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Gamification. A Conceptual Critique to Move Forwardsⁱ

Lobna Hassan

Abstract

Gamification has become a considerable part of game culture. Alongside that, it has garnered significant support and criticism that has left researchers and practitioners polarized on their perception and utilization of gamification as a label and a practice. The aim of this article is to attempt a re-clarification of the gamification concept and to utilize the gameenvironment analytical framework on a larger analytical scale that allows us to reflect on gamification and game studies as research fields. Based on that, I view gamification through the lens of gameenvironments and provide directions for future researchers.

Keywords: Gamification, Critical Gamification, Theory Development, gameenvironments

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A key challenge whenever one attempts to even approach gamification remains the lack of consensus on what it is or how it is implemented and evaluated. In the general conception, gamification has been seen as the addition of game elements, most significantly badges, points and leaderboards, to non-game contexts so as to create engagement (Deterding et al. 2011). Gamification has also been framed as a design process that aims at creating gameful experiences (Landers et al. 2018a). If gamefulness is experienced, then gamification is afoot (Hamari 2019). However, whether gamified products end up actually engendering that experience or not is subject to a multitude of aspects, such as user characteristics, use context, timing, or even happenstance (Hassan 2018, Landers et al. 2018b). Debates exist on who first

used the term *gamification*, but there is relative agreement on it having strong roots in marketing and retail (Huotari and Hamari 2017) and can be seen as a form of motivational design (Rigby 2015, Landers et al. 2018a, Koivisto and Hamari 2019).

It often appears that the image many people have of gamification is akin to loyalty programs: a tool of capitalism that aims to gather as much money as possible from consumers by encouraging them to spend more through streaks, points, tiers, and badges (Bogost 2014, Kim and Papers 2015, Nyström 2021). To others, gamification reflects practices that nudge employees to work harder, climb leaderboards, or earn badges; a reflection of neoliberal cultures that can lead to worker exploitation and workplace accidents (Rey 2012, Kim and Papers 2015). To others, gamification is seen to make work more fun and engaging and improves wellbeing (Kumar and Herger 2013, Warmelink et al. 2018). Outside of the workplace, gamification has been used with similarly opposed results in education (Majuri, Koivisto and Hamari 2018, Fernandez-Rio et al. 2020, Almeida, Kalinowski and Feijó 2021), health management (Cheng et al. 2019), civic participation (Hassan and Hamari 2020, Hassan and Leigh 2021), and citizen control (Kobie 2019) just to name a few contexts in which gamification has been utilized.

I find it remarkable that a concept (gamification), can be associated both with something and its polar opposite, although that is a quality that is not unique to gamification (e.g., religion is seen both as means of personal freedom and means of social control). Proponents and critics of gamification are often discussing vastly different versions of gamification when they discuss gamification. Some implementations have been criticized for reducing games to mere elements, expecting that the addition of these elements to non-gameful contexts, organizations, information systems, etc., would lead to positive and engaging

experiences for its users (Bogost 2014, Kim and Papers 2015). Others have also critiqued these same gamification implementations, while emphasizing that these are failed and unrepresentative gamification implementations (Landers 2019, Thibault and Hamari 2021). When implemented appropriately, according to a process that emphasizes user and context understanding, gamification can lead to positive, lasting, and user-serving experiences (Morschheuser et al. 2018, Landers 2019).

If gamification can be so differently understood, implemented, and experienced, then what exactly is it? How do we measure, compare, evaluate, and advance it? Scholars have written several works to address these questions (Deterding 2015, Nicholson 2015, Landers et al. 2018a, Hamari 2019, Thibault and Hamari 2021). Hence, I do not aim to contribute yet another one. Rather, I attempt a meaningful reiteration of these works towards further conceptual clarity. My goal is to show how conceptual clarity on gamification could be reached, where it stands with regards to the game studies field, and how we could move gamification research forwards. What qualifies me to attempt this is that I have been a gamification scholar since 2015, starting with my PhD research (Hassan 2018). I was a sincere proponent of gamification and its potential to truly make the world a better place. As time passed, I grew critical of gamification and its research for a variety of reasons. Today, I still believe in the theoretical potential of gamification, but remain unsure if that potential has actually been attained or could be attained in the future without significant work. It is this tumultuous background that qualifies me to reflect on gamification research in a rounded way. Yet, this account is not without bias. It reflects my thoughts, beliefs and what I perceive to be the state of the art of gamification. It is limited and biased, but it is written with the intent of positively advancing the field.

