

Beyond Badges: Changing the Gamification Narrative

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Abstract: Gamification is now a household word, but it remains at the top of the lists of emerging technology and expected trends for the future of instructional design. If this is true, how can we take gamification to a level beyond badges and points? This paper argues that narrative is a key element that has not yet been fully realized in gamification, reviewed through its prior successes in entertainment-education, game-based learning, project-based learning, and digital storytelling. It suggests that Alternate Reality Games may be the true future of gamification as we know it today.

The Road So Far

Gamification is the use of gaming mechanics in non-gaming environments, and in the last few years it's been a buzzword for instructional designers of e-learning and traditional classrooms alike (Gerber, 2014). Despite its now years-long popularity, the Horizon Report continues to list it as an emergent technology that will only see increased adoption in the next two to three years (Johnson et al, 2014). Considering what we've already seen of gamification implementation, how can we "level up" our gamification techniques?

There's no longer serious discussion surrounding the merits of gamification as a concept or its viability as a method; instead, more and more research is being dedicated to specific gamification methods and the relative impact of each element. Perhaps the element that made gamification famous is badges, awarded to users for completing pre-determined tasks. Some companies like Mozilla have started efforts to bring badges to a host of activities through systems like Open Badges. Open Badges is an open source software that allows any organization or instructor to issue digital badges that can be collected in a user's "Backpack." The intention is for these badges to be used as a means of quantifying skills and activities throughout a person's life, across the internet (Mozilla, 2015). But because badges are so easy to understand and implement they've arguably been overused, and organizations in and out of the educational sphere have placed a badge and point system on top of existing structures with little inclusion of other gamification elements or even integration of the badges into the rest of the system (Geber, 2014).

This is not to say badges don't have their merits; they help to reward experiential learning, provide a new method of assessment and consistent feedback, and serve as a record of achievements for students. Part of the experience of earning badges is tied to how your own badges compare to others', and in some cases this even creates peer communities around the learning experience. In one case study where badges were able to be created manually by users, peers began awarding badges to one another (Pedro et al, 2015). This is a good example of the remarkable ability of such a simple mechanic to foster a community among learners. Still, if we are to develop gamification to its highest quality we must examine elements of gamification beyond systems like badges, points, and leaderboards.

Don't Forget the Plot

For many gamers what draws them into their favorite games, and more importantly keeps them engaged for longer periods of time, is *not* points or digital collection, but the story. Unfortunately, a connective narrative is often the piece most lacking in implementation of gamification elements. Narrative experiences exist in other kinds of innovative instructional design and educational technology already – both as stories that transport us to other worlds in methods like entertainment-education and game-based learning, and the stories of our own experiences, like project-based learning and digital storytelling. The permeation of narrative in so many successful engagement methods and the success of strong storylines in games built for entertainment may indicate that this is the element of gamification instructors in both traditional and e-learning settings should turn their attention to. This review will examine the commonalities of these methods, especially in regards to their shared attention to narrative, explore possible reasons for the resonance of narrative structure with younger learners in particular, and ultimately review

the existing success of alternate reality games as a possible solution for bringing together narrative and gamification in learning environments.

Transportive Stories

The first group of instructional design methodology accounts for transportive stories, or narrative experiences that remove the learner from their everyday lives and allow them to explore imagined scenarios and imaginary worlds. These are the dramas that engage us on television or invite us to indulge in Netflix binge-watches; they're the fantastical worlds of large-scale games like *World of Warcraft* or the endearing environments of games like *FarmVille*. These stories place instruction into a context outside of the learner's own experiences, whether to model new experiences or to create a more engaging environment. Two examples of this type of narrative in instruction are entertainment-education and game-based learning.

Entertainment Education

Entertainment-education, sometimes shortened as *edutainment*, is media created for the explicit purpose of education. Many children's shows, including the perennial *Sesame Street*, are examples of entertainment-education, though it has also manifested in physical activities and objects like demonstrations or toys. The purpose of entertainment-education is to create media that is so entertaining in and of itself that the consumer does not immediately notice they are also being educated (Jarvin, 2015).

Entertainment-education has been reviewed and respected as an educational methodology since the 1990s, and is praised for its strong theoretical foundation and variety of applications, from health education to social activism, identity development to entrepreneurship (Storey and Sood, 2013). The potential impact of entertainment-education is far from negligible in any of these fields; 26% of viewers in one survey listed television as a primary source of health education, and because most viewers are now ignoring or skipping commercials, integrating these messages into the primary content is even more important for dissemination of the information (Murphy, et al, 2011). In another case, entertainment-education was used with high school students to cover a variety of global warming information and encourage changes in practice; the participating students were shown to have significant changes in their knowledge of the issue and desire to change behaviors to make an impact (Flora, 2014).

