Gamification in Soft Skills Training: An Innovative Approach to Experiential Learning

Chaymae El Gheryb*

Doctor in Information and Communication Sciences, Sidi Mohamed Ben Abdellah University - Fez, Morocco

DOI: https://doi.org/10.47772/IJRISS.2026.100601169

Received: 11 June 2026; Accepted: 16 June 2026; Published: 14 July 2026

ABSTRACT

In a professional world marked by rapid transformations, behavioral competencies, commonly referred to as soft skills, have become essential for employability, adaptability, and sustainable professional integration. However, their development remains a major pedagogical challenge, particularly in training contexts where traditional transmissive approaches continue to dominate and often limit learner engagement. This article examines gamification as an innovative pedagogical strategy for strengthening soft skills through active, experiential, and collaborative learning. Drawing on Self-Determination Theory (Deci & Ryan, 2000), Flow Theory (Csikszentmihalyi, 1990), Experiential Learning Theory (Kolb, 1984), and Engagement Theory (Kearsley & Shneiderman, 1998), the study analyzes how game-based mechanisms can foster intrinsic motivation, active participation, peer interaction, and the concrete mobilization of behavioral competencies. The article combines an in-depth literature review with an exploratory case study conducted in a Moroccan vocational training center. The case involved 50 adult participants over a five-day, 20-hour training program entitled Mission Soft Skills, structured around role plays, collaborative challenges, team scoring, badges, and reflective debriefing. Data were collected through participant observation, daily reflective journals, and a final questionnaire. The results point to high levels of engagement and positive self-reported outcomes: 92% of participants reported improved oral communication, 84% reported better stress management in group situations, and 96% felt they had learned through action. These findings should therefore be interpreted as indicators of perceived improvement and learner engagement rather than as objective measurements of soft skills acquisition. The study concludes that gamification may support the development of soft skills when it is embedded in a coherent pedagogical design and adapted to the local training context, even with limited technological resources. It also emphasizes the need for future studies based on pre-test and post-test measures, comparison groups, validated assessment instruments, and longitudinal follow-up.

Keywords: Gamification; Soft skills; Experiential learning; Active pedagogy; Vocational training.

INTRODUCTION

In a socio-professional context marked by rapid transformations, behavioral competencies, commonly referred to as soft skills, now occupy a central place in employability processes and professional adaptability. Nevertheless, their development remains a major pedagogical challenge, particularly in training systems where traditional transmissive approaches remain dominant and are not always conducive to learners' active engagement. At the same time, gamification is gradually emerging as an innovative pedagogical strategy that mobilizes game-based mechanisms such as challenges, progression, immediate feedback, and collaboration in order to strengthen intrinsic motivation, engagement, and experiential learning. Beyond its playful dimension, gamification can be understood as a pedagogical and communicational mediation device that fosters meaningful social interactions and active learning. Although the international literature highlights the positive effects of gamification in various educational contexts, research on its application in vocational training environments and in contexts with limited resources remains relatively underdeveloped. Moreover, the concrete pedagogical mechanisms connecting gamification, learner engagement, and the development of soft skills still require contextualized empirical analysis.

This article seeks to address these gaps by offering three main contributions. First, it analyzes gamification as a pedagogical mediation device that supports the development of behavioral competencies in a vocational training context. Second, it presents a contextualized empirical case study conducted in a Moroccan training center in order to illustrate the engagement and learning mechanisms activated by a gamified training program. Third, it proposes an interpretation of the observed effects through the articulation of theoretical frameworks drawn from motivational psychology, experiential pedagogy, and communication sciences. The objective of this research is therefore to explore the extent to which the integration of a gamified pedagogical device can contribute to learners' engagement and to the perceived mobilization of soft skills, particularly interpersonal communication, collaboration, and stress management, in a vocational training context. Rather than claiming to provide definitive causal evidence, the study seeks to document and interpret the pedagogical, motivational, and interactional mechanisms through which gamification may support active participation and the practical mobilization of behavioral competencies.

