

NAVIGATING THROUGH CHALLENGES AND BENEFITS OF GAMIFICATION IN EDUCATION

Lia BUTUCEL

Lecturer, MA

Moldova State University, Chisinau, RM

ORCID: <https://orcid.org/0000-0002-7828-9743>

Elena GOGOI

Ph.D., University Lecturer

Technical University of Moldova, Chisinau, RM

ORCID: <https://orcid.org/0000-0002-4159-3477>

Abstract. *Gamification has become an increasingly popular strategy in education, offering innovative ways to boost student engagement, motivation, and learning outcomes. This paper explores the concept of gamification, highlighting its practical applications, benefits, challenges, and future directions in educational contexts. It examines key elements that can make classes more interactive and engaging, promoting active participation, collaboration, and problem-solving. However, successful implementation requires careful design to avoid superficial engagement, distractions, and overemphasis on competition. Educators must strike a balance between game mechanics and meaningful learning, while considering students' diverse preferences and access to technology. Not all learners respond equally to gamified approaches, and the ethical implications of reward-based learning on intrinsic motivation must be addressed. Continuous assessment and adaptation are essential to ensure long-term effectiveness. Despite these challenges, gamification holds great potential for transforming learning experiences. This paper offers insights and best practices to help educators harness its advantages while mitigating its limitations.*

Keywords: *gamification, education, student engagement, motivation, learning outcomes, digital learning, game-based learning.*

Introduction

In today's classrooms, the very devices that often distract students, smartphones and other digital tools, can become indispensable elements of their learning experience. Rather than viewing them solely as distractions, educators can harness their potential to enhance engagement and participation. In education, gamification enhances engagement and enjoyment by incorporating game-like elements into the curriculum. This method boosts students' motivation, involvement, and knowledge retention by turning learning into an interactive and rewarding process [1]. This approach revitalizes traditional teaching methods, turning digital devices into tools that promote curiosity, motivation, and continuous learning.

Gamification, by definition, is “the process of adding games or game-like elements to something so as to encourage participation” [2]. More specifically, it refers to “the use of game design elements within non-game contexts” [3 , p. 1], while others extend the concept to making activities more game-like through design strategies [4, p. 372]. In the context of education, gamified learning (or gamification of learning) is a popular pedagogical method that incorporates rule-based, goal-oriented structures to enhance learner motivation and improve knowledge retention [1].

Theoretical foundations describe a game as “a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome” [5, p. 80]. In contrast, *play* refers to more free-form and exploratory activities [6]. Gamification aligns more closely with structured game activities, emphasizing rules, objectives, and feedback loops [3].

Why Gamification Matters: A Response to Changing Learner Needs

The education landscape is undergoing a profound transformation, driven through rapid technological advancements and changing student expectations. No longer confined to textbooks and lectures, modern learning environments are becoming more interactive, personalized, and student centered. Gamification emerges as one of the key catalysts of this shift. Introducing elements of play, competition, and achievement into academic settings, educators can reshape how students interact with content. This transformation is not merely about digitizing old methods; it involves reimagining the entire learning experience to be more engaging, adaptive, and motivating for today’s digital native learners.

Today’s students were born into a digitalized environment. They grew up online, becoming tech-savvy and highly adaptable [7]. This generational shift places pressure on educators to rethink traditional pedagogies and innovate in response to evolving learner needs. Moreover, the rapid advancement of technology and artificial intelligence has intensified the call for meaningful integration of digital tools into classroom practice. Despite these advancements, educators must create engaging learning environments, which serve as the foundation and essential prerequisite for the educational process [8]. At the same time, game elements in an educational context represent just a way to ensure an effective learning experience. Moreover, gamification, derived from game design principles, has emerged as a powerful tool to enhance adult learning by creating interactive, meaningful, and goal-oriented experiences [9]

Benefits and Challenges of Gamification

Different researchers suggest that gamification can foster a competitive environment, which might hinder collaborative learning and discourage certain students from engaging [10]. When incorporating games into the classroom, regardless of learners’ age, the primary goal is to foster engagement. The association of games with enjoyment and relaxation is natural, but their role in higher education extends far beyond entertainment.

