

Understanding Gamification for the Arts

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As Gamification becomes a more and more popular in society, arts organizations must understand how to effectively leverage its benefits to their advantage. A major hurdle to this quest is that there is much discrepancy as to what counts as a gamified solution. For the purposes of this paper, we will use Brian Burke's¹ definition: "The use of game mechanics and experience design to digitally engage and motivate people to achieve their goals." In other words, providing gamified solutions simply means allowing a new way to engage with and accomplish the goals users or players already have. It can take the form of a point system for completing tasks, a scavenger hunt to explore an area, a trivia quiz to test knowledge, or infinitely more possibilities. While gamification does not need to come in digital packaging, this does provide the benefit of mass accessibility. This paper will break down why gamification works in an arts management setting and what an arts organization will need to assess to create an effective digital gamified solution.

Understanding the Psychology Behind Gamification

Extrinsic and Intrinsic Motivations: Extrinsic motivations are rewards or goals that extend beyond and may be completely unrelated to the activity at hand. For example, one acting according to an extrinsic motivator might say: 'I read this book because it's required for class.' Intrinsic motivations, on the other hand, capture autonomy and purpose. 'I choose to read this book, because I want to know how the story will end.' Gamification aims to give an outlet to the user's intrinsic motivations. Rewards may be a component of the game, such as a coffee mug with a museums' logo for completing all the levels, but that is not the main reason why the user plays. This may get confusing when including point systems or digital badges for completing certain tasks, because on the surface these may seem like extrinsic motivators. The key to using gamification effectively is understanding the user's perspective and their options. Focus groups and data analysis will provide insight into how and why users play.

¹ Burke, Brian. *Gamify: How Gamification Motivates People to Do Extraordinary Things*. Brookline: Gartner, 2014

Consider these two scenarios:

- I can play this game and win a coffee mug or I can buy a mug at the gift shop
- I can play this game that will reward me points to define my progress towards my goal, and if I get enough points I can win a coffee mug or I can try to achieve the goal on my own.

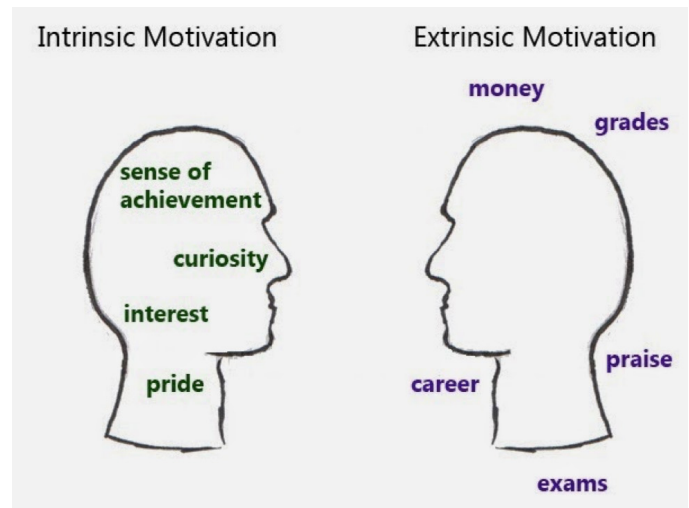


Figure 1. . Extrinsic motivations are rewards or goals that extend beyond and may be completely unrelated to the activity at hand. Intrinsic motivations, on the other hand, capture autonomy and purpose. Source: https://commons.wikimedia.org/wiki/File:Intrinsic_Vs_Extrinsic_Motivation.jpg.

Intrinsic motivation factors, especially curiosity and enjoyment of the activity, is a strong indicator of the intention behind the use of new technology, the attitude toward playing online games, and sharing these experiences with others.² Donor benefits are another way to consider gamification in an arts setting. If a donor is "promoted" to a new level, they may receive additional benefits such as an invitation to a pre-show cocktail hour. Keeping a desire for a sustainable organization in the long run in mind, your hope should be that hope they donated not for the extrinsic motivation of a few free cocktails, but for the intrinsic motivation of supporting the arts. In fact, intrinsic motivators can overcome a user's apprehension of using the gamification system, because when people feel more enjoyment

² Gumussoy, Cigdem Altin. "Acceptance of the Virtual Item Auctioning System in Online Games: The Role of Intrinsic Motivation, Extrinsic Motivation, and Trust." *Human Factors and Ergonomics in Manufacturing & Service Industries* 26, no. 5 (2016): 627 – 637

they are willing to exert more effort. That means if arts organization can tap into intrinsic motivators, players will likely excuse minor glitches and inconveniences they might experience.

Operant Conditioning: Understanding how rewards encourage continuous playing while not detracting from the final goal provides the framework, but distributing rewards to provoke desired actions is the trick to success. “Operant conditioning” is simply defined as the learning of actions based on the consequences of other actions. In most cases, a user will be dealing with positive reinforcement, or the strengthening of a response by presenting a reward. Negative reinforcement is strengthening a response by removing something unpleasant or unwanted. In the world of gamification, negative reinforcement is usually limited to remove ads after completing a task. While this can be effective, one runs the risk of losing credibility for including ads at all, especially in the case of a non-profit organization, as well as potentially irritating sponsors/advertisers by having users bypass their material.