Re-Clarifying the Gamification Concept

There have been several volumes that extensively documented the history of gamification (e.g., Raczkowski 2014, Landers et al. 2018a, Khaitova 2021). I would encourage the reader to delve into those for a detailed recount of it. In brief: gamification is certainly not a new practice although the label is modern. As I mentioned in the introduction, disagreements as to what gamification is are not minor and significantly impact the scientific and societal discussion of gamification. Conceptual disagreements and lack of clarity are common throughout disciplines. As a field emerges, it often develops in a diverse, decentralized manner that fosters conceptual disagreements. Such development is conducive to debate and plurality of voices but can be detrimental to theoretical and empirical coherence, consistency, reliability, and replicability. As a field reaches maturity, clarity and coherence are often expected to emerge, further strengthening a field.

A significant challenge for conceptual clarity has been pertaining to distinguishing gamification (if at all possible) from loyalty programs or other game-based applications such as serious games, game-based applications, or even games in general. Many early gamification implementations centered around adding game elements, most notably points, badges, and leaderboards (PBLs) to non-game contexts, relying on these additions to create engagement. Such implementations give us a form of gamification that is indeed akin to loyalty programs. While initially successful, these implementations tend to struggle in engaging most potential users after novelty effects wear off.

As excitement over gamification started to wear off after these initial implementations (Thom, Millen and DiMicco 2012, Bogost 2014, Hassan 2017), the conversation shifted slowly to emphasize that merely adding BPLs to an activity, such

as with loyalty programs, does not create lasting, meaningful engagement (Deterding 2015, Nicholson 2015, Rigby 2015, Hassan 2017). For gamification to engage, it has to go beyond loyalty programs and provide the user with more reasons to engage (Nicholson 2015, Hassan and Leigh 2021). How far beyond? Well, not so far beyond or else it becomes serious games; some would argue that gamification is not exactly in the same category of serious games (Becker 2021). Or is it?

Serious games are often seen as full-fledged games with a purpose other than or as well as entertainment – often education, but it could also be to encourage exercise or improve mental health (Bujari et al. 2015). Serious games are often perceived as pinnacle form of games with a purpose. Gamification, whatever it is, is perceived by some to not reach these heights of implementation sophistication (Bogost 2014, Kim and Papers 2015, Almeida, Kalinowski and Feijó 2021, Nyström 2021). To others, as presented in figure 1, gamification lies in an in-between space (Ampatzidou et al. 2018, Hassan 2018, Morschheuser et al. 2018). On an imagined Likert scale or continuum of application complexity and experience, where 1 is the least gameful and resource demanding and 7 is the most gameful and resource demanding, gamification is seen by many to occupy the middle space. It represents applications that are at least as sophisticated as loyalty programs if not more so, but not as gameful, technologically complex, nor resource demanding as serious games.

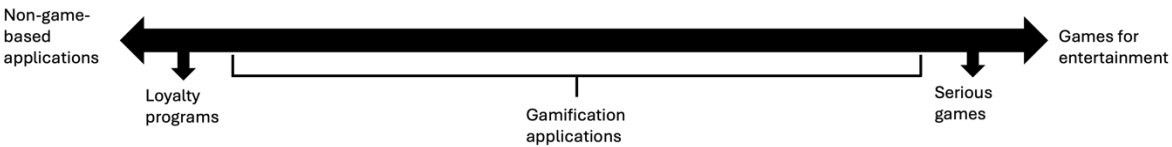


Figure 1: Gamification on the gameful experience and design complexity continuum.

