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The Great Game of Business: Advancing Knowledge on Gamification in Business Contexts

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Abstract

Gamification is a rather significant trend in recent years. It builds on the emotional and involving qualities of gaming but may not entail a full-fledged game. Gamification exists in a large number of industries; retail, media, consumer goods, and healthcare. It is used as means to educate employees in all types of industry, create customer engagement to brands and businesses, and even nudge people to change their behavior. The present paper is an introduction to the special issue on "Theoretical Perspectives and Applications of Gamification in Business Contexts". In total the special issue comprises of 11 novel and high-quality contributions on gamification. These are selected to enhance our understanding of underlying mechanisms that impact employees' and customers' attitudes and behaviors.

1. Introduction

Recently, games have become an established form of entertainment, consumer culture, and are a common part of people's daily lives (Malaby, 2017). As a result, our current reality and lives are increasingly game-like, not only because video games have become a pervasive part of our lives, but also because activities, systems, and services that are not traditionally perceived as game-like are increasingly *gamified* (Deterding, 2015).

Gamification primarily refers to a "*process of transforming any activity, system, service, product, or organizational structure into one which affords positive experiences (…) similar to those afforded by games, and is often referred to as the gameful experience"* (Höbgerg et al., 2019a) *"(…) to facilitate changes in behavior or cognitive processes. (…) gamification is commonly pursued by employing game design*" (Huotari & Hamari, 2017). In recent years, the popularity of gamification has skyrocketed and manifested in growing numbers of gamified

applications, as well as a rapidly increasing amount of research as shown by surveys of the field (Eppmann, Bekk & Klein, 2018; Koivisto & Hamari, 2019; Seaborn & Fels, 2015; Terlutter & Capella, 2013). In the United States alone, 65% of the adult population plays computer games while total video game sales exceed US $43.4 billion (ESA, 2019). The global gamification market is expected to reach approximately US $19.4 billion by 2023 with a compound annual growth rate of 44.06% from 2018-2023 (The Market Research News, 2019). Beyond human-computer interaction and game research, however, gamification has thus far remained a relatively small part of business, marketing, and organization studies literature. In these areas, organizations apply gamification primarily to motivate two stakeholder groups: employees and consumers (Bittner & Shipper, 2014; Conaway & Garay, 2014; Hofacker et al., 2016).

Gamification is regarded as a technology with a potentially high impact across industries, such as retail, media, consumer goods, and healthcare (Blohm & Leimeister, 2013; Conaway & Garay, 2014; Koivisto & Hamari, 2019; Seaborn & Fels, 2015). Nevertheless, predictions about the diffusion of gamification have varied from extremely positive outlooks, some of which suggest that half of all organizations will implement gamification in the near future (e.g. Gartner, 2011; IEEE, 2014) to less optimistic ones, claiming that most adoptions will fail (Gartner, 2012). It has been predicted that a majority of gamification implementations are doomed to fail due to poor understanding of how to successfully design gamification. This dearth in comprehensive understanding of the phenomenon inhibits organizations from adopting and designing effective gamification approaches (Morschheuser et al., 2018).

The purpose of this special issue is to address this gap by composing novel and high-quality research on gamification that enhances our understanding of the underlying mechanisms that impact employees' and customers' attitudes and behaviors. With this special issue we hope to contribute to future applications of gamification in business by providing insights on successful business implementation strategies as well as on design and context requirements that need to

be matched. We hope to encourage scholars to conduct research in this highly innovative and impactful area.

