Why Gamification is ~~Bullshit~~ Malarkey

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Within education, gamification is described as an emerging trend, a tool, and possibly the holistic approach of a new pedagogy (Biro, 2013; Dicheva, Dichev, Agre, & Angelova, 2015). Supporters of gamification state that, if done properly, you can increase student satisfaction, engagement, effectiveness and efficiency (Urh, Vukovic, Jereb, & Pintar, 2015). Within my own context of teaching in higher education, this is a very appealing proposition; the ability to harness the power of games without the difficulty of trying to implement games within my courses. And like many, I've been drawn in by promotional-style conference presentations that tout the many advantages of gamification and how easy it is to implement. At first glance it all seems very innovative and exciting. But not all gamification is created equal, and there are those who are outright against the idea. Ian Bogost (2015) is one such individual. In his infamous article, *Why Gamification is Bullshit,* he even goes so far as to re-label it as "exploitationware" created by marketing consultants with the sole purpose of deception and profit. While I agree with his underlying issues around the vagueness of the term, I felt that his reasoning did not do his argument justice and did not apply to the use of gamification in educational contexts. With this paper, I hope to revisit his idea. I do this not from the view that gamification is bullshit, but with the view that it shows evidence of malarkey; a term designed to obscure, mislead or impress (Malarkey. dictionary.com unabridged.). Beginning with some counterarguments in support of gamification, I use this paper to focus on the false novelty of gamification, its lacking research, and the problems associated with its subjective application.

Why Use Gamification?

Harnessing the Power of Games

Gamification draws on the ability of games to change behaviour. Proponents point to how gamers voluntarily invest countless hours developing problem-solving skills, engaging in achieving mastery, and how games enable players to develop cognitively, emotionally and socially (Deterding, Sucartm, Nacke, O'Hara, & Dixon, 2011, May; Dicheva et al., 2015; Gee, 2008; Lee & Hammer, 2011). Unlike typical instructional delivery, games offer experiences that are motivating, engaging, and enjoyable for learners (Barzilai & Blau, 2014; Gee, 2008; Lee & Hammer, 2011). This enjoyment may arise from sensory delight, feelings of suspense and relief, challenge, achievement, self-efficacy or even social connections (Barzilai & Blau, 2014; Farhangi, 2012). McGonigal (2011) suggests that games are able to tap into intrinsic motivation by providing satisfying work, the hope of success, social connections, meaning, and the chance for players to be a part of something bigger than themselves. Others point to the ability of well-designed games to guide players though increasingly complex problems, mastering challenges suited to their skill level, increasing in difficulty as skills expand (Gee, 2008; Lee & Hammer, 2011; Sørensen, 2009). This delicate balance is a central component of Game Flow; a state of deep concentration where thoughts, intentions, feelings and senses are focused on achieving a goal (Barzilai & Blau, 2014; Sweetser & Wyeth, 2005). Game Flow also relies heavily on immersion that is deep yet effortless, reducing concern for self and sense of time (Sweetser & Wyeth, 2005; R. N. Van Eck, 2015). Particularly

relevant to gamification are the essential aspects that make game experiences immersive, engaging and fun (Seaborn & Fels, 2015). Moreover, how can these essential aspects and components be applied in an educational context? While some components can be easily transferred to (and may already exist in) educational contexts, others can present a significant challenge. For example, during immersion, a player should be less aware of their surroundings, less self-aware and less worried about everyday life (Sweetser & Wyeth, 2005). They should feel viscerally involved and emotionally connected to the game. To achieve this, game designers often focus on the game's atmosphere and aesthetics, role playing-based storylines, enhanced character development and sustained player interactions. In a non-gaming environment, this level of control is sometimes impossible, resulting in the pursuit of easier targets such as sequenced challenges or basic competitive elements.

Gamification For The Win

The implementation of games within a classroom is difficult, however, instructors can incorporate game mechanics into activities and assignments (Armier, Shepherd, & Skrabut, 2016). This is the idea behind gamification; harness the power of games without students actually playing games. In a review of the research-based literature, Dicheva and associates (2015) found that most papers reported significantly higher student engagement as a result of gamification. This included increased engagement in forums, projects, learning activities, as well as increased attendance, material downloads, contributions, and participation in voluntary activities. However, while some papers found increased scores on practical material and overall score, they also found that students performed more poorly in written assignments and actually participated less in class (Domínguez et al., 2013). Yet the majority seem to find that gamification is able to motivate and support students to increase attendance and participation, as well as improve student performance (Buckley & Doyle, 2016; Dicheva et al., 2015; Lister, 2015).