A challenge with approaching gamification in general, especially with such a design and experience continuum, is that what scholars and designers deem a *badge* or a

leaderboard can significantly differ from a person and context to another, further complicating the comparability of gamification operationalization and consistency of results (Deterding 2014, Nyström 2021). Hence, even within this stream of research, arguing that a badge works in one context has no implication on a badge working again in another context if the operationalization of *badge* and definition and measurement of *working* were not identical. Yet, we see significant variation in the understanding and operationalization of gamification, badges, leaderboards, points, and the definition and measurement of experiential and behavioral outcomes that associate with it (Landers et al. 2018a). Furthermore, what designers, scholars, or users deem gameful – or gameful enough to be more than a loyalty program but less than a serious game – differs from one person to another based on a plethora of personal and experiential variables that need to be systematically isolated and compared to ensure consistency and coherence (Landers et al. 2018b, Hassan et al. 2020). This has led to a wide range of mixed, incomparable implementations, that led to very different outcomes from gamification and a field that lacks grounded, internal consistency.

We often see literature reviews of gamification research acknowledging this lack of conceptual agreement and measurement consistency, yet the authors of said reviews would argue that since there is a lack of conceptual or measurement consensus on, for example, what *gameful* means or a *badge* is, then a literature review, similarly, will summarize research without attempting to force theoretical coherence on the literature (Hamari, Koivisto and Sarsa 2014, Koivisto and Hamari 2019, Hassan and Hamari 2020, Hassan 2023). In these literature reviews, we see all studies of badges or gamefulness, for instance, lump into one category and reflected upon altogether, regardless of how the badges or gamefulness examined in those studies could be significantly different from each other. The result is that the knowledge we have on

gamification is conflated metaphorically into one large melting pot, without distinguishing how gamification or its elements were implemented, nor how outcomes from gamification were measured comparatively. Not all badges, points, leaderboards, or gamification are the same. Such a socially constructed approach to gamification science has been employed by many gamification scholars, myself included (Asquer 2013, Koivisto and Hamari 2019, Hassan and Hamari 2020, Aura, Hassan and Hamari 2022). However, it maintains a very open space within which gamification is defined and approached considerably differently, where some applications are more complex, thoughtful, and engaging than others. This approach also does not aid in the establishment of validity, reliability, and replicability standards needed for incremental scientific development or even progressive scholarly debate (Hassan 2023), let alone any replications of gamification research, where we can say that results from a study support, contradict, or partially replicate results from another study.

Furthermore, this understanding of gamification as presented in figure 1 still lacks consensus and is considered reductive to how many conceptualize and approach gamification. Gamification can often be considered a larger cultural phenomenon that reflects how society overall is moving towards a post-utilitarianism era, perhaps even towards an age of self-indulgence, where enjoyment and positive experiences are the goal, rather than mere human survival. Within such an understanding, conscious or unconscious attempts at infusing life with positive experiences are considered gamification (Huotari and Hamari 2017, Hamari 2019, Thibault and Hamari 2021): serious games, loyalty programs, exergames, storytelling in education, learning math by singing, etc., can all be considered forms of gamification as they attempt to use engaging experiences (often referred to as gameful) to create motivation towards an activity in the same manner that games use engaging

experiences to motivate engagement with entertainment (figure 2).

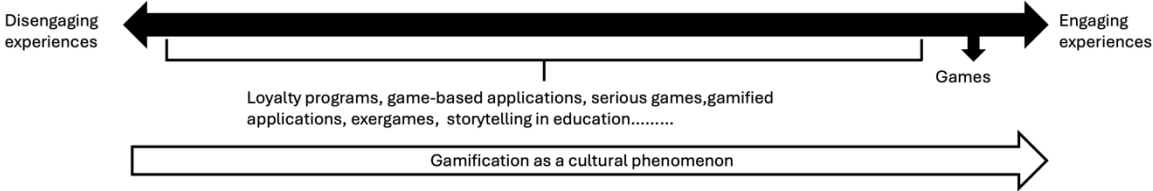


Figure 2: Gamification as a cultural phenomenon.

