

## Chapter 2

# Should I Play or Should I Go? Identifying Challenges for Gamification

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### ABSTRACT

*A pervasive application of gamification in many areas of everyday life has arguably yet to happen. For instance, despite much commercial interest in and a potentially huge market for successful gamification products in the areas of education and health, much of the excitement is still based on speculation, and reception in parts of the academic community remains sceptical. The chapter aims to collate observations from multiple empirical studies and meta-studies and collect and highlight issues that need to be resolved or mitigated for gamification to progress. Such issues include unclear definitions, a limitation on small sets of elements employed with unclear effects, unintentional side-effects of competition, a confusing variety of operationalizations, the erosion of intrinsic motivation through extrinsic incentives, a disconnect between theoretical understandings and practical realizations, a strong focus on a behaviorist paradigm, studies' mixed, partial, and inconclusive results, a lack of attention to moderating factors, and methodological limitations.*

### INTRODUCTION

The idea to fit play with purposes beyond itself, to “leverage aspects of games to achieve something beyond playfulness” (Richter et al., 2015, p. 23), has been proposed and implemented many times, before and after the “digitalisation of society or the massive economic success of computer games” (Fuchs, 2014, p. 136)<sup>1</sup>, under a plethora of monikers. One of the recent, most prominent notions is *gamification*. Regardless of when and by whom the notion was first proposed (see, for instance, Hägglund, 2012, p. 8; Tulloch, 2014, p. 318; Yıldırım&Şen, 2019, p. 2), “only around the beginning” of the 2010s (Fuchs, 2014, p. 120) it “gained widespread usage” (Tulloch, 2014, p. 318), and “has become a favoured buzzword of marketers, online strategists, start-up gurus, venture capitalists and digital consultants” (ibid., p. 317). Gamification as a research field is variously seen to be in its “infancy” (Hung, 2017, p. 62; Koivisto&Hamari, 2019, p. 192), as an “emerging” (Sailer&Homner, 2020, p. 101) or “maturing” field

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## ***Should I Play or Should I Go?***

(Nacke&Deterding, 2017; Rozman&Donath, 2019, p. 16), or even as a “science” (Landers et al., 2018) or “as a new educational theory” (Biro, 2014 in Dichev&Dicheva, 2017, p. 23).

A pervasive application of gamification in many areas of everyday life is arguably yet to happen. Despite much commercial interest in and a potentially huge market for successful gamification products, for instance, in the areas of education and health, much excitement is still based on speculation, and reception by “many games studies academics and game designers” remains sceptical (Tulloch, 2014, p. 317; see e.g. Fizek, 2014; Raczkowski, 2014; Sailer&Homner, 2020, p. 78). Although “results in general lean towards positive findings about the effectiveness of gamification”, Koivisto and Hamari (2019, p. 191) note that “the amount of mixed results is remarkable”. The idea and the practices of gamification have attracted and continue to attract a fair amount of criticism: “Ever since its advent[,] gamification has sparked controversy between game designers, user experience designers, game theorists and researchers in human-computer interaction” (Dichev&Dicheva, 2017, p. 2). Bai et al. (2020, p. 2) speculate that Bogost’s (2011) well-known description of gamification as “marketing bullshit” “reflects many people’s attitudes”; Yıldırım and Şen (2019, p. 1; see *ibid.*, p. 4) note that “[w]hether [educational] gamification is an organized structure that contributes to student achievement, a simple pontification process or total nonsense is a matter of debate”; and for Tulloch (2018), educational gamification is but “an enactment, and reinforcement tool of neoliberal and market logic” (Kalogiannakis et al., 2021, p. 23).

Gamification is a non-trivial endeavour (Khalil, 2018; Landers et al., 2018, p. 328; Koivisto&Hamari, 2019, p. 199) and is marked by a multiplicity of different implementations; it is a “very diverse” research field “with respect to the focus of the studies and the reported outcomes” (Dichev&Dicheva, 2017, p. 12). An almost Babylonian confusion of understandings, definitions and notions plagues the discourse; Sailer and Homner (2020, p. 78) observe a “conceptual heterogeneity in gamification”. Conflicting views and contradictory observations concern central aspects of the idea; for instance, it is demanded that single elements of gamification are tested rigorously in isolation for their effects on, for instance, learners (e.g. Dichev&Dicheva, 2017, p. 10; Ortiz-Rojas et al., 2017), and at the same time it is noted that elements only work meaningfully in combination (e.g. Nacke&Deterding, 2017; Xi&Hamari, 2019, p. 212); it is claimed that empirical gamification research often only measures “motivation and engagement” (Ortiz-Rojas et al., 2017), and at the same time it is also claimed that, in fact, motivation is not measured at all or only by second-hand measures (e.g. Johnson et al., 2016; Dichev&Dicheva, 2017, p. 12); educational gamification is praised as a way to empower learners and to increase their autonomy compared to traditional teaching methods (e.g. Zeng&Shang, 2018, pp. 539–40; Zainuddin et al., 2020, p. 1), while at the same time, much of educational gamification is informed by classic conditioning theories of learning within a behaviourist paradigm (e.g. Landers et al., 2018, p. 331; Baptista&Oliveira, 2019, p. 311); and it is noted that the engagement of learners with gamified learning systems aligns with their academic performance (e.g. Tsay et al., 2018, p. 9; Bai et al., 2020, p. 14) and does not align with their academic performance (Hung, 2017, pp. 61–2; Kalogiannakis et al., 2021, p. 1).

The chapter does not aim to point out faults or shortcomings of researchers, studies or approaches; but it tries to *take stock*: By collating observations from multiple empirical studies and meta-studies, *this study identifies, presents and discusses challenges gamification faces*<sup>2</sup>. The chapter does not exhaustively list experiences or results of gamification, but it collects and highlights issues that need to be resolved or mitigated for gamification to progress. The issues are identified and described, but not weighed or ranked. Therefore, an unsystematic analysis of the discourse in the form of studies and meta-studies is appropriate. The survey includes empirical gamification studies and meta-studies that are identified through online searches using various search engines such as *Google Scholar*, and reviews of empiri-

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