
Moving Beyond the Effectiveness of Gamification

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Abstract

The recent booming popularity of gamification has incited researchers to investigate the effectiveness of this technique. However, by identifying different possible implications for both user and context, this paper wants to move beyond effectiveness and to elaborate on different ethical ramifications of the use of gamification. The paper concludes with formulating some guidelines for future research.

Author Keywords

Gamification; User; Context; Ethics; Motivation

ACM Classification Keywords

H.5.m [Information Interfaces and Presentation (e.g., HCI)]: User Interfaces - User-Centered Design; K.4.1 [Computers and Society]: Public Policy Issues - Ethics; K.8.0 [Personal Computing]: General - Games

Introduction

The central tenet of gamification, “the use of game design elements in non-game contexts” (p. 10) [5], is the enhancement of people’s motivation and engagement [15]. Therefore, gamification has become popular across different sectors ranging from marketing and informatics to politics, education and health [9,14]. Gartner has estimated that by the end of 2015 over 50% of the businesses will use gamification [6], leading to a projected gamification industry revenue of \$1.5 billion [12]. In academia, research on gamification has also recently boomed, mainly with the goal to judge the effectiveness of gamification.

In this paper, we will argue that in order for the research field on gamification to mature, it is timely to move beyond the study of its effectiveness and reflect on how the implementation of gamification, in turn, can shape the broader context it is implemented in and the users involved. Though these implications for user and context are to date underexplored, they bring about important questions and ethical ramifications in a world where gamification can become omnipresent. By complementing existing criticisms of gamification with research findings that originate in other research fields, we will pinpoint concerns related to both the gamification context (including society) and its users. By articulating – sometimes provocative and far

stretched – statements, we want to draw attention to the need to reframe existing research questions, keeping the potential implications in mind, and to use new and innovative research designs in the study of gamification.

Implications for the context

Firstly, not every context is suited to play in. Starting from a very young age, people are socialized about the way they should act in different settings according to their cultural norms [7]. Nonetheless, by implementing gamification, users are asked to start playing, even in contexts where playing is culturally inappropriate. Deterding talks in this respect about the ‘embarrassment’ (p. 311) this mandatory play may bring forth [4]. Yet, in a gamified world, the discrepancy between the expectations of gamification and those on the basis of people’s culture can have more far reaching implications. Notably, people might adapt their expectations of how to behave, transforming the existing culture into one of play and games. Furthermore, when, for example, the typical ‘trial & error’-behavior of games [1] becomes part of a society’s culture, people may also start to believe that they can try again when they failed on their first attempt, which is likely to become problematic in sectors like healthcare or jurisdiction.

Secondly, competitiveness, one of the most used features of games [18] in gamification [8], stimulates a struggle to be the best, if necessary even by cheating. Moreover, as winning automatically implies someone else’s loss, it may promote a more selfishness-centered society [16] and discourage admirable characteristics like, for example, volunteer work or doing good for people.

Furthermore, this competitive context can harm the future of ‘bad gamers’, illustrating the interrelatedness of context and user. Although losers may set higher goals for the future, research has revealed that eventually they will perform systematically worse than their ‘winning’ counterparts, regardless of their pre-existing competences [2]. This example shows that gamification in this way can overshoot its goal, having far-reaching negative effects on the worst performing, and by extension the least motivated.

Implications for the user

As for the implications for the users involved in gamification, we will first discuss the implications for their intrinsic and extrinsic motivation. Intrinsic motivation is the human specific motivation that is inherent to and driven by the activity itself, whereas extrinsic motivation is caused by external factors independent from the activity such as rewards [17]. Intrinsic motivation has been found to outperform extrinsic motivation, having a more long-lasting influence on performance and leading to autonomous self-regulation [14]. Although implementing extrinsic motivation can stimulate people on the short term, it also has the potential to demolish existing intrinsic motivation [3,17], learning the users they should only perform the activity when rewarded [13]. Most gamified systems, however, rely on extrinsic motivational cues, by rewarding activities with badges or by encouraging competition. Consequently, by replacing the existing higher order intrinsic motivation with its extrinsic counterpart, gamification can potentially harm highly motivated people [10]. Furthermore, in the case of removal of the gamification elements and hereby also the corresponding extrinsic

motivation cues, we risk leaving unmotivated people behind.

Secondly, when gamification becomes omnipresent, questions arise about its utility. Different scholars have already claimed that the found positive effects of gamification can be attributed to a 'novelty effect' (e.g. [11]), stating that the effects are just temporarily, caused by the newness and accompanying excitement of the implemented system [10]. Furthermore, the omnipresence of gamification can speed up this process, transforming the newness of this technique into generality, removing the initial excitement. As a consequence, users will turn their backs on the by then boring gamification, resulting in the opposite of what it was implemented for.

Toward long-term, user- & context-centered research

In this paper, we pinpointed some of the possible negative implications gamification can have in society. However, although these considerations have a strong academic basis, specific research about these possible consequences lacks. Therefore, we evoke researchers to not only reframe their research questions paying attention to these implications, but also to use other research designs to tap in this underexposed subfield of gamification. Although detailed methodological guidelines go beyond the scope of this paper, we would like to highlight two important points:

Firstly, gamification research should broaden up, investigating beyond the basic outcome measures such as effectiveness. By looking at the influence of gamification on its users and context, interesting insights can originate, leading to a more nuanced

understanding of the mechanics of this technique. Secondly, the use of a long-term perspective in this field becomes increasingly indispensable. In this way the possibility of a novelty effect can be scrutinized and the potential long-term implications on society listed in this paper can be examined.

Conclusion

To summarize, we argue that for the research field to mature, scholars should go beyond the effectiveness of gamification and explore other possible implications on both user and context by reframing their research questions and by using other research methods. This way, researchers can actively participate in the debate as to whether gamification should be used in multiple contexts, making it omnipresent, or should be limited to specific contexts for specific reasons only.

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