This lens uses gamification to highlight a larger cultural phenomenon: the move towards self-indulgence in some societies, which is probably a notion worthy of examination and verification. Most importantly to me, however, is that through this lens it is easier to note the similarities behind the different game-based applications we see today: I argue they are all different attempts at reaching the same goal of making disengaging activities more engaging. Those disengaging activities could be, for example, spending more money in the case of loyalty programs, or learning in the case of serious games. Nonetheless, this lens also lacks consensus and does not address the lack of scientific standardization needed to approach gamification science, research, and practice with the significant levels of validity and reliability needed to establish sound, replicable results.

This conceptualization, however, presents gamification as a process of change. Landers et al. (2018a) argue that at the core of gamification is a user-centered design process, as has also been noted – directly or indirectly – by many gamification scholars (Deterding et al. 2011, Deterding 2015, Hamari 2019, Koivisto and Hamari 2019). Gamification is not a product, it is not a serious game or a loyalty program, it is the design process we employ to reach these outcome products, as in figure 3. These products can have different game elements, operationalizations of game elements, or represent different game design approaches. They also can engender different

reception and levels of engagement from users depending on a myriad of factors.

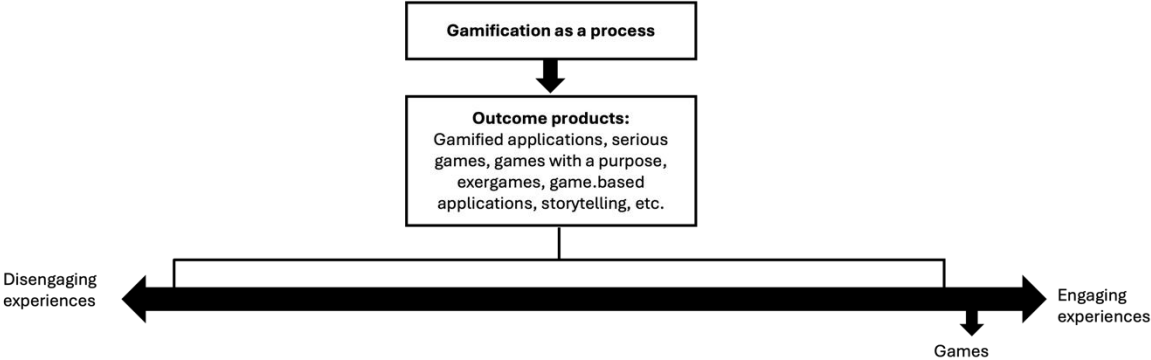


Figure 3: Gamification as a design process.

Naturally, not all processes are similarly efficient, effective, transparent, ethical, responsible, or inclusive, and, by extension, not all process products are equally efficient, effective, ethical, responsible, accessible, or inclusive. It is therefore expected that some gamification products will be close to a loyalty program or be associated with detrimental capitalism and exploitation (Rey 2012, Bogost 2014, Kim and Papers 2015), while other implementations are connected with a myriad of positive outcomes (Hassan and Hamari 2020, Aura, Hassan and Hamari 2021, Aura, Hassan and Hamari 2022). The critique or praise of one form of gamification does not and should not reflect or impact on the other as they are not the same products and were not designed through the same process.

Such a conceptualization of gamification as presented in figure 3 is, I argue, able to co-exist with the outlined critique of some of its outcome products, without denying the success of some of its other outcome products. This understanding also allows for gamification to be seen as a reflection of a larger cultural phenomenon. Gamification is a design process that aims at creating engaging products and experiences through game elements or engagement psychology often employed in game design (Landers et al. 2018a). Such a process could be employed consciously when it is explicitly

referred to as gamification, or unconsciously when we approach engagement through game-thinking (Hamari 2019). Rather than debating whether gamification is *good* or *bad*, we need to better understand what design process leads to what outcome products, how said outcome products are perceived and experienced, by whom, and under what conditions (Landers et al. 2018a). This needs to be done in a systematic manner through explicitly detailing how concepts were operationalized and measured, if we are to ensure comparability, consistency, and replicability of gamification research.