In recent years, the integration of gamification in higher education has garnered increasing attention, particularly as institutions seek innovative methods to enhance student engagement and learning outcomes. Popular platforms such as **Kahoot!**, **Quizizz**,

and the use of **video essays** have become widespread in university settings due to their interactive and student-centered approach.

Various researchers highlight the need to thoroughly understand both the advantages and the potential drawbacks of gamification as it continues to develop, so that educators and policymakers can make well-informed decisions regarding its implementation [4].

Increased student engagement and motivation. Studies have consistently shown that game-based learning platforms enhance students' intrinsic motivation and classroom engagement. Tools such as Kahoot! and Quizizz create a competitive yet playful environment, encouraging active participation [11]. Plump and LaRosa [12] also highlight the positive emotional response students have when learning is transformed into a dynamic experience.

Improved learning outcomes and knowledge retention. Gamification strategies are positively correlated with improved cognitive performance. The interactive nature of quizzes and games supports immediate feedback and repetitive practice, both of which aid in knowledge retention [9]. A meta-analysis by Krouska et al. [11] demonstrates statistically significant improvements in academic achievement through gamified instructions.

Development of Critical Thinking and Creativity. Video essays, as a gamified form of assessment, promote deep learning and higher-order thinking skills. They require students to synthesize information, apply theoretical frameworks, and present arguments in a creative, multimodal format [13]. This aligns with 21st-century competencies in communication and digital literacy.

Fostering Collaboration and Social Interaction. Gamified activities often involve team-based components that encourage collaboration, communication, and peer learning. These elements are particularly beneficial in large university classrooms where student interaction can otherwise be limited [14].

Timely Feedback and Self-Assessment. Platforms such as Quizizz provide students with real-time feedback on their responses, allowing them to assess their understanding and take ownership of their learning [15]. This supports metacognitive development and encourages self-directed learning. Research indicates that when students are immersed in a game-like environment, they are more likely to engage deeply, leading to better academic performance and knowledge retention [11]. Moreover, gamification supports the development of critical thinking, problem-solving, and collaborative skills, all crucial for 21st-century learners [13].

Gamification enhances student engagement and enjoyment by incorporating game-like elements into the curriculum. These elements—such as points, levels, progress bars, leaderboards, badges, and storylines—transform learning into a dynamic, personalized experience. For example:

- *Points and levels* can be used to track mastery in language learning apps where students progress through vocabulary, grammar, or reading comprehension stages.
- *Badges* can reward students for achievements such as perfect attendance, submitting homework on time, or demonstrating improvement.
- *Leaderboards* can introduce a friendly competitive element by ranking performance on quizzes or participation.

- *Narrative-based quests* can be used in history or literature classes to frame assignments within stories or challenges, encouraging students to “unlock” knowledge as they progress.

Potential Drawbacks and Limitations of Gamification. Despite its many advantages, gamification in higher education presents several challenges that educators must navigate carefully. One major concern is the risk of superficial engagement—students may focus more on earning points or badges rather than developing a deep understanding of the subject matter. Additionally, over-reliance on extrinsic motivators can diminish intrinsic motivation over time, especially if game elements overshadow meaningful content [16]. The competitive nature of leaderboards or timed quizzes can also heighten anxiety or alienate students who do not thrive in high-pressure environments [21]. Furthermore, implementing gamification effectively requires significant planning, technological resources, and continuous assessment to ensure inclusivity and accessibility. If not thoughtfully designed, gamified experiences can exacerbate existing inequities and fail to support diverse learning needs.

Practical Applications: Gamification in Language Learning

Gamification can be implemented in various ways, including integrating point systems, leaderboards, and badges into traditional coursework or developing educational games that simulate real-world scenarios and challenges [17]. The authors also argue that by immersing students in a game-like environment, they are more likely to engage deeply with the learning process, resulting in better academic performance and retention [Ibid.].

Although game activities are separate from real-world tasks, they function within a clearly defined structure being bound by time, space, and specific rules. This structured environment creates a sense of challenge and direction that is often missing in traditional classroom settings. When applied to education, this controlled yet engaging format can help students focus, set measurable goals, and receive consistent feedback.

