Gamification Best Practices

Building the Foundation of Advanced Learning

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What IS Gamification?

Gamification is the strategic attempt to enhance the efficiency, understanding, and adoption of new or existing systems and processes by adding game elements. Typical examples include points, badges and leaderboards. This research will consider the introduction of game design elements and gameful experiences in the design of learning processes.

Research Problem

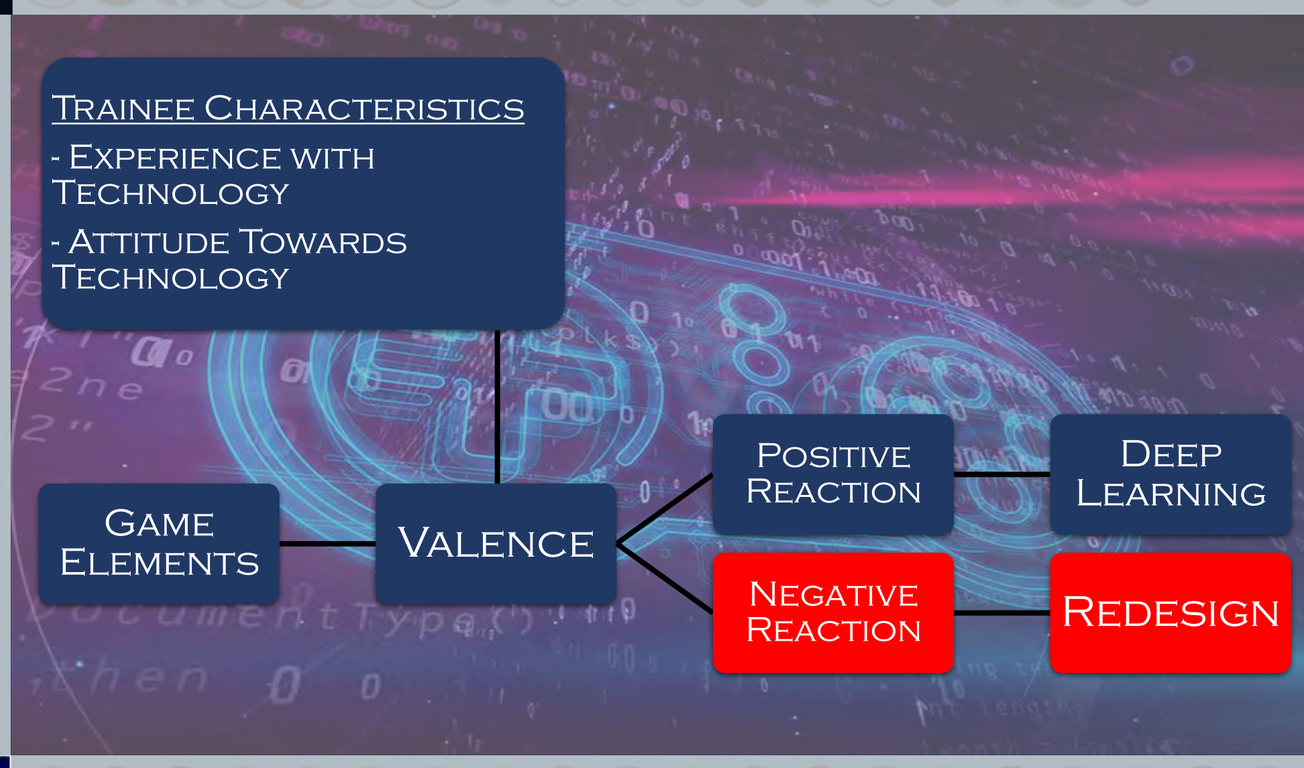
There is limited understanding of the useful effects of game design elements. Essentially, current studies have simply attempted to prove game elements inspire motivation as opposed to understanding how or why the increased motivation occurs. This has led to over-use, over-saturation, and the novelty effect, threatening gamification's longevity.

Research Question

What are the foundational principles and best practices for designing a learning focused gamified experience?

Objectives

1) explore current game design methodology to understand the development process;
2) derive commonalities from gamified applications deemed to be successful and unsuccessful;
3) establish a set of best practice development principles to inform future gamified design.