Positioning Gamification in the Gameenvironment

Gameenvironments is an analytical framework used to study games, game narratives, gamers, and the cultural environments of games and gaming (Radde-Antweiler 2018). The framework is composed of two analytical levels, the first being the technical environments of games and gamers, and the second being the cultural environment of games and gamers (Radde-Antweiler, Waltemathe and Zeiler 2014). The concept and framework are often used to examine games and how they are experienced rather than to reflect on the status of a whole field or sub-field as I am about to do. Nonetheless, I find that utilizing the concept of gameenvironment in such a non-conventional, holistic manner can help us understand how to advance the field of gamification.

As discussed in section two, there are vastly different theoretical understandings of gamification. Hence, the technical environment of gamification can vary considerably from one instance of gamification to another in terms of the textual and audiovisual narratives interactivity options and in-game performance. Some gamification operationalizations can vary significantly from what games are often perceived of as

in the general consciousness, e.g., if we compare a gamified loyalty program to a classical platformer game. In other instances, gamification can employ the same textual and audiovisual narratives interactivity options and in-game performance employed in a platformer game to teach science (Mohammed, Fatemah and Hassan 2024). Nonetheless, because there is a lack of agreement on what constitutes a game (Stenros 2017), it is perhaps unfair to conclude that gamification is technically similar to or different from games. I argue that gamification most likely shares the same technical aspects of gameenvironments as games do. If anything, some gamification instances might have expanded that technical reach by utilizing new narratives and interactivity options from other fields where gamification has been introduced, e.g., banking or shopping.

On the cultural – or perhaps disciplinary – level, I argue that gamification research and practice hold a precarious position in the gameenvironment. In my subjective, limited academic experience, while gamification research is occasionally published at the same outlets that publish more supposedly canonical game research, it is often received with criticism or at least healthy skepticism. While considered a sub-discipline of game studies (Landers et al. 2018a), academic game studies outlets, such as *Games and Culture* and *Game Studies*, have rarely published on gamification and have often published critiques of it rather than studies placing it under a positive light (e.g., Ferrara 2013, Lieberoth 2015). At games (and non-games) conferences, I have anecdotally experienced many spirited debates over the legitimacy of gamification as a game studies sub-discipline, where both sound and far-fetched arguments have been wielded for and against it.

The points I summarized on conceptual clarity and results (in)consistency that I raised previously could indeed have affected the publishing of gamification research,

perhaps even rightfully so. However, I would like to discuss a few additional reasons as to why I found publishing gamification research within canon game studies outlets relatively challenging. Anecdotally, I have found that gamification research is often perceived as a betrayal of proper game studies, and is rather relegated as a lesser, applied-games discipline. Hence, I wonder if that perceived reception of gamification research might have dissuaded more dedicated gamification research that could have had a better chance towards advancing its science. This publishing challenge has also fragmented the publishing of gamification research across human-computer interaction (HCI), business, psychology, design, and information systems, to name just a few disciplines where gamification research has appeared. Such publishing diversity has often been celebrated by gamification scholars, seeing it as a reflection of the multidisciplinary nature of gamification research.

Gamification research was not deterred by these reception challenges. We have seen its rise in popularity over the years (Koivisto and Hamari 2019, Hassan and Hamari 2020). I wonder, however, if this lack of a home discipline has been a significant contributor to the lack of conceptual clarity or even more systematic study of gamification. This rise of gamification research may have started to mature and lose steam (Nacke and Deterding 2017, Hassan 2024) but, I argue, the concept of gamification has been established enough that we will continue to see its presence in different gameenvironments, necessitating conceptually clarifying it and developing its research agenda if it is to mature progressively.