This paper specifically explores the use of gamification in language learning, where maintaining motivation is especially crucial due to the long-term nature of skill acquisition. In the context of English for Specific Purposes (ESP), platforms like Kahoot! and Quizizz offer valuable tools for customizing language instruction to align with students’ academic or professional fields. For example, instructors teaching Business English can create Kahoot! quizzes focused on terminology related to finance, marketing, or negotiations, incorporating situational dialogues and case-specific vocabulary. Quizizz allows for asynchronous gameplay, making it ideal for students to reinforce technical jargon or practice grammar in context outside class hours. These platforms support various question types—multiple choice, fill-in-the-blank, or match-the-pairs—which can be tailored to simulate real-world language use in fields such as medicine, law, engineering, or tourism. Studies have shown that such tools increase student motivation and promote long-term retention of subject-specific vocabulary [18]. This transformation goes beyond simply digitizing traditional methods; it calls for a complete reimagining of the learning experience—making it more engaging, adaptive, and motivating for today’s digital-native learners. Through gamification, teachers can turn routine vocabulary drills and reading comprehension tasks into dynamic, competitive activities that boost participation, enhance retention, and promote deeper content mastery.

Video essays serve as a powerful gamified assessment method in ESP classrooms by combining creative storytelling with discipline-specific language use. Assignments can be designed around realistic professional scenarios—for instance, nursing students may create a patient-care explainer video, or engineering students might deliver a project proposal in technical English. This approach not only encourages students to apply their language skills in authentic contexts but also builds essential soft skills such as digital communication, critical thinking, and oral presentation. The multimodal nature of video essays—combining visuals, narration, and structured argumentation—caters to diverse learning styles while promoting higher-order thinking [17]. Instructors can implement rubrics that assess both linguistic accuracy and content relevance, ensuring that students are evaluated holistically. Peer review and classroom screenings further enhance collaborative learning, as students engage in constructive feedback and reflect on discipline-specific language use [19].

Conclusion

Gamification in education holds significant potential to transform traditional learning environments, enhancing engagement, motivation, and knowledge retention. Its effectiveness depends on thoughtful implementation that balances extrinsic rewards with intrinsic motivation, while ensuring inclusivity and ethical considerations. As artificial intelligence and immersive technologies continue to advance, gamification is expected to play an even more prominent role in education. Incorporating game leads to increased student participation and deeper learning. These strategies support immediate feedback, interactivity, and a stronger connection to course content. However, challenges such as design complexity, unequal impact among students, and the need for alignment with learning objectives remain.

Educators should provide adaptable and inclusive gamified experiences that suit diverse learning preferences and abilities. In language learning contexts, especially English for Specific Purposes (ESP), gamification enhances vocabulary acquisition, contextual language use, and communication skills through engaging tools such as Kahoot!, Quizizz, and video essays.

Future research should refine gamification strategies, address existing challenges, and evaluate long-term impacts on student outcomes. When applied with care and purpose, gamification can serve as a powerful catalyst for creating more interactive, personalized, and effective educational experiences.

References:

1. WULAN, D. R., NAINGGOLAN, D. M., HIDAYAT, Y., ROHMAN, T., FIYUL, A. Y. Exploring the Benefits and Challenges of Gamification in Enhancing Student Learning Outcomes. In: Global International Journal of Innovative Research, 2024, vol. 2, no. 7.
2. *Gamification* in Merriam-Webster Dictionary. Available: <https://www.merriam-webster.com>
3. DETERDING, S., DIXON, D., KHALED, R., NACKE, L. From Game Design Elements to Gamefulness: Defining “Gamification”. In: Proceedings of the 15th International Academic MindTrek Conference, Tampere, 2011. <http://dx.doi.org/10.1145/2181037.2181040>
4. SAILER, M., HENSE, J. U., MAYR, S. K., MANDL, H. How Gamification Motivates: A Study on the Influence of Intrinsic and Extrinsic Motivation on Game Mechanics. In: Pro-