A common theme within the literature is the idea that gamification may be used to facilitate both extrinsic and intrinsic motivation, and that this ultimately impacts student performance (Seaborn & Fels, 2015). Though most gamification research focuses on reward systems tied to grades, gains in participation are still observed when rewards are not directly tied to grades (Armier et al., 2016; Dicheva et al., 2015). Apart from tangible rewards (ie: badges), gamification may support motivation when it utilizes multiple routes to success, allows for the "freedom to fail", provides rapid feedback, provides individual and team competition, and allows for the recognition of achievements that may be positively reinforced by peers (Dicheva et al., 2015; Lee & Hammer, 2011). With many instructors struggling with student motivation and engagement, it seems that gamification may be able to provide the help needed (Lee & Hammer, 2011). Unfortunately, the impact on engagement varies greatly depending on if intrinsic or extrinsic motivation is targeted (Buckley & Doyle, 2016). Hanus and Fox (2015) discuss this in more detail. They suggest that imposing rewards can result in feelings of constraint or forced behaviour, and that the rewards, incentives and competition that drive gamification have been demonstrated to actually decrease intrinsic motivation. Sources of motivation also vary, and while gamification may be motivating for some, it may serve to demotivate others (Buckley & Doyle, 2016). For this reason, we cannot flock to gamification as the answer to all our motivational and engagement problems.

<p align="center">Why Gamification is Malarkey</p>

The False Novelty of Gamification

Gamification is not a new concept. Period. Many point to its origins in marketing (ie: corporate rewards and loyalty programs) while others consider scholastic grades, grade levels, and degrees already a form

of gamification (Armier et al., 2016; Lee & Hammer, 2011; Seaborn & Fels, 2015). The current re-emergence of gamification is simply attributed to the rise of cheaper technology, personal data tracking, and the prevalence of the game medium (Deterding et al., 2011, May; Seaborn & Fels, 2015). Some even suggest that gamification has already reached the peak of the "Hype Cycle" in 2013, and may reach a productivity plateau in business contexts within five to ten years (Dicheva et al., 2015). Despite this, gamification is often treated as a completely new phenomenon with little connection made to previous educational methodologies or concepts (Biro, 2013). But the elements of gamification are not unique. Brio (2013) highlights several theories of learning that are often claimed by gamification:

> As we study the literature of the theories on learning, we could find separate fragments of the key elements of gamification. The role of creativity and playfulness (Rousseau, 1762; Pestalozzi,1801), the significance of learning in small packages step-by-step (Skinner, 1968) and the superiority of positive reinforcement compared to punishment (Skinner, 1968) have already appeared in many scientific works. Even the theoretical background of the continuously increasing challenges can be found amongst the five suggestions of B. F. Skinner to make teaching and learning more effective (Skinner, 1968). (p. 342)

Designing learning environments for self-directed, constructive, meaning making is also an old idea. Papert (1980) was one of the first to suggest that designing environments for rich meaning making was possible. Papert coined the term "microworld" to describe a self-contained world designed to encourage engagement, ownership of ideas and learning style, exposure to others' ideas, exploration, negotiation and communication. Further studies looked at the ability of microworlds to foster meaning making though students' sharing and revision of artifacts, and the engagement in discussion, discourse, dialogue and negotiation (Kynigos & Futschek, 2015). These behaviours all tie in closely with the concept of meta-game and its ability to encourage social engagement, cooperation, collaborative problem solving, and an overall sense of belonging and contribution (Dicheva et al., 2015; Farhangi, 2012; Kow, Young, & Tekinbaş, 2014; Nolan & Mcbride, 2014). Although meta-game elements are not commonly applied in gamification, they are a desired outcome of good Games, and should be a focus when applying gaming elements to non-game contexts. Yet, the fact remains that these elements are not unique to, nor do they originate from, digital gaming.

Ignorance is Bliss

Despite a growing body of literature around gamification, the pool of investigative research remains shallow. A multidisciplinary review of applied gamification research indicates that the top fields are education (26%), health and wellness (13%), and online communities / social networks (13%) (Seaborn & Fels, 2015). Unfortunately, much of the educational literature is comprised of short term, non-experimental case studies, and most empirical studies do not include a proper evaluation (Dicheva et al., 2015; Seaborn & Fels, 2015). Seaborn and Fels (2015) also report that 87% of applied gamification research does not mention or address theoretical foundations. This demonstrates a focus on the "tips and tricks" of gamification as opposed to the underpinning learning theories.