In the industry, gamification consultancies and training certificates have similarly risen in popularity over the years (Burke 2016, Koivisto and Hamari 2019, Nyström 2021). The size of the gamification industry has reached millions of euros, and gamification has been introduced to many industries, most notably education, training, and retail.

Alongside this growth, there has also been growth in skepticism. Negative perceptions and receptions of gamification extended beyond academia (Thom, Millen and DiMicco 2012, Nyström 2021), and we have seen makers of landmark applications, such as *Zombies, Run!* (2012), distance themselves from gamification (Six to Start 2022). Similarly, gamers and users, as key stakeholders in gameenvironments, have had quite diverse reactions to gamification: from those who wholeheartedly embraced it and have seen it to have a transformational impact on their motivation and life, to so-called true gamers who reject it as an abomination of games.

The attitude towards gamification, while indeed justifiable in some instances on a scientific level, often feels ideological and deeply seated. As I wrote in the introduction, this is my subjective account of reality that the reader may agree or disagree with. But it is because of this perceived intense critique of gamification in academia and the industry that I think that gamification is the cast-out child of the gameenvironment and has grown to form its own gameenvironment: a *gamifironment*, if you will.

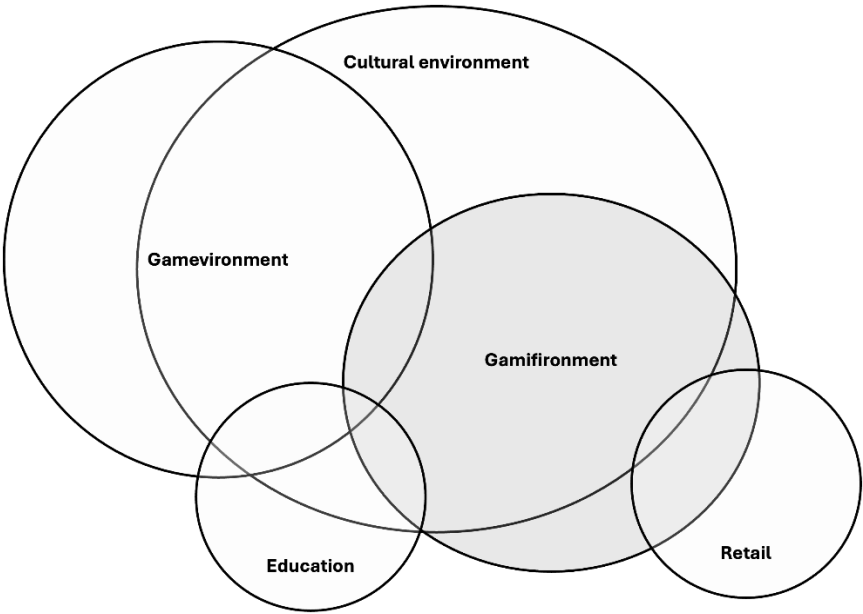


Figure 4: Positioning gamification relative to the gameenvironment.

As in figure 4, the gamifironment, as I conceive of it, overlaps with the original gameenvironment but it has grown independent of it, where it conceptually and practically drew upon other media and cultural environments, as well as scientific disciplines.

I encourage the reader not to take figure 4 literally but rather as an attempt at presenting the idea that, given the academic and cultural reception of gamification, I find that it has developed in relative independence of, but at least on a technological level still in connection with, gameenvironments as well as other cultural environments and disciplines and practices that it has drawn upon. Hence, I encourage the reader to approach gamification research and practice with a similar cross-boundary malleability and recognize that it means quite a different thing to a variety of people.