In order to achieve this objective, the study is structured around the following research questions:

1. How does the integration of gamification mechanisms influence learners' engagement in a soft skills training program?
2. To what extent does this type of device promote the mobilization and development of behavioral competencies?
3. Which pedagogical and interactional mechanisms help explain the observed effects?

THEORETICAL FRAMEWORKS AND CONVERGENCE WITH ACTIVE PEDAGOGY

Gamification is part of a constructivist and experiential approach to learning that promotes autonomy, active participation, and motivation. It is based on several major theoretical foundations:

- Self-Determination Theory (Deci & Ryan, 2000), which emphasizes the importance of intrinsic motivation supported by three fundamental needs: autonomy, competence, and social relatedness.
- Flow Theory (Csikszentmihalyi, 1990), according to which the balance between challenge and competence fosters an optimal state of immersion.
- The Experiential Learning Cycle (Kolb, 1984), which values learning through action, reflection, and conceptualization.
- Engagement Theory (Kearsley & Shneiderman, 1998), which associates social interaction and emotional investment with high-quality learning.

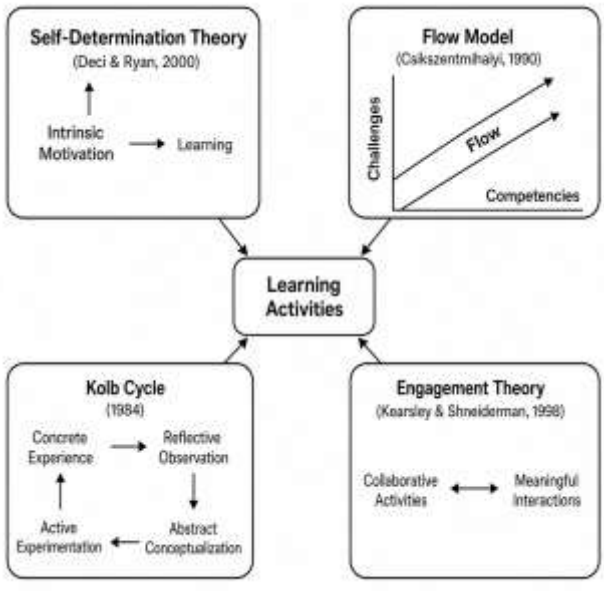

Figure 1. Theoretical foundations of gamification in active pedagogy

The figure above illustrates the convergence of the four fundamental theoretical frameworks underlying the integration of gamification into active pedagogy, particularly in soft skills training.

SOFT SKILLS AND DEVELOPMENT MODELS

Soft skills, defined as non-technical competencies related to communication, collaboration, emotional intelligence, and problem solving, are essential for successfully navigating complex professional environments. Robles (2012) describes them as a set of interpersonal behaviors, personal qualities, and social abilities that enable individuals to work effectively with others.

The Big Five personality model (McCrae & Costa, 1999) provides a useful framework for understanding behavioral predispositions that influence soft skills. For example:

- Openness to experience supports creativity and adaptability.
- Conscientiousness promotes rigor and time management.
- Extraversion encourages communication and leadership.
- Agreeableness facilitates teamwork.
- Low neuroticism helps individuals manage stress more effectively.

These five dimensions of the Big Five personality model - openness, conscientiousness, extraversion, agreeableness, and neuroticism - influence individual predispositions to soft skills development. By understanding these traits, trainers can better adapt their pedagogical strategies to strengthen competencies such as communication, collaboration, and stress management.

GAMIFICATION METHODS AND TOOLS APPLIED TO ACTIVE PEDAGOGY

Gamified pedagogical methods

Gamification applied to training relies on a variety of pedagogical methods that foster learners' cognitive and emotional engagement. In connection with active pedagogy, it mobilizes interactive and collaborative mechanisms that help anchor learning over time.