Research Process

Partnering with a Nova Scotia eLearning Content Creation Platform:

- Netnography (Online Ethnographic Study)
- Comparative and Competitive analysis
- Survey
- Semi-Structured Interviews (Super Users)
- Focus Groups (Casual Users)

Research Outcomes

- Establish gamification best practices.
- Provide template for gamified design.
- Create deep, meaningful learning opportunities.
- Increase engagement, performance, sales, loyalty, etc.
- Address wasted spending.
- Contribute to "Gamification Theory"

Relevant Literature

- Deci, E. L., & Ryan, R. M. (2008). Self-Determination Theory : A Macrotheory of Human Motivation , Development , and Health. 49(3), 182–185. https://doi.org/10.1037/a0012801
- Deterding, S. (2015). The lens of intrinsic skill atoms: A method for gameful design. Human-Computer Interaction, 30(3–4), 294–335. https://doi.org/10.1080/07370024.2014.993471
- Detering, S., & Deterding, S. (2014). Repositorium für die Medienwissenschaft Eudaimonic Design , or : Six Invitations to Rethink Gamification Eudaimonic Design , or : Six Invitations to Rethink Gamification by.
- Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A systematic mapping study. Educational Technology and Society, 18(3), 75–88.
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? - A literature review of empirical studies on gamification. Proceedings of the Annual Hawaii International Conference on System Sciences, 3025–3034. https://doi.org/10.1109/HICSS.2014.377
- Klock, A. C. T., Gasparini, I., Pimenta, M. S., & Hamari, J. (2020). Tailored gamification: A review of literature. International Journal of Human Computer Studies, 144(September 2019). https://doi.org/10.1016/j.ijhcs.2020.102495
- Kraiger, K. (2003). Perspectives on training and development. Handbook of psychology, 171-192.
- Krath, J., & Von Korflesch, H. F. O. (2021). Designing gamification and persuasive systems: A systematic literature review. CEUR Workshop Proceedings, 2883, 100–109.
- Landers, R. N. (2014). Developing a Theory of Gamified Learning: Linking Serious Games and Gamification of Learning. Simulation and Gaming, 45(6), 752–768. https://doi.org/10.1177/1046878114563660
- Landers, R. N., & Armstrong, M. B. (2017). Enhancing instructional outcomes with gamification: An empirical test of the Technology-Enhanced Training Effectiveness Model. Computers in Human Behavior, 71, 499–507. https://doi.org/10.1016/j.chb.2015.07.031
- Morschheuser, B., Hassan, L., Werder, K., & Hamari, J. (2018). How to design gamification? A method for engineering gamified software. Information and Software Technology, 95(October 2017), 219–237. https://doi.org/10.1016/j.infsof.2017.10.015
- Nacke, L. E., & Deterding, S. (2017). The maturing of gamification research. Computers in Human Behavior, 71, 450–454. https://doi.org/10.1016/j.chb.2016.11.062
- Nair, S., & Mathew, J. (2019). A theoretical framework for gamified learning. International Journal of Innovative Technology and Exploring Engineering, 8(12), 2846–2851. https://doi.org/10.35940/ijitee.L3032.1081219
- Rapp, A. (2016). The Value of Rewards. 253–259. https://doi.org/10.1145/2968120.2987721
- Rapp, A. (2017). From Games to Gamification: A Classification of Rewards in World of Warcraft for the Design of Gamified Systems. Simulation and Gaming, 48(3), 381–401. https://doi.org/10.1177/1046878117697147
- Rapp, A., Hopfgartner, F., Hamari, J., Linehan, C., & Cena, F. (2019). Strengthening gamification studies: Current trends and future opportunities of gamification research. In International Journal of Human Computer Studies (Vol. 127, pp. 1–6). Academic Press. https://doi.org/10.1016/j.ijhcs.2018.11.007
- Zainuddin, Z., Chu, S. K. W., Shujahat, M., & Perera, C. J. (2020). The impact of gamification on learning and instruction: A systematic review of empirical evidence. Educational Research Review, 30(March). https://doi.org/10.1016/j.edurev.2020.100326