The stories developed for entertainment-education can be broken down into three primary methods of impact: engagement with a character, engagement with the story as a whole, or emotional response to the story (Murphy, et al, 2011). Of these, engagement with the narrative seems to be the most impactful, so that the more a viewer is transported into the world of the story the greater they will be influenced by the content they are presented with or the experiences they have in that story (Green and Brock, 2000). Transportation into a story is described as "a convergent process, where all mental systems and capacities become focused on events occurring in the narrative (Green and Brock, 2000)". This is far more likely to occur when a consumer is presented with a story than more strictly informational rhetoric. As Green and Brock describe it, "Novels, films, soap operas, music lyrics, stories in newspapers, magazines, TV, and radio command far more waking attention than do advertisements, sermons, editorials, billboards, and so forth (2000)." Considering this list, a traditional classroom seems to have more in common with editorials and sermons than novels and films, and that gap in ability to engage is exactly why entertainment-education was developed. A student may not feel immediate intrinsic investment in a traditional classroom environment, but they may be able to more easily engage with and relate to characters and stories.

Game-Based Learning

If the description of the mental focus in narrative transportation sounds familiar, it may be because it's uncannily similar to that of the gaming concept of *flow*. Flow is best described as the state of being "in the zone," where the task at hand is so engaging that one loses a sense of time and forgets other obligations in favor of that activity (Chen, 2007). Though achievable in virtually any task (depending on a person's individual interests), flow is especially sought after in game development because it leads to increased player loyalty and playtime. Attempts to define and determine the formula for creating flow have led to an idea called the Flow Zone, which posits that flow can only be achieved when a task is challenging enough to drive a player to overcome it but not so challenging that it causes anxiety (Chen, 2007). In this way, flow shares similarities with scaffolding in instructional design, where

the instructor must understand how much help a learner needs to accomplish a task without providing so much that the learner misses out on important learning outcomes. Flow has been directly correlated to player enjoyment and their perceived learning in game-based scenarios, which in and of itself should make it of interest to instructional designers looking to improve the enjoyment of a learning experience (Barzilai and Blau, 2014).

Like gamification, game-based learning has been effectively proven as an instructional methodology that yields positive results in a broad range of studies; however, the most effective use of game-based learning is in games that are both well-designed games and well-designed instruction (Chen and Hwang, 2014). In other words, like the problem of badges and points that lack substance, a game cannot be overlaid onto an existing educational structure without proper integration and yield the same quality of learning outcomes.

The Story of Us

There's another kind of narrative that has emerged in both technology and instructional design, and it's the narrative of our own lives and the collective narrative of humanity. In the digital age, the breakdown of barriers to sharing information has created a world where news about events on the other side of the globe are almost instantaneous, and continuous updates from other people is an accepted and expected reality. Activities like crowd funding – collecting small donations from large groups of people in order to fund projects or causes – showcase a new mentality, and arguably a *reality*, that help can come from anywhere. Trending topics on social media amplify collective experiences that sometimes take root unexpectedly and for the most seemingly inconsequential reasons, a global version of silly conversations shared between friends. In learning environments, the stories of collective humanity are told through project-based learning and digital storytelling in particular.

Project-Based Learning

Project-based learning is a method that relies on real world learning tasks, often grounded in the personal interests of the students. It has gained popularity in particular for its ability to motivate students to investigate subjects with more depth and breadth, and develop skills in personal decision making in the process (Grant, 2011). Of particular interest to narrative instructional design are projects that have real-world outcomes, where what the student accomplishes may impact something outside of the classroom space. These projects contribute to a student's sense of participating in a story of real humanity that exists outside of the engineered world of a traditional classroom.

Project-based learning has been shown to have positive impacts on student motivation, their attitude toward the subject, and their investment in the subject (Grant, 2011). In one study the attendance rate of economically disadvantaged students actually increased after project-based learning was introduced (Creghan and Adair-Creghan, 2015). Clearly this method of connecting classroom projects to real world problems and issues is resonating with young learners, and perhaps this is because it is a reflection of what they experience in their lives outside of the classroom, where hyper-connectivity is the norm. When considered this way, it's easy to see why a traditional classroom may feel increasingly isolated or disconnected to students who have grown up with social media.

