Cookbook Methodology

G4C:
NGE
Playful Learning in
Next Generation
Entrepreneurship

Co-funded by
the European Union

Integrating gamification in business courses

A methodological preliminary

In recent years, gamification has emerged as a powerful tool to enhance engagement and learning outcomes in educational settings. This document aims to provide a cookbook on integrating gamification into business courses.

To this end, we have opted for a multi-faceted methodology that includes literature study, desk research on the internet, interviews with teachers, and brainstorming sessions to provide potential examples. The application of this methodology results in a cookbook that is both theoretically grounded and practically applicable. The insights gained from each step of the process ensured that the gamification cookbook addresses the needs of educators and provides them with the tools and examples necessary to effectively implement gamification in their courses.

Below, we detail the steps and techniques used to develop this cookbook to include gamification elements in business modules.

1. Literature study

The first step in creating the cookbook involved an extensive literature review. This process was crucial for understanding the theoretical foundations and empirical evidence supporting gamification in education. Key sources included academic journals, books, and conference papers that discussed various gamification strategies, their effectiveness, and best practices.

For instance, Deterding et al. (2011) provided a foundational understanding of gamification, defining it as the use of game design elements in non-game contexts. Additionally, studies by for instance Hamari, Koivisto & Sarsa (2014) offered a meta-analysis of gamification's effects on user engagement, highlighting the conditions under which gamification is most effective. These sources, among others, helped establish a theoretical framework for the cookbook.

2. Desk research conducted on the internet

Complementing the literature study, desk research on the internet was carried out to gather up-to-date information and practical examples of gamification in business education. This involved exploring educational websites, online courses, and platforms that have successfully integrated gamification elements.

Websites like Coursera and edX were particularly useful, as they offer numerous business courses that incorporate gamification. For example, the University of Pennsylvania's "Gamification" course on Coursera, taught by Kevin Werbach, provided valuable insights into how gamification can be applied in various educational contexts. Additionally, blogs and articles from educational technology websites offered practical tips and case studies that informed the cookbook's content.

3. Interviews with lecturers

To ensure the cookbook was grounded in real-world teaching experiences, interviews were conducted with business course instructors who have implemented gamification in their classrooms. These interviews provided qualitative data on the challenges and successes of using gamification in business education.

Lecturers shared their experiences with specific gamification techniques, such as using leaderboards to foster competition, incorporating role-playing games to simulate business scenarios, and utilizing badges and rewards to motivate students. One instructor noted that gamification helped increase student participation and retention, particularly in large lecture courses. These insights were invaluable for creating a cookbook that is both practical and relevant to educators.

4. Brainstorming sessions to identify examples

The final step in the methodology involved brainstorming sessions with several lecturers and students. The goal was to generate a wide range of gamification examples that could be included in the gamification cookbook. These sessions were structured to encourage creative thinking and collaboration.

Participants were asked to think of innovative ways to integrate game elements into business courses. Ideas included using simulation games to teach complex business concepts, creating interactive case studies where students make decisions and see the outcomes, and developing mobile apps that offer gamified learning experiences. The brainstorming sessions resulted in a rich collection of examples that were incorporated into the cookbook.

References

- Barata, G., Gama, S., Jorge, J. & Gon alves, D. (2013). Improving participation and learning with gamification. In: Proceedings of the First International Conference on Gameful Design, Research, and Applications (pp. 10-17). ACM.
- Buckley, P. & Doyle, E. (2016). Gamification and student motivation. Interactive Learning Environments, 24(6), 1162-1175.
- Caponetto, I., Earp, J. & Ott, M. (2014). Gamification and education: A literature review. In: European Conference on Games Based Learning (pp. 50-57).
- Deterding, S., Dixon, D., Khaled, R. & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification". In: Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments (pp. 9-15). ACM.
- Dom nguez, A., Saenz-de-Navarrete, J., de-Marcos, L., Fern ndez-Sanz, L., Pag s, C. & Mart nez-Herr iz, J. J. (2013). Gamifying learning experiences: Practical implications and outcomes. Computers & Education, 63, 380-392.
- Hakulinen, L. & Auvinen, T. (2014). The effect of gamification on students with different achievement goal orientations. In: Proceedings of the 2014 International Conference on Teaching and Learning in Computing and Engineering (pp. 9-16). IEEE.
- Hamari, J., Koivisto, J. & Sarsa, H. (2014). Does gamification work?--A literature review of empirical studies on gamification. In: 2014 47th Hawaii International Conference on System Sciences (pp. 3025-3034). IEEE.
- Ib ez, M. B., Di Serio, . & Delgado-Kloos, C. (2014). Gamification for engaging computer science students in learning activities: A case study. IEEE Transactions on Learning Technologies, 7(3), 291-301.
- Landers, R. N. & Landers, A. K. (2014). An empirical test of the theory of gamified learning: The effect of leaderboards on time-on-task and academic performance. Simulation & Gaming, 45(6), 769-785.
- Muntean, C. I. (2011). Raising engagement in e-learning through gamification. In: Proceedings of the 6th International Conference on Virtual Learning (pp. 323-329).
- Pa?ov , D. & Veja?ka, M. (2022). Implementation of gamification principles into higher education. European Journal of Educational Research, 11(2), 763-779.
- Subhash, S. & Cudney, E. A. (2018). Gamified learning in higher education: A systematic review of the literature. Computers in Human Behavior, 87, 192-206.
- Venter, M. & De Wet, L. (2025). Systematic literature review of gamification design in higher education programming courses: Methodological rigor exposed. Computer-Human Interaction Research and Applications.
- Werbach, K. (n.d.). Gamification. Coursera. Retrieved from Coursera.