- ceedings of the 2017 CHI Conference on Human Factors in Computing Systems, 2017, p. 2855–2868.
5. SALEN, K., ZIMMERMAN, E. *Rules of Play: Game Design Fundamentals*. Cambridge: MIT Press, 2004.
 6. GROH, F. Gamification: State of the Art Definition and Utilization. In: 4th Seminar on Research Trends in Media Informatics, Ulm, 2012.
 7. CEPRAGA, Lucia, GOGOI, Elena. PBL – factor de succes în dezvoltarea Generației Z. In: Relevanța și calitatea formării universitare: competențe pentru prezent și viitor. Volumul I, 9 octombrie 2020, Bălți. Bălți: Universitatea de Stat „Alec Russo” din Bălți, 2020, pp. 10–15. ISBN 978-9975-50-255-9. https://ibn.idsi.md/vizualizare_articol/120197
 8. DANDARA, O., GOGOI, E. Contextul de învățare, determinantă a eficienței procesului de formare profesională prin învățământul universitar. In: Integrare prin cercetare și inovare. Științe sociale. SS, 9-10 noiembrie 2023, Chișinău, Republica Moldova: Centrul Editorial-Poligrafic al USM, 2023, pp. 217-225. ISBN 978-9975-62-688-0.
 9. ZAINUDDIN, Z., RASYIDIN, R., ZANZIBAR, Z., ARUNI, F., NURMASYAHYATI, N. Andragogical Principles in a Gamification Concept: How Does It Work for Adult Learners in an Online Class? In: *Journal of Applied Research in Higher Education*, 2023, vol. 15, no. 5, p. 1632–1648.
 10. ALZHRANI, F. K., ALHALAWY, W. S. Gamification for Learning Sustainability in the Blackboard System: Motivators and Obstacles from Faculty Members’ Perspectives. In: *Sustainability*, 2023, vol. 15, no. 5. <https://doi.org/10.3390/su15054613>
 11. KROUSKA, A., TROUSSAS, C., VIRVOU, M. Gamification in E-learning: The Effectiveness of Badges. In: *International Journal of Serious Games*, 2021, vol. 8, no. 1, p. 3–17.
 12. PLUMP, C. M., LAROSA, J. Using Kahoot! in the Classroom to Create Engagement and Active Learning: A Game-Based Technology Solution for eLearning Novices. In: *Management Teaching Review*, 2017, vol. 2, no. 2, p. 151–158.
 13. TORRES-TOUKOUMIDIS, Á., ROMERO-RODRÍGUEZ, L. M., PÉREZ-RODRÍGUEZ, A., CÍVICO-ARIZA, A. Video Essays as a Gamified Strategy to Promote Digital Literacy and Critical Thinking in Higher Education. In: *Education and Information Technologies*, 2021, vol. 26, p. 873–892. <https://doi.org/10.1007/s10639-020-10277-3>
 14. DICHEV, C., DICHEVA, D. Gamifying Education: What is Known, What is Believed, and What Remains Uncertain – A Critical Review. In: *International Journal of Educational Technology in Higher Education*, 2017, vol. 14, no. 1, art. 9.
 15. BASUKI, Y., HIDAYATI, Y. Kahoot! or Quizizz: The Students’ Perspectives. In: *Proceedings of the 3rd English Language and Literature International Conference (ELLiC)*, 2019, p. 13–18.
 16. DECI, E. L., RYAN, R. M. The “What” and “Why” of Goal Pursuits: Human Needs and the Self-Determination of Behavior. In: *Psychological Inquiry*, 2000, vol. 11, no. 4, p. 227–268.
 17. GHAI, A., TANDON, U. Integrating Gamification and Instructional Design to Enhance Usability of Online Learning. In: *Education and Information Technologies*, 2022, p. 1–20. <https://doi.org/10.1007/s10639-022-11202-5>.
 18. LICORISH, S. A., OWEN, H. E., DANIEL, B., GEORGE, J. Students’ Perception of Kahoot!’s Influence on Teaching and Learning. In: *Research and Practice in Technology Enhanced Learning*, 2018, vol. 13, no. 1, art. 9. <https://doi.org/10.1186/s41039-018-0078-8>.
 19. DREON, O., KERPER, R. M., LANDIS, J. Digital Storytelling: A Tool for Teaching and Learning in the YouTube Generation. In: *Middle School Journal*, 2011, vol. 42, no. 5, pp. 4–10. <https://doi.org/10.1080/00940771.2011.11461797>