Method	Description	Link with active pedagogy
Serious games	Games designed for educational purposes, combining narrative elements and pedagogical objectives.	Promote the resolution of complex problems.
Pedagogical escape games	Team-based activities with time constraints and puzzles to solve.	Stimulate cooperation, communication, and autonomy.
Simulations and role plays	Professional or social situations enacted by learners.	Develop soft skills in realistic contexts.
Learning quests	Learning pathways structured as quests and levels to unlock.	Encourage perseverance and intrinsic motivation.

Table 1. Gamified pedagogical methods and their relationship with active pedagogy

The value of these methods lies in their ability to place learners at the center of the action. Through role plays, escape games, and scenario-based learning pathways, learners are no longer passive receivers of content; they become active participants in their own skill development. This immersion encourages experimentation, emotional engagement, and authentic learning situations in which soft skills are naturally mobilized. What is particularly significant is that these methods do not necessarily require sophisticated technical resources. With a

well-designed scenario, a scoring sheet, and the intention to involve learners, pedagogical change can already become visible. In local contexts, this type of approach is especially relevant because it stimulates participation even among learners who are not accustomed to expressing themselves openly.

Digital gamification tools

- Kahoot, Quizizz, and Wooclap: for playful and instant formative assessment.
- Classcraft: transforms the classroom experience into a narrative universe with missions and teams.
- Genially: enables the creation of interactive content such as digital escape games.
- Badgecraft and Open Badge Passport: support the recognition and traceability of acquired competencies through digital badges.

Digital gamification tools extend these dynamics by offering interactive, stimulating, and easy-to-use supports. Platforms such as Kahoot or Genially can transform a simple review activity into a playful, competitive, and collaborative learning moment. Classcraft, with its narrative universe, and digital badges such as those offered by Open Badge Passport add a dimension of visible recognition and progression, which motivates learners to become more involved. However, it is essential to recall that the tool is only a means. The pedagogical intention behind its use is what makes the difference. Misused, a digital quiz can remain a gadget; properly integrated, it becomes a powerful lever for active learning and the valorization of competencies. This underlines the importance of coherent pedagogical design aligned with educational objectives.

Deterding et al. (2011) emphasize that the effectiveness of such tools depends on the intentional design of game mechanics, and not merely on their technical presence.

Synergy Between Gamification and Active Pedagogy in Soft Skills Learning

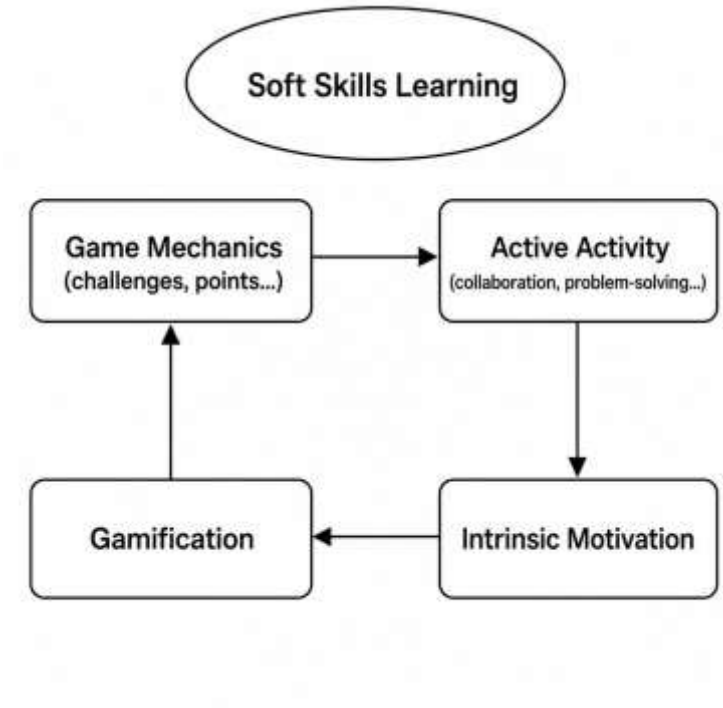

Figure 2. Synergy between gamification and active pedagogy in soft skills learning

The synergy between gamification and active pedagogy is based on a dynamic sequence in which each component reinforces the other. Game mechanics such as challenges, point systems, or immediate feedback help structure engaging pedagogical activities based on collaboration, problem solving, and action. These active learning activities stimulate learners' intrinsic motivation by responding to their needs for autonomy, progression, and social interaction.