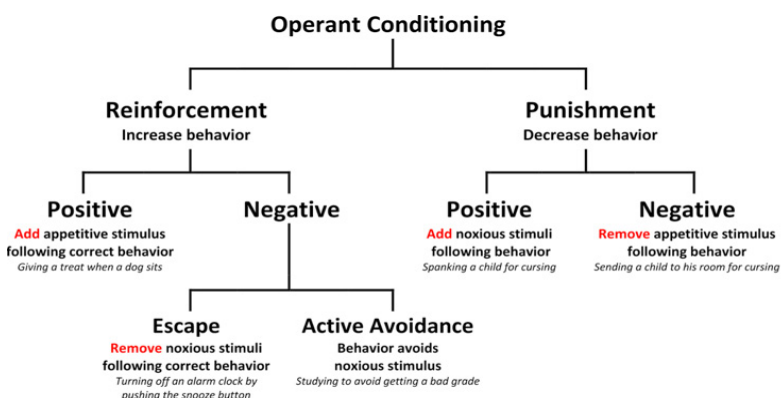


Figure 2. “Operant conditioning” is simply defined as the learning of actions based on the consequences of other actions. In most cases, a user will be dealing with positive reinforcement, or the strengthening of a response by presenting a reward. Source: <https://conflictresearchgroupintl.com/operant-conditioning-oc-rory-miller/>.

Understanding reinforcement can be helpful, because compared to other reward and punishment systems, positive reinforcement is the most effective

way to change behavior.³ It can be as simple as public praise, such as an accolade mention on your website or social media channels (i.e. Congrats to Player John Smith for finding all 10 paintings in our scavenger hunt game!).

Planning the Game

The Three Objectives: Gamification can be used to accomplish three objectives: (1) changing behaviors, (2) developing skills or (3) driving innovation. For an art museum audience, these objectives could be identified as respectively: seeing more art, identifying archetypical stories in art, or coming up with a new analytical framework for their upcoming dissertation.

The first step is to pinpoint which one of these objectives align most with your patrons (the users’) goals. Choosing the ultimate objective before starting program development will help you make decisions and will help with the overall consistency game experience. This is a key step for any organization, because an effective game can be designed around one of these perspectives, but not all three.

Be sure to clearly define the user’s goal, and make it SMART (specific, measurable, achievable, realistic and time bound). In our museum example, the game may challenge users to find painting A in the contemporary room, painting B in the European Renaissance room, and painting C in the East Asian room. Using SMART goals gives players a way to measure their success, and therefore, encourages them to keep playing.

Leveling Up: The next step in game development is to break down the overarching goal into smaller, attainable goals. Usually this is accomplished by including in-game levels or badges, and is the most identifiable feature that links a gamified solution to a video game, and therefore, entertainment. ‘Leveling-up’ gives users a sense of progress, informs them how

3 Stangor, Charles. “Changing Behavior Through Reinforcement and Punishment: Operant Conditioning.” In *Beginning Psychology*. (Creative Commons: 2012). <https://2012books.lardbucket.org/books/beginning-psychology/s11-02-changing-behavior-through-rein.html>

to continue using the tool you have provided them, but also reminds them to have fun. In our museum example, a badge of accomplishment might be awarded for each painting visited throughout the museum. A poor use of levels would be to award badges depending on how time spent in the museum (e.g. 'the 30-minute badge'). This would not be an effective progress marker, because it lacks alignment with the goal of experiencing more art.



Figure 3. In game development, be sure to clearly define the user's goal, and make it SMART (specific, measurable, achievable, realistic and time bound). Using SMART goals gives players a way to measure their success, and therefore, encourages them to keep playing. Source: <https://pixabay.com/en/objectives-definition-target-1260156/>.

User Needs: When deciding upon each step in the game, make sure to establish the user knowledge base. This might be tricky if you are marketing to a large and diverse audience. The key is to not assume knowledge while not assuming too much ignorance. For instance, you may lose some players if your first step/level is learning what a paintbrush is in a game that allows visitors engage to with the art in your gallery. On the flip-side, leading players to specific paintings with esoteric terminology can give the impression the game isn't meant for them. Your goal should be to keep users engaged, so steer clear of paths that might lead to boredom. If you think players with widely different areas of expertise will be playing and it is impossible to find a workable middle ground, consider designing two or more versions of the game, such as a beginner and an advanced setting.

The most successful games create an environment of engagement cycles, meaning they offer a challenge and subsequent feedback before the user continues.⁴ Without an opportunity to receive feedback, users may feel unchallenged (i.e. "If it doesn't matter how well I did, why do I need to try") or frustrated (i.e. "I can't move on to the next level, but I don't know what I'm doing wrong"). Both situations can lead to game-abandonment. A well-known example of this is [Gallery One](#) and their Sculpture lens.⁵ Designers found that when they added a feedback component saying how close visitors were to perfectly mimicking the pose, players played for longer and reported having more fun. Engagement cycles also prevent your game from resembling a lecture or a demanding to-do list. Allow some back and forth conversation between the game and the player to keep engagement high, whether it's score reporting or hints.