Directions for Moving Forward

The question I pose now is: given this diversity in development, reception, conceptualization, and approach, how do we create some coherence in the gamifironment to advance gamification research and practice? Several scholars have provided directions to answer this question (Ferrara 2013, Deterding 2015, Rigby 2015, Hyrynsalmi, Smed and Kimppa 2017, Landers et al. 2018a, Thibault and Hamari 2021), myself included (Hassan et al. 2018, Hassan and Hamari 2020, Hassan 2023, Hassan 2024). I encourage the reader to consult these cited works, and other works beyond my recollection. I will not attempt to recount these recommendations, however, I will highlight a few that I find exceptionally important or may not have been sufficiently emphasized.

To many, the word gamification has become potentially irredeemably negative for

multiple scientific and practical reasons. That can often hinder its neutral, positive, or progressive reception. It often places gamification researchers in a defensive position, rather than a more neutral or forward-looking one. Gamification is in need of a PR image campaign to reiterate, to academics and non-academics, that its negatively perceived implementations are, indeed, failed implementations that do not reflect the wider gamification landscape. Gamification is most importantly in need of systematic research that clarifies its concepts and ensures operationalization and measurement consistency. However, I also do wonder if the word *gamification* has become too irredeemable, beyond the saving grace of any PR campaign or responsible science movements. Would gamification researchers and practitioners be better off abandoning the label rather than redeeming it? I do not know, but I reiterate that gamification is not a new practice, and the use of its modern label is not imperative to the continued existence of the practice. Treating gamification as if it is separate from its roots in game-based applications, serious games, and motivational design in general does not serve anyone, including gamification research and practice itself. Outside of image control, ignoring this history also leads to wasting resources by reinventing the wheel, hindering the accelerated development of the motivational design field. It might be useful if we approach the motivational research field overall with equal parts optimism and criticism, emphasizing the importance of scientific rigor in any kind of research, regardless of the labels used in said research.

Scientific rigor benefits from continuous development. Gamification researchers have often been encouraged towards controlled, experimental research that can causally isolate the psychological effects of its design elements or philosophies. Researchers have also been nudged toward longitudinal research that shows gamification effects beyond novelty, and qualitative research that can give us more nuanced insight into how gamification is perceived and experienced. I echo these calls for action, and I add

to them a call for replicable research and replications.

Social sciences have recently suffered from a replication and responsible science crisis, where there have been several replications that failed to support previously published findings (Chambers 2017). Direct replications are essential to scientific developments as they show the extent to which findings are not due to happenstance. Given the lack of conceptual clarity around gamification, it is very likely that gamification has been approached quite differently by researchers and that a significant portion of gamification research is not even replicable. Direct replications of gamification research that can be replicated have started to emerge, pointing towards the need for further examination of gamification given how many initial results do not replicate (Baxter, Holderness and Wood 2017, Sebastian 2021). This call for replicable research and replications would also benefit the larger game studies field and science in general, but my emphasis here is on gamification.

For direct replications to take place reliably, research needs to be published with detailed description of concepts, how they were operationalized, measurements, and methods, and/or in combination with open data that can allow for replicating analyses. Publishing research as registered reports can also significantly aid in this process and in ensuring the validity and reliability of published research. These responsible science practices (Chambers 2017) require sincere commitment from researchers and academic institutions and can be disruptive in the short-term. In the long-term, they are likely to strengthen gamification science, weed out the reliable from the random results, and significantly aid in remedying the PR image of gamification and the quality of its practice.

Conclusion

This article is an attempt at re-clarifying what gamification is. Through it, I have reiterated some of the currently popular approaches to gamification as well as provided my thoughts on how conceptual agreement could be reached. I have further attempted to place gamification relative to the gameenvironment, concluding that it has grown to be a gamifironment of its own. Finally, I encourage gamification researchers to pay close attention to agenda setting recommendations that scholars have provided to advance the gamification field. Of those, I emphasize the need for redeeming the public image of gamification or abandoning it towards its roots in motivational design. I also emphasize the need for gamification researchers to strengthen their adoption of responsible science practices and to work towards the systematic publishing of rigorous, replicable research and replication of the existing gamification research.

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