This strengthened motivation creates an environment conducive to engagement, promoting deeper and more sustainable learning. In this framework, gamification is not limited to making learning fun. It becomes a strategic lever for developing soft skills through immersive, interactive, and meaningful training experiences.

Empirical Studies and State of The Art

In recent years, gamification has attracted increasing attention from educational researchers, particularly because of its potential to strengthen soft skills learning. Numerous studies have been conducted internationally and in the Arab world, providing concrete evidence of its effects in training environments.

At the international level

- Cucchi et al. (2023): this study analyzes the integration of game mechanics into hybrid courses. It shows that this strategy contributes to the development of critical thinking and emotional intelligence among students, two essential dimensions for success in complex professional contexts.
- Marcos-Pablos et al. (2021): this Spanish research, conducted among management students, evaluated the impact of pedagogical escape games. The results are highly encouraging: participants demonstrated notable improvement in communication, leadership, and stress management skills. The authors emphasize the immersive and motivating effect of these devices.
- Subhash and Cudney (2018): this literature review of 46 international studies shows that the introduction of playful elements into training pathways significantly improves learners' motivation, their ability to collaborate, and their effectiveness in problem solving. Digital tools such as Kahoot, Quizizz, and digital badges proved particularly effective in higher education contexts.
- Landers and Armstrong (2017): in their empirical study, the authors demonstrate that gamified learning environments increase perseverance and cognitive engagement. These effects are strengthened when the proposed activities are close to real-life situations and structured with clear mechanics.

In the Arab world

- Alabbasi (2021 - Saudi Arabia): the author studied the use of Quizizz and ClassPoint in university classes. The study revealed a clear improvement in student participation, better oral expression, and increased ability to work in groups.
- Ben Messaoud and Ben Rejeb (2020 - Tunisia): this research focused on the integration of gamified activities into a project management module. The results show positive development in interpersonal communication, conflict management, and collective decision-making, all of which are essential skills for teamwork.

In Morocco

- University study (2023): conducted at a Moroccan university, this study evaluated the impact of Kahoot on English language learning. The results indicate increased motivation, greater autonomy, and improved stress management, in addition to better academic outcomes.
- Bensalah and Rachidi (2022): in a communication training program for OFPPT trainees, the authors introduced gamified role plays. Participants significantly strengthened their public speaking, active listening, and cooperation skills. Immediate feedback played a central role in learning effectiveness.
- Pilot project (engineering school - Rabat, 2021): this project combined digital badges, team challenges, and self-assessments through Moodle. Internal results showed improved self-regulation, greater teamwork capacity, and more frequent initiative-taking among students.

DISCUSSION OF THE RESULTS

The analysis of the available studies shows that gamification is not limited to a simple playful dimension, but constitutes an effective pedagogical lever for the development of soft skills in various educational contexts. Tools such as Kahoot, Quizizz, role plays, and escape games promote motivation, engagement, and active

participation, which are favorable conditions for acquiring competencies such as communication, cooperation, and stress management.

These effects are also observable in the Arab world and particularly in Morocco, where local initiatives, even with limited resources, have demonstrated the effectiveness of gamification. However, to maximize its impact, gamified devices must be designed rigorously, aligned with pedagogical objectives, and supported by structured feedback.

Case Study: A Gamification Device Applied to Soft Skills Development in a Training Center in Morocco

Context and objectives

This case study was conducted in November 2024 in a vocational training center in Khouribga, Morocco, as part of an employability support program developed through a partnership between a Moroccan public organization and a socio-professional integration association.