Digital Storytelling

Social media is slowly making its way into traditional classrooms, but it – and devices students use to connect to it – remains largely excluded from that space. There's much to be said on the possible impacts of social media on human development, but one thing it has allowed us to do like never before is share our experiences in unprecedented mass and speed. This allows for a collective documentation of the everyday human experience that includes everything from the mundane to the life-altering (Papadopoulos et al, 2014).

In a multi-layered evolution of storytelling, Twitter has become part of the media-consumption experience. Television shows will regularly display suggested hashtags for joining the conversation during the program, creating a shared viewing experience that has become an instant, digital version of the “water cooler” discussion. This practice has become so popular that many shows take it a step further by displaying selected tweets live during the broadcast, transforming Twitter from a back channel to “part of the show itself (Harrington et al, 2012).” The result is that the television experience is no longer about one-way consumption, but an interactive conversation where the

commentary of the collective viewership is just as socially important as the content itself. This kind of activity has been called transmedia, and represents a new method of collective storytelling that distributes power away from the owners of the original media and allows consumers to have transformative control over the source material (Ibrus and Scolari, 2014).

But collective storytelling doesn't need a major media source material to be effective and meaningful; Gonzalez-Polledo and Tarr (2014) examined the documentation of chronic pain and illness posted by users to social media sites Flickr and Tumblr. In both artistic images and personal documentation of their experiences in text, the platforms allowed users to bring a humanity and everyday realism to their stories of chronic illness that is lacking in more traditional medical texts or editorial descriptions. They concluded that this kind of digital storytelling "open[s] up new possibilities of imagination, action and advocacy not bound by the dynamics and the 'rules' of offline social relations (2014)." Considering the often traditional rules of order in physical classrooms and the required adherence to guidelines and rubrics in both physical and e-learning classes, young learners used to expressing themselves in these creative ways may feel especially restricted by these environments.

Epic Meaning

All of these instances of engagement in narrative share a common characteristic: epic meaning. Jane McGonigal describes epic meaning as the feeling of participating in something bigger than yourself, which transcends your individual experience (2011).

In entertainment-education and game-based learning epic meaning comes from the feeling of being transported to another world or another place, and participating in either the lives of that world's characters or as a player in a game's epic quest. Group gaming experiences amplify this feeling by literally allowing the player to participate in a task beyond their individual needs for the benefit of the team.

In the scope of project-based learning the education becomes more important than one's own personal understanding of the materials, especially when the project is directly tied to a real world problem or possible outcome; and in digital storytelling the story of humanity is collectively documented out across social media platforms, in multimedia methods, and in a distribution of power not seen before.

Authenticity and Feeling "Real"

We see the importance of epic meaning in the narrative of young adults played out in their consumer practices and responsiveness to marketing tactics. Members of the millennial generation and beyond respond positively to "cause marketing," the integration of charitable or social-change related activities and messaging into brand narratives (Lantos, 2014). They want to feel that what they are doing is contributing to something bigger than themselves, impacting global issues that they care about.

By the same token, millennials are quick to judge the authenticity of a message, a skill developed perhaps because of growing up in the digital age when the "realness" of something is much more often in question. They look for interactions from brands that feel personal and genuine, and organizational practices and messages that are authentic and transparent (Lantos, 2014). An authentic desire by an organization to support a cause will be seen as positive; one that is clearly being done to gain publicity or good favor will be seen as ingenuine and deceiving.

When thinking about instructional design, younger learners may respond more positively to lessons and projects that don't feel contrived; they want authentic discussions and subject matter, and are motivated by actions they think will have a tangible impact. Furthermore, their negative response to companies that add in a charitable element to an otherwise pre-existing business model may explain some of their poor response to badge and point systems that are overlaid onto what is otherwise a traditional instructional model. In order to create a feeling that the gamification elements actually *mean* something they must be authentically built into a comprehensive instructional design. That said, younger learners *do* respond positively to experiences that effectively transport them into another world, whether that world is fantastical or a reflection of our own. In order to create a learning environment that

inspires both their desire for authentic, epic experiences, and allows them to experience transportation, instructional designers need to bring an epic narrative to projects that mean something, and do it in a way that facilitates engagement and perhaps even flow. This is a tall order, but alternative reality games, a cousin to more straightforward gamification, may provide a possible solution.

