

Playing with Purpose: The Road to Ethical Competition in Gamified Experiences

Delcoucq, Landelin

Faculty of Engineering, University of Mons, Belgium.

Email: landelin.delcoucq@umons.ac.be

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Extended abstract

Gamification, which can be defined as the art of using game elements in non-game contexts, has spread widely over the last few decades and is now clearly positioned as a recognized educational approach in its own right. Its applications range from encouraging employees to adopt new habits or new tools (Werbach et al, 2012), to developing interactions between consumers and a brand (Terlutter et al, 2013) and of course to facilitating learning processes (Sailer and Homner, 2020).

The main idea behind gamification, to make a task or activity "more fun" through elements of play, seems innocent, interactive and even fundamentally beneficial. In many cases, this turns out to be true. Gamification has the ability to transform seemingly monotonous tasks into stimulating experiences, making educational, professional or even everyday processes more attractive and giving them new meaning. In other contexts (Suyunov et al, 2023), it can also help to break down communication barriers and encourage collaboration.

However, like any approach, its effectiveness, impact and the success of its objectives depend greatly on how it is used and implemented. The clear benefits and motivational contributions can turn into frustration, stress and the appearance of a sense of exclusion if poorly implemented.

As with any innovative approach, it is essential to understand the wider implications of its adoption and implementation. In particular, in this article, we will look at the impact of gamification-related competition and the good practices that need to be put in place to ensure that it is benevolent. The content of this article will be structured around four points. The first will define the concept of competition and present the benefits it brings in the context of gamification. The second will highlight the main dangers of putting participants in competition. The third will propose a series of best practices and points of attention necessary to maintain the benefits of gamification based on competition. The fourth and last point will support the previous ones, based on the analysis of data from 52 bachelor and master students following a civil engineering course, and 17 students following a course on cybersecurity applied to Process Mining.

Competition and Benefits in Gamification

Competition has long been, and rightly so, considered a powerful motivator in many aspects of life, whether in a sporting context, in the professional sector, in everyday life, in an educational setting or even in the world of research. In sport (Clancy et al, 2016), competition constantly encourages the individuals concerned to go beyond their limits and improve their performance. By competing against other individuals or teams, the opportunity to stand out and the desire to surpass oneself leads to enhanced and exceptional performance. In the business world, competition is a key factor in the development of innovative practices and new concepts. Whether on an individual or corporate level, the quest for new ways to stand out from the competition is a basic element of business dynamics (Ghemawat, 2007). This race to innovate, in the form of better performing products, new marketing strategies or more efficient solutions, benefits not only the companies themselves but also consumers, who benefit from better products and services (Azar, 2008).

These elements can be directly transposed to gamification. Competition increases engagement. The opportunity to compete with others creates a sense of excitement and urgency. Participants actively apply themselves to achieving specific objectives. This translates into deeper engagement and more consistent participation in gamified systems (Zichermann, 2013).

As mentioned above, competition also fosters innovation through healthy competition. As participants seek to outdo their rivals, they need to develop and implement new ideas. Gamified systems that encourage competition can therefore act as catalysts for innovation and continuous improvement (Hamari et al, 2014).

Potential Dangers of Competition

The previous point highlights the fact that competition can act as a powerful motivational driver that clearly motivates participants to get involved. However, it also entails risks that need to be carefully managed to ensure that all participants enjoy a gamified experience in line with the objectives of its creators.

To this end, based on an analysis of the literature, we have highlighted four key risks: the risk of exclusion, the risk of discouragement, the risk of falsification and the risk of conflict.

The risk of exclusion is complex because it has three facets. Some participants may be excluded from the competition, either because they do not have the necessary prerequisites to be competitive (Raith et al, 2021), or because they do not wish to take part in competitions, but they may also be excluded from their team because of a lack of skills. Marginalisation due to a lack of necessary prerequisites occurs mainly when participants are faced with unfair and potentially uncompensable barriers or obstacles (Kuss et al, 2012). For example, if access to certain essential resources or information is limited (logistical resources, different instructions, language skills, etc.). The behaviour of participants who have realised that they cannot compete with others may be to withdraw from the game or activity, resulting in a potential loss of learning and engagement opportunities for these individuals. Finally, the gamification mode of competition favours certain types of skills and leads to a logical negligence of

others. For example, cooperation and collaboration skills may be undervalued, marginalising individuals who excel in these areas.