The intervention focused on the development of three key behavioral competencies: interpersonal communication, teamwork collaboration, and stress management. The general objective was to explore the perceived contribution of a gamified active training pathway to learners' engagement, intrinsic motivation, and ability to mobilize behavioral competencies in practice.

METHODOLOGY

Methodological Positioning and Scope of the Study

In response to the exploratory nature of the research, the empirical component is presented as a contextualized case study rather than as an experimental evaluation. This positioning is important because the intervention did not include a control group or standardized pre-test and post-test measurements. The contribution of the study therefore lies in the interpretation of engagement processes, learners' perceptions, and observed interactional dynamics, while acknowledging the limits of causal generalization.

The study adopts an exploratory qualitative approach based on an instrumental case study (Stake, 1995), aimed at analyzing in depth the pedagogical and interactional mechanisms activated in a gamified training device. This design was selected because the purpose was not to prove a statistical causal relationship, but to understand how learners engage in a gamified soft skills training pathway and how they perceive the mobilization of communication, collaboration, and stress management skills during situated activities.

The sample consisted of 50 participants, including 26 women and 24 men, aged between 20 and 35 years, enrolled in a transversal skills development program in a Moroccan vocational training center. Participant profiles were heterogeneous and included job seekers, young graduates, and individuals undergoing professional retraining.

The pedagogical device took place over five consecutive days, representing 20 hours of training structured around collaborative gamified activities and reflective debriefing phases.

In order to understand the development of soft skills, several sources of data were mobilized within a methodological triangulation logic:

- Participant observation of interactions and group dynamics;
- A daily reflective journal completed by the learners;
- A final training questionnaire combining closed and open-ended questions on perceptions of learning, engagement, and competency mobilization.

This triangulation strengthens the interpretive validity of the results by crossing participants' perceptions with pedagogical observations. Nevertheless, the data remain primarily self-reported and observational; consequently,

the percentages presented in the results section should be read as descriptive indicators of perceived learning and engagement rather than as objective measures of competency acquisition.

The final questionnaire was used as an exploratory feedback tool rather than as a standardized psychometric instrument. Its purpose was to capture participants' perceptions of their learning experience, their perceived progress, and their level of engagement at the end of the training program.

Data analysis procedures

Closed-ended questionnaire responses were analyzed descriptively by calculating the percentage of positive responses for each indicator. Open-ended responses from the daily reflective journals were examined through a thematic reading. Recurring statements were grouped around four analytical categories derived from the research questions: engagement, perceived progress, peer interaction, and transfer of soft skills to professional situations.

Observation notes were compared with these categories in order to identify points of convergence or divergence between learners' self-reported perceptions and the behaviors observed during role plays, collaborative challenges, and reflective debriefing sessions. This procedure helped reduce exclusive dependence on self-reported data, although it does not eliminate perception bias or social desirability effects.

Methodological precautions

No pre-test or post-test was administered before and after the intervention. Therefore, the study does not aim to measure the exact magnitude of soft skills development attributable to the gamified device. Instead, it explores participants' perceived progress, engagement, and behavioral mobilization during the training experience. A future experimental or quasi-experimental design would be required to compare these results with those produced by a traditional training approach.

Description of the gamified device

The pathway entitled Mission Soft Skills combined structured game mechanics with contextualized pedagogical situations:

- Scenario-based role plays simulating professional situations such as conflict resolution, negotiation, and group leadership;
- Timed challenges inspired by simplified escape games, mobilizing active listening, stress management, and cooperation;
- A team scoring system, with the attribution of digital badges through the Badgecraft platform;
- An evolving leaderboard updated daily to stimulate motivation.

Teams were reshuffled every day in order to encourage social agility and the development of transversal competencies.

In order to limit excessive competition, the leaderboard was framed as a tool for collective progression rather than as an individual ranking system. Debriefing sessions emphasized cooperation, reflection, mutual support, and the transformation of game experience into explicit learning.