Alternate Reality Games

Alternate reality games build upon real-world context to add gamified and project-based tasks to simulation-like scenarios. They often use multimedia to add multidimensional experiences to the game. Alternate reality games are deeply rooted in an overarching storyline which drives the motivation in the game and serves as the structure by which all other gamified functions and educational tasks are assigned. Typically the storylines used in alternate reality games are developed with a dramatic flair that creates a sense of urgency and authentic meaningfulness outside of a normal learning experience. For example, alternate reality games have been used to discuss such issues as global health crises and reliance on oil in a world struck by climate change (Dondlinger and McLeod, 2015). These games are designed to intentionally blur the lines between the game and real life, where instead of installing a game onto a computer the designer is in a way “installing” the game into the public sphere (Rettburg, 2006).

Jane McGonigal is one of the most recognizable designers of alternative reality games, and has spoken about the emphasis she places on the story within the game. In her view, part of the role of the game designer is to provide an environment that fosters player storytelling, so that their experiences playing the game are just as important as the narrative of the game itself (Rettburg, 2006). This is especially true in alternate reality games because the tasks and game missions literally take place within the player’s own life, and are therefore impacted by circumstances outside of the gameplay – for example, if a player’s only transportation was the bus system and they needed to get to a specific real world location to complete a game task, this would be a very different experience compared to a player who had their own vehicle. Outside circumstances may impact not just the player, but the game as a whole; for example, in this scenario an individual player not having transportation may lead to the other players completing a task – in this case perhaps collaborating to create a carpool, or working together to navigate a bus route – that was not planned in the game design. The result is that unlike more strictly built and programmed computer or video games, the actions of individual players in an alternate reality game can alter the experience of the game overall, so that the game is different depending on the group playing.

There is often not a pre-determined, singular outcome for an alternate reality game – for example, McGonigal’s game *Find the Future* at the New York Public Library (2011) asked students to search for a list of artifacts that already existed in the library, but their most important game task was to write stories about the artifacts to be included in a collective book at the end of the experience. In this way, the players left a deeply personal mark on the outcome of the game that the game designers could only control to a certain extent. In addition, the game could only be fully completed if all players participated in the activity.

Collective play and collaboration is highly important in most alternate reality games – players are often given only pieces of information, and are forced to work together to compare and combine their information to find the next steps in the game. The game *I Love Bees* (2004), one of the earliest alternate reality games, was a great example of this: not only did it send clues to players at random to start the game, from that point on information was spread literally around the globe, and the collective player community relied on each other to relay information back to the group. The excitement of the narrative and the feeling that they were participating in something on such a large scale is likely what provided these players with the motivation to stay engaged in such complex tasks.

Discussion

Gamification continues to be a successful methodology in learning environments, but often leaves something to be desired in the quality of implementation and long-term engagement. As we move into the end of the millennial generation and into younger learners who are even more accustomed to a variety of highly engaging experiences, it’s important that instructional designers consider how gamification can continue to be improved. The

surface-level addition of simple elements like badges, points, and leaderboards doesn't yield the quality of outcomes that could be achieved with a more integrated instruction-and-game model; based on the success of other methods and the existing research on game design and experiences, it seems that the inclusion of a narrative element may be the key that's missing in many attempts at gamified learning. This is demonstrated in entertainment-education and game-based learning in their ability to transport learners into more engaging worlds and scenarios, and in project-based learning and digital storytelling in their ability to make learners feel connected to the larger human or community narrative.

A concurrent element to narrative is authenticity; younger generations in particular have shown that they are looking for authentic experiences and genuine communication. Instructors should be careful to avoid a learning environment becoming either too contrived or too disconnected from the real world, or learners may be more likely to feel disengaged. Experiences that encourage connection to the world may yield better results than trying to contain learning to the classroom environment, and instructors should be careful not to confuse focusing student attention with restricting them from what has become a natural way for them to digest information and communicate experiences.

Because of the positive results of narrative-based methods and the importance of authenticity, collaboration, and epic meaning in the lives of young learners, alternate reality games may provide the next step in gamified classrooms. By blurring the lines between game and real world and putting emphasis on collaboration, alternate reality games are able to achieve a transportive experience that retains authenticity and fosters an experience of participating in something larger than oneself. In doing so, they bring together many of the best elements of engagement methods.

Further research, and especially case studies, should be completed on alternate reality games built specifically for education. Many of the existing alternate reality games were designed primarily as marketing endeavors, or were completed in a very limited timespan. Because so many of the existing examples were designed and facilitated by large companies, alternate reality games may seem too complex or costly for instructors to implement; however, with a strong narrative base these experiences could almost certainly be mirrored with minimal cost by utilizing low-tech and freeware options. With so many opportunities for creative instructional design using this method, alternate reality games may soon emerge as the next badges.

