

Chapter 3

A Qualitative Investigation of Gamification: Motivational Factors in Online Gamified Services and Applications

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ABSTRACT

Gamification is commonly employed in designing interactive systems to enhance user engagement and motivations, or to trigger behavior change processes. Although some quantitative studies have been recently conducted aiming at measuring the effects of gamification on users' behaviors and motivations, there is a shortage of qualitative studies able to capture the subjective experiences of users, when using gamified systems. The authors propose to investigate how users are engaged by the most common gamification techniques, by conducting a diary study followed by a series of six focus groups. From the findings gathered, they conclude the paper identifying some implications for the design of interactive systems that aim at supporting intrinsic motivations to engage their users.

INTRODUCTION

Huizinga (1949) in *Homo Ludens* stressed that “Play is not “ordinary” or “real” life. [...] It is played out within certain limits of time and space. It contains its own course and meaning” (Huizinga, 1949, pp. 8-9). Roger Caillois's (1962) defined play in a way similar to Huizinga's, as a voluntary activity that is different from ordinary affairs and is delimited by times, places, and cultural boundaries.

However, this difference between the world of ordinary life and the world of play is now gradually fading. Game elements have invaded areas traditionally characterized by the seriousness of everyday activities. Looking at some recent phenomena, we can find a variety of clues of this trend. Pervasive games merge with the everyday life world in which they take place (Montola, Stenros & Waeren, 2009). Serious games combine fun and serious aims for educational purposes (Michael & Chen, 2005). Alternate reality

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games are addressed to improve people's real life situations, by introducing game aspects in them (McGonigal, 2011).

In the field of Human-Computer Interaction (HCI) this phenomenon is even more visible, since an increasing number of tools are incorporating elements coming from the videogame world to make user experience more engaging and motivating. This is gamification, defined as "the use of game design elements in non-game contexts" (Deterding, Dixon, Khaled & Nacke, 2011), which is more and more employed in the design of digital services, interfaces and interactive systems.

By and large, the idea of merging the game world and the interactive system design is not a new subject in HCI research. Malone (1980) searched for heuristics in videogames to guide the design of interactive learning environments, making them interesting and enjoyable by leveraging users' intrinsic motivation. Funology (Blythe, Overbeeke, Monk & Wright, 2003) aimed at designing enjoyable and pleasurable user experience by taking inspiration from game design. Also Persuasive Technology (Fogg, 2003) looked for years at game elements to find suggestions for designing incentive systems, which could influence and change people's behaviors.

Despite these previous attempts to blend HCI and games, the idea of using precise design techniques taken directly from the world of game design, to make serious tools more engaging and pleasurable, is still a very recent phenomenon. Gamification does not require the development of a full-fledged game, but can count on a set of design elements that can be applied through different contexts. These elements can be ascribed mainly to the use of reward systems (e.g. points in *Yahoo Answers*), status recognition (e.g. badges in *Foursquare*) and mechanics to push user competition (e.g. leaderboards in *Samsung Nation*). The so called PBL triad (Points, Badges, Leaderboards) is nowadays used in the majority of commercial gamified applications (Werbach & Hunter, 2012)

and academic works (Hamari, Koivisto & Sarsa, 2014), defining a shared language that indeed facilitates the widespread adoption of these techniques (Rapp, 2014).

Even with the current hype on gamification both in industry and academy, there is a shortage of studies that investigate how game elements employed in current online gamified services and applications are perceived by users and which kind of engagement they trigger. Researchers have focused mainly on the effects of gamification on users' behaviors, using quantitative methods for discovering whether different game elements are able to increase users' performances and participation. We argue that the users' subjective experiences, as well as the users' meanings, perceptions and feelings, still need to be clarified and are paramount to discover the motivational factors that attract and motivate participation, engagement and loyalty in current gamified systems.

For these reasons, we propose to adopt a qualitative approach to find how the most common gamification techniques impact the user's subjective experiences and how the game elements employed motivate and sustain the user engagement. From the data gathered we will proceed to extract some implications for design, to help researchers and developers in creating more engaging tools. Up to now, in fact, there is a lack of design guidelines grounded on users' needs, capable of driving and focusing the development of novel gamified tools.

To resume, the main expected contributions to the current gamification literature of our research are to:

1. Capture the subjective experiences of the users dealing with the current gamified tools, despite the external effects they may have on their performances and behaviors;
2. Investigate how the game elements employed in current gamified systems motivate and sustain the user engagement;

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