RESULTS

Engagement and participation

- 98% of participants attended all training sessions.
- The level of active involvement observed during the sessions, including oral participation, initiative-taking, and mutual assistance, appeared higher than what trainers usually observe in conventional training sessions

at the same center. However, this comparison remains indicative, since it was not based on a formal control group or a standardized measurement protocol.

Self-reported data (n = 50)

Interpretation of Self-Reported data

The percentages presented below are based on participants' self-reported perceptions at the end of the training program. They should not be understood as objective measures of competency development, but rather as descriptive indicators of perceived progress, motivation, and engagement. This distinction is important because self-reported data may be influenced by response bias or social desirability effects.

Indicator	**Positive responses (%)**
Better stress management in group situations	84%
Improved oral communication	92%
Feeling of having learned through action	96%
Motivation strengthened by the playful dimension	94%
Desire to experience this type of learning again	100%

Table 2. Participants' self-reported outcomes after the gamified training program

Overall, the results suggest that participants perceived the gamified pathway as engaging and useful for practicing soft skills. The high percentage of learners wishing to repeat this type of learning experience also points to the motivational value of gamification. However, this enthusiasm may partly reflect a novelty effect associated with the pedagogical device. Longitudinal observation would therefore be necessary to determine whether motivation and behavioral changes persist after the end of the training program.

DISCUSSION

The results are consistent with previous research highlighting the potential of gamification as a lever for engagement and active learning (Subhash & Cudney, 2018; Landers & Armstrong, 2017). The increased level of participation observed in the studied device appears to be associated with the simultaneous mobilization of intrinsic motivational mechanisms, such as the perception of progression, immediate feedback, peer collaboration, and the simulation of concrete professional situations. The expression "appears to be associated with" is deliberately used here in order to avoid implying a direct causal relationship that the research design cannot fully establish.

These results can also be interpreted in light of Self-Determination Theory (Deci & Ryan, 2000), insofar as the device responds to the fundamental psychological needs of autonomy, competence, and social relatedness. The balance between the proposed challenges and participants' perceived abilities also promotes a state of engagement close to flow (Csikszentmihalyi, 1990).

In the Moroccan context studied, gamification appears particularly relevant because it can help overcome some of the limitations of traditional pedagogical approaches by encouraging the participation of learners who are usually less inclined to express themselves. This relevance is particularly visible in soft skills training, where learning depends on practice, interaction, feedback, and situated experience. At the same time, the device must be adapted to local constraints, including limited technological resources, heterogeneous learner profiles, and unequal levels of confidence in oral expression.

However, several limitations must be emphasized. First, the measurement of behavioral competencies is based mainly on self-reported data and pedagogical observations, which may introduce perception bias and social desirability effects. Second, the absence of pre-test and post-test measurements does not make it possible to assess the precise magnitude of competency development before and after the intervention. Third, the study did not include a comparison group exposed to a traditional soft skills training format. As a result, it cannot determine whether the observed levels of engagement are specific to gamification or could also be achieved through other active pedagogical methods. Finally, the sample size and the single-center nature of the case study limit the external validity and generalizability of the findings.

Critical Discussion of Potential Risks of Gamification

The implementation of gamification also raises several pedagogical risks. First, competition-based mechanisms may motivate some learners but discourage others, especially participants who feel uncomfortable with public comparison or fear of failure. Second, repeated use of game elements may lead to learner fatigue if activities are not renewed or meaningfully connected to training objectives. Third, the playful dimension may sometimes encourage participants to focus on points, badges, or rankings rather than on reflective learning. These risks confirm the need for careful pedagogical design, balanced feedback, and debriefing phases capable of transforming the game experience into explicit learning.

In the studied intervention, these risks were partly addressed through the daily reshuffling of teams, the use of collective rather than individual scoring, and the integration of reflective journals. Future studies should nevertheless examine differentiated learner responses to gamification according to gender, age, previous training experience, personality traits, and preferred learning styles. This would allow trainers to design more inclusive gamified learning environments.