References

- Barzilai, S., & Blau, I. (2014). Scaffolding game-based learning: Impact on learning achievements, perceived learning, and game experiences. *Computers & Education*, 70, 65-79.
- Chen, J. (2007). Flow in games (and everything else). *Communications of the ACM*, 50(4), 31-3
- Chen, N. S., & Hwang, G. J. (2014). Transforming the classrooms: innovative digital game-based learning designs and applications. *Educational Technology Research and Development*, 62(2), 125-128.
- Creggan, C., & Adair-Creggan, K. (2015). The Positive Impact of Project-Based Learning on Attendance of an Economically Disadvantaged Student Population: A Multiyear Study. *Interdisciplinary Journal of Problem-Based Learning*, 9(2), 7.
- Dondlinger, M. J., & McLeod, J. K. (2015). Solving Real World Problems With Alternate Reality Gaming: Student Experiences in the Global Village Playground Capstone Course Design. *Interdisciplinary Journal of Problem-Based Learning*, 9(2), 3.
- Find the Future. (2011). The New York Public Library. Retrieved from http://exhibitions.nypl.org/100/digital_fun/play_the_game
- Flora, J. A., Saphir, M., Lappé, M., Roser-Renouf, C., Maibach, E. W., & Leiserowitz, A. A. (2014). Evaluation of a national high school entertainment education program: The Alliance for Climate Education. *Climatic Change*, 127(3-4), 419-434.
- Gerber, H. R. (2014). Problems and Possibilities of Gamifying Learning: A Conceptual Review.
- Gonzalez-Polledo, E., & Tarr, J. (2014). The thing about pain: The remaking of illness narratives in chronic pain expressions on social media. *New Media & Society*, 1461444814560126.
- Grant, M. M. (2011). Learning, beliefs, and products: students' perspectives with project-based learning. *Interdisciplinary Journal of Problem-based Learning*, 5(2), 6.
- Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of personality and social psychology*, 79(5), 701.
- Harrington, S., Highfield, T., & Bruns, A. (2012). More than a backchannel: Twitter and television. Audience interactivity and participation, 13-17.
- I Love Bees. (2004). *42 Entertainment*. Retrieved from <http://www.42entertainment.com/work/ilovebees>
- Ibrus, I., & Scolari, C. A. (2014). Transmedia Critical: Empirical Investigations into Multiplatform and Collaborative Storytelling~ Introduction. *International Journal of Communication*, 8, 24.
- Jarvin, L. (2015). Edutainment, Games, and the Future of Education in a Digital World.
- Johnson, L., Becker, S., Estrada, V., & Freeman, A. (2014). Horizon Report: 2014 Higher Education.
- Lantos, G. P. (2014). Marketing to millennials: Reach the largest and most influential generation of consumers ever. *Journal of Consumer Marketing*, Vol. 31 Iss: 5, pp.401 – 403
- McGonigal, J. (2011). Reality is broken: Why games make us better and how they can change the world. *Penguin*.

- Murphy, S. T., Frank, L. B., Moran, M. B., & Patnoe-Woodley, P. (2011). Involved, Transported, or Emotional? Exploring the Determinants of Change in Knowledge, Attitudes, and Behavior in Entertainment-Education. *Journal of Communication*, 61(3), 407-431.
- Mozilla. (2015). Intro to open badges. Retrieved from <https://support.mozilla.org/en-US/products/open-badges/introduction-open-badges>
- Storey, D., & Sood, S. (2013). Increasing equity, affirming the power of narrative and expanding dialogue: the evolution of entertainment education over two decades. *Critical Arts*, 27(1), 9-35.
- Papadopoulos, S., Cesar, P., Shamma, D. A., Kelliher, A., & Jain, R. (2014). SoMuS: Social Multimedia and Storytelling.
- Pedro, L., Santos, C., Aresta, M., & Almeida, S. (2015). Peer-supported badge attribution in a collaborative learning platform: The SAPO Campus case. *Computers in Human Behavior*.
- Rettberg, S. (2006). Avant-Gaming: An interview with Jane McGonigal. *The University of Iowa*. Retrieved from <http://web.archive.org/web/20080709020949/http://www.uiowa.edu/~iareview/mainpages/new/july06/mcgonigal.html>