Within educational-based research, the advantages and disadvantages of using gamification elements are the subject of much debate (Buckley & Doyle, 2016). One such debate can be seen in the use of external awards. As mentioned previously, several papers suggest that the use of external rewards can damage intrinsic motivation, while other papers suggest that there is no evidence of this happening (Armier et al., 2016; Buckley & Doyle, 2016; Hanus & Fox, 2015; Seaborn & Fels, 2015). Research around motivation and gamification can also suffer from confounding variables. For example, Buckly and Doyle

(2016) found varied correlational results between gamification and motivation, and report that student participation varies depending on whether students are motivated intrinsically or extrinsically. However, they also admit that the correlations observed between intrinsic motivation and participation may simply reflect the initial motivations of learners (ie: keeners want to participate regardless of strategy). Other studies around motivation and engagement rely solely on students' perceptions (Dicheva et al., 2015). Although student perceptions are important, it would be more informative if these were paired with measurements of engagement.

Despite healthy debate regarding the application of some gamification elements, it seems that others still have not been empirically investigated. For example, the principle of "freedom to fail" is possibly one of the most controversial elements with respect to its application in a conventional classroom, yet there are no experimental studies carrying out a controlled evaluation (Dicheva et al., 2015). Overall, Seaborn and Fels (2015) assert that ". . . there is a pressing need for empirical studies that employ comparative and/or longitudinal designs to validate what effect, and the extent of the effect, gamification features have on participants' performance and enjoyment as well as to identify best practices" (p. 27). If research is comprised of short term, non-experimental case studies with sub-par evaluation, then conducting a metaanalysis of these works will continue to be a major challenge (Dicheva et al., 2015). Moreover, this means that using studies for any kind of theory formation around application will be impossible.

The Subjective Definition of Gamification

There is no standard definition or application for gamification. The term reflects diverse meanings, contradictory uses, division on its academic worth, underdeveloped theoretical foundations, and a lack of standardized application (Seaborn & Fels, 2015). Its interpretation is often determined by the sector in which it is being used (ie: marketing verses education) (Biro, 2013). While some define gamification as the incorporation of elements such as points, leaderboards, and badges (Lister, 2015), others advocate for a deeper view of gamification that includes theoretical foundations and overarching purposes (Seaborn & Fels, 2015; R. Van Eck, 2014). Despite differences, most sources agree that gamification generally involves the use of game elements and mechanics in non-game contexts (Buckley & Doyle, 2016; Deterding et al., 2011, May; Seaborn & Fels, 2015). The difficulty then becomes determining what constitutes a game element and what the standards of use are.

In terms of gamification application, the most popular game elements are points, badges, rewards and leaderboards (Dicheva et al., 2015; Lister, 2015; Seaborn & Fels, 2015). These are fairly simplistic elements aimed at triggering competitive motivation. Considered to be at the *micro-scale* level of gamification, their application is still complicated by their varied use, where they may or may not be associated with grades, and may reward varied behaviours such as completion of a challenge, participation, or demonstration of a transferrable skill (Dicheva et al., 2015; Lee & Hammer, 2011). Also at the *micro-scale* level is the gamification of other existing class structures (ie: converting assignments into quests) (Lee & Hammer, 2011). Conversely, at the *macro-scale* level of gamification, fundamentals of game design are used to enhance teaching and learning (ie: design for playful curricula), and these are sometimes implemented on a large institutional scale. At the *macro-scale,* gamification may target meta-game elements such as communication, social networking and collaborative problem solving, as well as focus on mechanisms that promote concrete goal-setting, provide resources and feedback, and develop student identity as learners (Armier et al., 2016; Lee & Hammer, 2011). Unfortunately, it seems gamification at the *macro-scale* is rare, with most using the prevalent "stock" approach to gamification, also referred to as *pointsification* (Seaborn & Fels, 2015). Without the differentiation between the

various interpretations of gamification, the term can be used to "whitewash" applications, masking superficial use (Biro, 2013; Dicheva et al., 2015). For this reason, there needs to be a standard definition, clarification of theoretical foundations, and the establishment of standards of practice. Without this, the term "gamification" will continue to be misleading and obscure the realities of superficial applications.

Concluding Remarks

While gamification is appealing, we cannot run to it because it happens to be the next fad in education. While well-designed gamification holds promise, even within higher education, its superficial use at the *mico-scale* is misleading and can be potentially damaging. Without clear definitions around its application, the term is vague and meaningless at best, and purposely deceptive at worst. Moving forward we need to clearly define what gamification is, explain its theoretical underpinnings, and empirically evaluate its benefits and drawbacks. We must acknowledge where gamification can provide value, and where gamification may not be the best choice. In the end, gamification is one of many tools in the toolbox…but I can't pass you the tool if you don't tell me what it looks like…and I don't know how you expect to this tool when it comes with all these different instructions!

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