The risk of discouragement may seem paradoxical, since it is in total opposition to one of the main benefits of gamification, which is engagement. This risk manifests itself particularly in those who feel at a disadvantage compared with others. Participants who feel they are underperforming can quickly lose confidence in their abilities (Ryan and Deci, 2000). The frustration engendered by repeated but unsuccessful attempts leads to discouragement and moves away from the active participation sought by the process. This risk can be seen as a precursor to exclusion.

The risk of falsification is one of the main challenges associated with the introduction of competition in gamified systems. It is based on the adoption of (partially) unfair behaviour by a certain number of participants. These behaviours are characterised by cheating or system manipulation in order to obtain an unfair but significant advantage (Kimppa and Bissett, 2005).

The risk of conflict linked to the potential to damage relationships between participants is an aspect to be taken into account when designing gamified activities. Rivalry between participants can lead to hostile behaviour (Raith et al, 2021). This can take the form of teasing, provocation or, in extreme cases, even insults. The perception and real intentions behind these behaviours can be felt very differently by the people involved and have a negative impact on relationships and therefore on the objectives of the gamified activity (Feltovich, 2019).

Method for a Ethical Competition

The means available for breaking out of a competitive pattern that can lead to situations of tension and considerably, if not totally, reduce the benefits of the method fall into two categories. The first tackles the framework of the activity, and must be carried out upstream of the activity, based on the definition of standards and rules. The second is more flexible and adaptive. It is applied during the course of the activity itself and relies on the feelings of the people involved.

The risks highlighted above can be avoided by defining a clear and precise set of rules. Establishing rules for conduct and competition to ensure that participants understand the consequences of unfair behaviour is essential. An appropriate means of control is also necessary through detection mechanisms that identify deviant behaviour (unhealthy or unhealthy behaviour). Whether the context is in the professional world or in education, the attitude of participants in a traditional situation and in a gamified situation can be completely different and even if the rules may seem obvious it is necessary to mention them in a non-contestable way. Finally, appropriate sanctions must be provided for in the event of proven unfair behaviour. They must be proportionate to the seriousness of the behaviour in order to strike a balance between deterrence from committing an unfair act (or repeating one) and the loss of motivation caused by a sanction whose consequences would be definitively irrecoverable.

The introduction of intermediate rewards and recognition for progress and improvements helps to combat discouragement and exclusion, especially for participants who are not in a position to achieve the final result. The entry level into the gamified activity may be high, but its design must ensure that it is accessible to all, whatever the participants' previous experience.

Putting forward a variety of sub-activities and complementary challenges within the gamified activity itself allows participants to choose those that best match their skills and interests. This gives participants the opportunity to find areas in which they can excel.

In particular, unfair barriers that could disadvantage certain groups should be avoided. This means diversifying the design of games by encouraging the participation of people from different backgrounds.

In addition to varying the very nature of the activities, offering different levels of competition considerably reduces conflict-related phenomena. If ex-adversaries find themselves in a cooperative situation, in a neutral situation or in a situation where competition is no longer the central element, the tensions generated will fade and bonds will be rebuilt. A relevant concept to consider is the strategy of cooptation where participants are led to collaborate while maintaining a competitive rivalry (Bouncken et al, 2005).

Application to the Gamification of a Learning Activity

Although the propositions set out above are justified for all activity gamification contexts, the example dealt with here relates to a learning activity concerning Master's and Bachelor's students in engineering.

The results obtained are still partial and require further, more detailed analysis, but they nonetheless prove the hypotheses set out above. Indeed, 85% of the students questioned found that competition is a source of motivation and 78% felt that the competitive aspect of the activity was more important than its educational aspect.

Despite the application of all the recommendations set out, among the panel surveyed, 12% of students felt uncomfortable with the competition at least once during the proposed learning activity. This shows the importance of future research to further improve how all participants feel about the competition.

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