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EDITED AND REVIEWED BY
Eileen Scanlon,
The Open University, United Kingdom

*CORRESPONDENCE
Stamatios Papadakis
✉ stpapadakis@uoc.gr

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Editorial: Gamification in education

Stamatios Papadakis^{1*} and Michail Kalogiannakis²

¹Department of Preschool Education, University of Crete, Rethimno, Greece, ²Department of Special Education, University of Thessaly, Volos, Greece

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Editorial on the Research Topic Gamification in education

Gamification is a hot topic in educational research and for good reasons. It is a way to make learning more engaging and motivating for students by incorporating game-like elements into the learning experience. The articles in this issue explore the latest research on gamification in education, from its potential to improve student outcomes to its challenges and limitations.

The initial study by [Rojabi et al.](#) delved into using Kahoot in the classroom to enhance vocabulary exam performance and elevate student involvement and enthusiasm. The investigation also delved into the hurdles students encounter when acquiring vocabulary through Kahoot. The study evaluated the influence of gamification on student accomplishments, utilizing quantitative and qualitative approaches with first-year English students. The results demonstrated that using Kahoot effectively for vocabulary instruction can facilitate a more profound grasp of vocabulary and course concepts, as enhanced exam results indicate. Furthermore, this approach positively affects student engagement and motivation. Nonetheless, it is imperative to conduct more rigorous research to comprehensively comprehend the effectiveness of Kahoot and enhance vocabulary teaching methods.

The second paper, authored by [Vidaković et al.](#), introduced a gamified approach to onboarding in the context of higher education's game-based learning (GBL). In this article, the authors presented a two-phase onboarding process as an essential component of GBL. This onboarding intervention was designed to tackle students' challenges when embarking on a GBL module or course. These challenges arise from entering a new digital platform and typically come with unfamiliar expectations regarding how students should engage with the course content and their peers and instructors. The authors detailed the evolution of this intervention through two distinct projects, leading to its current iteration. Additionally, they analyzed and applied two theoretical frameworks, semiotic domains and cognitive load, to examine the underlying mechanisms through which the intervention is anticipated to impact student learning.

The researchers organized and conducted three focus groups in the third publication, which [Pila et al.](#) authored. They aimed to gain a deeper understanding of the perspectives held by preschool educators regarding the use of haptic feedback technology in the teaching of STEM (Science, Technology, Engineering, and Mathematics) concepts.

The data gathered from these focus group sessions revealed several key themes. These themes revolved around teachers' current classroom practices concerning technology's role in STEM education, the reactions and responses of teachers when introduced to the haptic feedback tablet and their overall perceptions of how its utilization could impact early childhood education. These identified themes provide valuable insights into teachers' attitudes and may play a pivotal role in shaping the development of future STEM applications tailored for haptic feedback tablets.

The fourth research article, authored by [Anane](#) in 2022, explored the application of flipped learning and gamification as strategies to augment student engagement in a French foreign language course tailored for novice learners. This investigation encompassed 215 students who were enrolled in a university elective course. These students were exposed to traditional teaching methods and the innovative flipped learning approach.

The study's findings unveiled that students who engaged in preparatory work before the sessions and participated in flipped learning sessions achieved higher scores in the gamified quizzes. Moreover, the students preferred flipped learning sessions due to their effectiveness in facilitating comprehension and retention of textual material. Additionally, they valued the incorporation of gamification tools, which added an element of interest and engagement to their learning experience.

The final research article by [Liu et al.](#) in 2023 focused on assessing the effectiveness of the mobile serious game (MSG) named "SpacEscape" in enhancing the understanding of the solar system among middle school students. The study employed a randomized experimental design involving 228 participants, collecting data from pre-tests, post-tests, and gameplay sessions. Statistical analyses, including independent sample *t*-tests and MANOVA with repeated measures, were conducted to evaluate the outcomes. The findings indicated that SpacEscape had a significant positive impact on the science learning of middle school students, irrespective of their performance within the game. Furthermore, the students expressed enjoyment when playing SpacEscape during

class. Consequently, the researchers concluded that SpacEscape holds promise as a valuable tool for enhancing science education in middle school settings.

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