GO AND GAMIFY AWAY

Bárbara Andrez[(a)], Paula Menino Homem, & Maria Manuela Pinto
Faculty of Arts and Humanities, University of Porto /
CITCEM - Transdisciplinary Research Center for Culture, Space and Memory (Portugal)

Abstract

This workshop aims to test and operationalize Gamify Away, an innovative, gamified framework designed to meet the specific needs of target groups while equipping participants with organizational game design competencies. Gamify Away is an ongoing development tool, originally conceived as part of a PhD project focused on the intersection of education and games in museums, and, in this case, it is especially oriented towards collections risk management. In today's fast-paced world, where information and demands are overwhelming, professionals often struggle to integrate engaging, game-based activities to increase fruition as well as knowledge. Gamify Away may offer a practical solution, providing a simple, adaptable, and hands-on tool for educators and mediators. The workshop will adopt a hands-on approach methodology that will guide participants through the process of game creation using the framework. The session is designed for 20 participants, divided into 4 groups of 5 members. Each group will have access to a toolkit comprising a board game, dice, cards, and other tools such as markers, pens, and small figurines, that will help participants brainstorm a game narrative and, by the end of the workshop, present their game synopsis based on the educational objectives and outcomes, and game mechanics that they have decided upon. Participants are expected to leave with practical knowledge of how to develop educational games tailored to their specific contexts, empowered to create new, engaging game-based learning experiences.

Keywords: Framework, gamification, learning objectives and outcomes, analogue prototype testing.

1. Introduction and objectives

Nowadays, digital dependencies are a reality, and digital competencies are a must-have. Traditional educational methods are questioned, and the potential of game-based learning to promote collective problem-solving competencies is highlighted (Rye, Sousa & Sousa, 2025). Nevertheless, despite the availability of several tools and frameworks (Chou, 2019; Marczewski, 2018; Schell, 2008; Hunicke, LeBlanc & Zubek, 2004), the creation of certain software, games or other educational gamified learning activities are often not fully considered. Furthermore, the means by which they are evaluated often don't provide all the necessary data, which relates to the inherent complexity, hard to understand. It is recognized that knowledge retention is determined by the individuals' competencies, emotions, experiences and motivations (Tokuhama-Espinosa, 2011; Norman, 2004; Ryan & Deci, 1985), but it is also assumed that it is possible to consolidate activities able to optimize game creation at an early stage, based on a clear definition of educational objectives and outcomes. Created for museum contexts, it is believed that Gamify Away can be extended to several educational purposes. Dwelling on Csikszentmihalyi's (1990) Flow theory and understanding that an educational (digital or analogue) gamified experience can be a tool to reiterate already conveyed information, it is believed that in a well-balanced activity, challenges need to be adjusted to the specific needs of each target audience. They should be ultimately related to the educational goals that cultural institutions or others intend to deploy. Difficulties may appear along the way, but they shouldn't cause permanent anxiety or stress by being too high, nor should they lead to boredom states by being too low. According to Falk and Dierking (2011), a museum experience should integrate personal, social and physical contexts in order to be remembered, but even so, it is important to note that visitors may not recall all that has been said or experienced, perhaps only a few details that could fade over time (Falk & Dierking, 2001) and that's why differentiated solutions may be needed.

This workshop represents an opportunity to iterate a framework entitled Gamify Away, built upon early obtained results with gamified prototype testing (Andrez, Homem & Pinto, 2024; Andrez *et al*, 2023). Appropriating Campbell's (2004) hero's journey, gamification strategies (Chou, 2019; Marczewski, 2018; Zichermann & Cunnigham, 2011), the Flow theory (Csikszentmihalyi, 1990) and recently found results

related to the comparison between two groups (n=66) inside a museum, a relation between all of them has been established.

Gamify Away is a hands-on approach gamified framework able to kick start a game-based learning experience by deblocking ideas in a certain order based on validated exploratory studies (Andrez, Pinto & Homem, 2022), scientific approaches and insights based on results. In this workshop it is intended to demonstrate and validate a first iteration of this framework outside a cultural institution context.

The following sections describe the workshop's practical approach methodology, briefly presenting its current structure, along with its cycles, interactions and some rules, followed by final considerations.

2. Methodology

The workshop will start with a presentation of the framework and its explanation, a how-to-play approach and set rules to follow. Participants will be invited to take part in a group by choosing where to sit. For better time optimization, there is a 20-participant limit, which allows to divide attendees into 4 groups of 5 members. Upon onboarding and explaining, there will also be shown how aggregated considerations regarding the Flow theory (Csikszentmihalyi, 1990) and the hero's journey by Campbell (2004) can be taken into account upon the final stage of the activity. Groups will test out Gamify Away for about 30 minutes and each group will have access to a toolkit comprised of a board game, cards, markers, dice, hourglasses, figurines and coins. Help will be offered when needed, or when there is doubt amongst participants. By the end of the session, each group should be able to articulate a clear first game idea based on Gamify Away elements, game selection mechanisms and constant iterations. After each group presentation, a brief discussion will cover key insights, followed by a code for a quick online questionnaire to assess the overall workshop satisfaction and framework utility and usability.

