the results should be interpreted as preliminary evidence of the gamified approach's potential in the analyzed context.

Gamification applied to teaching should balance playful elements with real-world corporate challenges. This allows students to experience professional practice scenarios, make strategic decisions, and develop essential job market performance competencies. The effectiveness of the approach depends not only on the presence of game mechanics but also on how coherently these dynamics align with educational objectives, market demands, and students' needs.

CONCLUSION

According to the participating students' perceptions, the implementation of the gamified learning path in higher education showed potential to make the learning process more dynamic and interactive, as well as better aligned with the educational demands of the 21st century. The students found that integrating playful elements with intentional pedagogical planning created a gamified experience that fostered socio-emotional competencies relevant to contemporary professional practice, such as leadership, communication, teamwork, and career planning.

This study's results indicated that focus, challenge, skills, control, goals, and feedback promote active learning and build a more engaging teaching environment. However, it is noteworthy that the immersion element received lower ratings, underscoring the need to reconsider the relevance of total immersion in educational games. After all, the main objective in an educational context is to connect students to the practical application of knowledge rather than disconnect them from academic reality (Althoff; White; Horvitz, 2016; Caserman et al., 2020).

Students' perceptions corroborate the quantitative findings and highlight the value of the gamified approach in organizing the academic routine and motivating and engaging students. The suggestions received also point to avenues for continuous improvement of the methodology, such as including tutorials and more closely aligning gamified activities with curricular content.

Thus, the research question can be answered affirmatively. The results indicate that, in the students' perception, the structured application of gamification based on the GameFlow model was associated with fostering the development of soft skills in distance management education. This study expands the range of innovative pedagogical practices and highlights the importance of active approaches that address students' needs.

Theoretically and practically, the study suggests that gamification should be used judiciously to ensure that the playful aspect does not overshadow educational objectives. Maintaining a balance between fun and learning is essential to ensuring the depth and relevance of the educational experience.

However, the results of this study should be interpreted in light of certain methodological limitations. As discussed in the Methods section, the analysis is based on a sample restricted to students from a single course and institutional context. This limits the generalizability of the findings to other educational settings. Additionally, the study design did not include a comparison group that used traditional teaching approaches. This prevents us from establishing causal relationships between gamification use and perceived outcomes. The evaluation primarily relies on students' perceptions of the learning experience, as no external instruments or objective measures were used to assess the development of social-emotional competencies directly. With this approach, one must consider the possibility of response biases, such as social desirability bias, which may cause participants to overestimate the experience's positive effects. Thus, the findings should be understood as exploratory evidence of the approach's pedagogical potential in the analyzed context.

For future studies, the following recommendations are made: (1) investigate the longitudinal impact of the program on graduates' professional performance, (2) explore the inclusion of social and collaborative interaction elements, (3) adapt and test the proposal in fields requiring hybrid competencies, and (4) conduct comparative studies between gamified and traditional pedagogical approaches.

In summary, when applied strategically, gamification represents a significant contribution to pedagogical innovation in higher education. By fostering autonomy, self-reflection, and socio-emotional development, this approach can effectively prepare individuals for the challenges of academic and professional life.

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Authors contribution

ALC: Conceitualização, Metodologia, Coleta de dados, Análise de dados, Escrita, Revisão, Administração do projeto. APSD: Conceitualização, Análise de dados, Revisão. LRZDCD: Coleta de dados, Análise de dados, Revisão. PP: Revisão, Validação.

Editor: Prof. Dr. José Luís Bizelli