Successful game design requires a cycle of release, test, improve, and repeat. You'll find that no matter how much you plan pathways and experiences, a user is going to interact with your game in a way you did not expect. [Marketers](#) call this understanding the job-to-be-done, or JTBD.⁶ Allow time to test your game, and listen to any comments or complaints that arise during the process. The more you adapt the game-experience to fit your users' needs, the more successful the game will be, giving your organization opportunities to achieve certain goals.

The Digital Model

As mentioned, a game can be played through many different forms of media, however, there are benefits to consider going the digital route. First, the digital model has the advantage of scale. An in-person game may only be able to support four players at a time, or be inherently limited by the

4 Burke, Brian. Gamify: How Gamification Motivates People to Do Extraordinary Things. Brookline: Gartner, 2014

5 "Interactives." The Cleveland Museum of Art. Accessed May 5, 2017. <http://www.clevelandart.org/gallery-one/interactives>

6 Nobel, Carmen. "Clay Christensen's Milkshake Marketing." Harvard Business School Working Knowledge. February 14, 2011. <http://hbswk.hbs.edu/item/clay-christensens-milkshake-marketing>.

facility's capacity limit. Depending on how the game is designed, thousands of people could be trying to play at one time.

In the same vein, the digital model is more flexible in regards to space and time. In this case, space means the physical location of where the game is played, and is important no matter the size of the organization. If the institution has a national or global audience, it may want people to engage with the game and/or each other no matter where the users are, not only when they are in town or in at the facility. If the institution serves a local audience, space is still a factor when users face simple obstacles such as finding parking nearby, or not finding a babysitter for the night. If people can interact from a distance, user engagement figures can rise.

In a digital environment, time does not refer to hours of operation (although that is something to be considered if the game is linked to the institution's facilities), but rather the time zone of other players. If the game has a cooperation or competition component and players are interacting from different geographic areas, time flexibility is a must. Time flexibility allows users to interact at their own pace and schedule while still being engaged with each other.



Figure 4. Social media can also help boost the game's success. It can act as powerful word-of-mouth facilitator, as it is a place for players to share their stats and accomplishments, compare scores with other players, or encourage others to play. Source: <https://www.flickr.com/photos/132889348@N07/20009412344>.

Social media can also help boost the game's success. It can act as powerful word-of-mouth facilitator, as it is a place for players to share their stats and

accomplishments, compare scores with other players, or encourage others to [play](#).⁷ Studies show that intrinsic motivators increase the likelihood of people creating digital content including video, blogging, and mobile phone photography, compared to monetary compensation or no intervention at all.⁸ Thus, if you provide a game that is fun and allows digital share-outs, you will likely increase positive brand awareness while still engaging with your current audience.

Approachable Technology: Trust is an important precondition for attempting new technology.⁹ Market and position analyses provide an understanding of brand, trust, and perceptions. Is the arts organization seen as an innovator in technology? Do people trust the brand, new products/programs, and the claims the organization makes? Are they at risk of a data breach?

Achieving success requires an organization to make the game as user-friendly as possible. Many may not bother playing if there is a required guidebook to read before the game even starts. Do not introduce an overly complex feature at once but instead, give the players a chance to learn as they go. Be sure to include a help feature with a search option, so if players do come across a problem, they can find the solution easily and return to the game as soon as possible. If the game is designed for different segments of education levels or age groups, be sure to make the system as universal as possible, use simplified language, and do not assume players will recognize elements from other games.

Above all else, an organization must test the game on multiple devices and operating systems. The game should retain its visual appeal and usability

7 Whitley, Kimberly A. "Why Word of Mouth Marketing Is the Most Important Social Media." *Forbes*. July 17, 2014. Accessed June 18, 2017. <https://www.forbes.com/sites/kimberlywhitley/2014/07/17/why-word-of-mouth-marketing-is-the-most-important-social-media/#3ba3502454a8>.

8 Poch, Rebecca and Brett Martin. "Effects of intrinsic and extrinsic motivation on user-generated content" *Journal of Strategic Marketing* 23, no. 4 (2015): 305-317

9 Wu, K., Zhao, Y., Zhu, Q., Tan, X., & Zhang, H. (2011). A meta-analysis of the impact of trust on technology acceptance model: Investigation of moderating influence of subject and content type. *International Journal of Information Management*, 31, 572-581.

across different screens, whether the user accesses it through a desktop computer, smartphone, or tablet using Microsoft, Apple, or Android platforms.

Final Thoughts

Gamified solutions can be incredibly useful tools for an arts organization and their patrons. However, designing an effective tool requires an understanding of why the tool works, how the tool will be used, and what form it will take. As gamification becomes a more prevalent tool in the for-profit business and marketing world, there is an opportunity for the arts to learn from and utilize it for audience engagement. Ultimately, gamification works when the organizations can pinpoint the users' goal and design a game to track their progress and ultimately achieve that objective.



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