3. Gamify Away: A Kickstarter gamified framework with iteration cycles

This framework was created to help kick start the first steps of game design experiences based on learning outcomes. The framework is also a gamified experience that needs to be played in order to apprehend all the game-like components. Once the groups are settled participants will have 3 minutes to define their context, target audience and one main objective before starting to play. Although the framework is based on collaborative work, each participant will have their own figurine or pawn, and time will be tracked for the whole session and in between moves within each group using a one-minute hourglass. The board game is divided into three main categories (learning outcomes, game mechanics and set) that participants will need to brainstorm upon, always keeping in mind the chosen context, target audience and objective. Also, the board has special houses, such as "move cards", "card enhancement", and "surprise cards", with fun activities and reading-out-loud moments. The goal of this gamified approach is to write down and iterate brainstorming ideas for each category using blank cards and markers to get a better selection of cards in the end. Along the way, participants need to iterate every time they encounter the "move cards" house, where they choose the best cards from each category to pass into the first iteration placement, which allows only 3 ideas in each category. Moving along the board is made with the help of a dice, and for every well-written card or iteration between the one-minute mark, participants get a money chip. By the end, when 3 cards from each category are placed on the board, the participant with more money chips chooses the best cards from each category for the final iteration stage, where also mixing ideas into new cards is allowed. The best-written cards are presented, and afterwards, the group has 5 minutes to write down a brief game synopsis based on all the categories that they have decided upon.

4. Final considerations

It is worth noting that Gamify Away is an ongoing development tool that relies upon several iterations regarding possible game-like scenarios. It is understood that this structure can change, regarding the final given evaluation, ongoing workshop satisfaction and immersion. Gamify Away tries to simplify a fairly complex activity that is inherent to game experience creation, but the tool can shed some more insights on how and why to get started. It is believed that game design is always a well-balanced collaborative product, a result of a differentiated group of people that brainstorm, make, test and analyse the best solution by trying to implement prototypes that may change over time. The complexity of a learning gamified experience relies upon several considerations and info-communicational dynamics that are aggregated around each context, team, institution, target audience, financial support, stakeholders and the cultural and social dimensions by which the experience is integrated, amongst other factors. With that in mind, this workshop may be an opportunity to consolidate a more robust framework that is able to kick

start a collaborative imagining and creation game tool relying on already established frameworks and theories. Although it is understood that the subjectivity and unpredictability of game creation and learning retention outcomes exist, Gamify Away may serve as a powerful starting point for generating strong ideas. However, for these ideas to become reality, teams must equip themselves with diverse competencies and expertise, including design, pedagogy, storytelling, and technical development. Collaboration, iteration, and a willingness to experiment are key ingredients to transform initial concepts into engaging and impactful gamified learning experiences.

Acknowledgements

References

Andrez, B., Homem, P. M., & Pinto, M. M. (2024). SOS Museum, a Gamified Learning App for Cultural Heritage Preservation Tailored for School Visits: Observational Insights. *WSEAS Transactions on Environment and Development*, *20*, 331-338. https://doi.org/10.37394/232015.2024.20.32

Andrez, B., Pinto, M. M., & Homem, P. M. (2022). Estrategias de Gamificación Digital para Promover el Aprendizaje Basado en la Experiencia sobre Preservación y Curaduría en Museos. II *Congreso Internacional de Museos y Estrategias Digitales 9-28 de octubre 2022*. Valencia: UPV.

Andrez, B., van Zeller, M., Coelho, A., Homem, P. M., & Pinto, M. M. (2023). Interdisciplinary Co-creation of a Multiplayer Gamified Mobile App to Address Heritage Preservation Consciousness Among Museum Visitors: The Case of the Military Museum of Porto. *Proceedings of ICERI2023 Conference 13th–15th November 2023, Seville, Spain*, 5518-5524.

Campbell, J. (2004). *The Hero with a Thousand Faces*. New Jersey: Princeton University Press.

Chou, Y. K. (2019). *Actionable Gamification: Beyond Points, Badges, and Leaderboards*. Milpitas: Octalysis Media.

Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. New York: Harper & Row.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Springer Science Business Media, LLC. https://doi.org/10.1007/978-1-4899-2271-7

Falk, J. H., & Dierking, L. D. (2000). *Learning from Museums Visitor Experiences and the Making of Meaning*. USA: AltaMira Press.

Falk, J. H., & Dierking, L. D. (2011). *The Museum Experience*. New York, London: Routledge.

Hunicke, R., LeBlanc, M., & Zubek, R. (2004). MDA: A Formal Approach to Game Design and Game Research. *AAAI Workshop on Challenges in Game* AI 25-29 July 2004, San Jose, CA, USA.

Marczewski, A. (2018). *Gamification Even Ninja Monkeys Like to Play: Unicorn Edition*. UK: Gamified UK.

Norman, D. A. (2004). *Emotional Design Why We Love (or Hate) Everyday Things*. New York: Basic Books.

Rye, S., Sousa, M., & Sousa, C. (2025). *Transformative Learning Through Play. Analogue Games as Vehicles for Educational Innovation*. Cham, Switzerland: Palgrave Macmillan. https://doi.org/10.1007/978-3-031-78523-8

Schell, J. (2008). *The Art of Game Design: A Book of Lenses*. Burlington: Morgan Kaufmann Publishers, Elsevier.

Tokuhama-Espinosa, T. (2011). *Mind, Brain, and Education Science*. New York, London: W. W. Norton & Company.

Zichermann, G., & Cunnigham, C. (2011). *Gamification by Design*. Sebastopol: O'Reilly Media Inc.