Despite these limitations, the study provides relevant contextual insights that help clarify the mechanisms through which gamification may contribute to the development of soft skills in vocational training programs. More precisely, it suggests that gamified role plays, collaborative challenges, feedback, and reflective debriefing can create favorable conditions for the mobilization of oral communication, teamwork, and stress management skills. The contribution of the study is therefore mainly interpretive and contextual: it explains how gamification may support soft skills learning while recognizing that stronger measurement tools are required to determine the magnitude and durability of its effects.

General Conclusion and Research Perspectives

This research highlights the potential of gamification as a pedagogical mediation device that promotes engagement, active participation, and the perceived mobilization of behavioral competencies. It emphasizes that the effectiveness of a gamified approach depends more on the quality of pedagogical design, the coherence of the proposed interactions, and the quality of reflective debriefing than on the technological sophistication of the tools used.

Future research should adopt more rigorous methodological designs, including pre-test and post-test assessments, validated soft skills measurement instruments, behavioral observation grids, comparison groups exposed to non-gamified training, and follow-up measures several weeks or months after the intervention. Expanding the sample to several vocational training centers and different learner populations would also improve the external validity of the findings and make it possible to identify the contextual factors that facilitate or limit the effectiveness of gamification.

Ethical Approval

This study involved adult participants in a vocational training context. Participation was voluntary, and participants were informed about the educational and research purposes of the study. No personally identifiable information was collected. The study respected the principles of confidentiality, informed consent, and respect for participants.

Conflict of Interest

The author declares no conflict of interest.

Data Availability

The data supporting the findings of this study are not publicly available due to confidentiality and privacy considerations related to the participants. Aggregated results and the structure of the training questionnaire may be made available by the author upon reasonable request, provided that participant confidentiality is preserved.

REFERENCES

1. Alabbasi, D. (2021). The impact of gamified tools in Saudi university education. International Journal of Instruction, 14(2), 233-250.
2. Ben Messaoud, R., & Ben Rejeb, M. (2020). L'impact des jeux sérieux dans l'enseignement supérieur en Tunisie. Revue Maghrébine de Management et d'Innovation, 5(1), 67-85.
3. Bensalah, H., & Rachidi, M. (2022). L'intégration des jeux de rôle dans les formations OFPPT : étude de cas. Revue des Pratiques Pédagogiques au Maroc, 9(1), 45-58.
4. Csikszentmihalyi, M. (1990). Flow: The Psychology of Optimal Experience. Harper & Row.
5. Cucchi, M., Ramos, D., & Vallejo, C. (2023). Game elements and critical thinking in hybrid learning. Educational Technology Research, 51(4), 102-121.
6. Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry, 11(4), 227-268.
7. Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification". Proceedings of the 15th International Academic MindTrek Conference, 9-15.
8. Kearsley, G., & Shneiderman, B. (1998). Engagement theory: A framework for technology-based teaching and learning. Educational Technology, 38(5), 20-23.
9. Kolb, D. A. (1984). Experiential Learning: Experience as the Source of Learning and Development. Prentice Hall.
10. Landers, R. N., & Armstrong, M. B. (2017). Enhancing instructional outcomes with gamification: An empirical test. Journal of Educational Psychology, 109(4), 611-621.
11. Marcos-Pablos, S., García-Peñalvo, F. J., & Conde, M. Á. (2021). Evaluating escape rooms as educational tools: Effects on soft skills. Computers in Human Behavior Reports, 3, 100075.
12. McCrae, R. R., & Costa, P. T. (1999). A Five-Factor Theory of personality. In L. A. Pervin & O. P. John (Eds.), Handbook of Personality: Theory and Research (pp. 139-153). Guilford Press.
13. Robles, M. M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. Business Communication Quarterly, 75(4), 453-465.
14. Stake, R. E. (1995). The Art of Case Study Research. SAGE Publications.
15. Subhash, S., & Cudney, E. A. (2018). Gamified learning in higher education: A systematic review. Computers in Human Behavior, 87, 192-206.