2. Forecasting emerging research areas

Although the phenomenon of gamification has attracted major research interest recently (Hammedi et al., 2017; Högberg et al., 2019b; Jang et al., 2018; Parjanen & Hyypiä, 2019; Zimmerling et al., 2019), there is still a lack of a coherent framework that entails the impact gamification has on various stakeholder groups. We addressed this issue by conducting an expert-based forecast study on the areas in which research on gamification will be most urgently needed in the future. We chose the Delphi method as a technique to evaluate the likelihood and time frame of the occurrence of gamification applications in various industries and application contexts. Thirty-five experts from academia and business, including game designers and application developers, participated in the 2017 Delphi study. Over two rounds of surveys, they evaluated the likelihood of ten propositions on future gamification scenarios that we developed based on a cross-disciplinary literature review.[1] Based on the results of the Delphi study, we identify four layers in which research is most urgently needed (see Figure 1).

[1] For example, one proposition reads as "*80% of Forbes global 2.000 companies offer at least one loyalty program that is based on gamification*.".

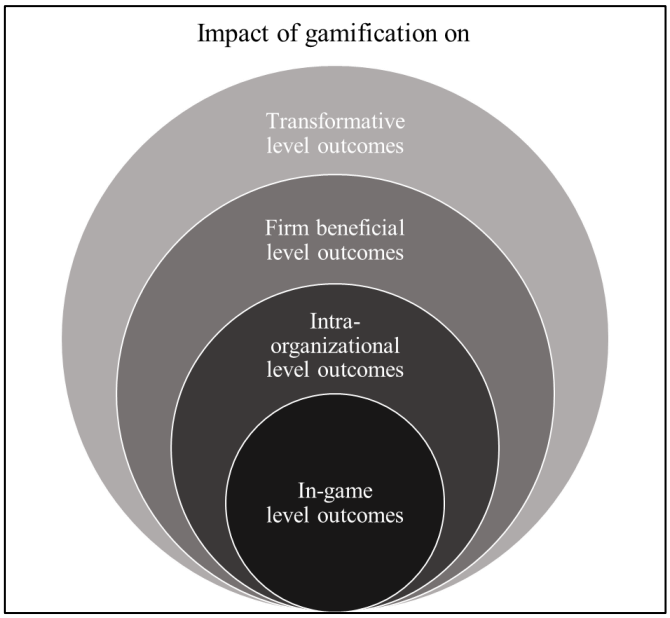

Figure 1: Emerging research areas

First, we call for a deeper understanding of users' responses to game-design elements, such as leaderboards and rewards, that impact users' engagement with the game ("in-game level outcomes"). Second, there is a need to explore the impacts of gamification to an intra-organizational context, in particular by looking at gamification's impact on employee attitudes and behaviors, such as motivation, job satisfaction, productivity, and job turnover ("intra-organizational level outcomes"). Third, we need more knowledge on the impact of gamification on customer attitudes and behaviors ("customer level outcomes"). Finally, we call for more research on the transformative impact of gamification on users, for example, in customers' long-term energy consumption or changes in health-related behavior ("transformational level outcomes"). We discuss the four emerging research areas below.

2.1 In-game level outcomes

The Delphi study provides support for the importance of careful game element design that matches the business context. For example, the experts consider that a transparent display of the results and the underlying game logic is especially important in intra-organizational gamification applications. Whereas for gamification applications at the customer interface, feedback and status are among the most appropriate elements to enhance user experiences.

These findings are in line with expert assessments which state that adding game elements, such as goal-setting, countdowns, or virtual rewards increase user enjoyment (Bond Brand Loyalty, 2019).

2.2 Intra-organizational level outcomes

The results of our Delphi study show that experts see much potential in implementing gamification in intra-organizational settings. Of the surveyed experts, 75% expect a high employee acceptance of successfully applied gamification within the next five years. The experts also predict an increase in employee productivity and satisfaction due to gamification. In particular, they consider gamification integrated in the recruitment process as highly beneficial as it could strengthen the selection quality but also positively reflect the firm's brand. Studies support the beneficial effects of gamification, such as improved job satisfaction and enhanced employee productivity (Oprescu et al., 2014) but also point to unintended side-effects, such as a decrease of employees' intrinsic motivation (Thom, et al., 2012), the potential of cheating (Carignan & Lawler Kennedy, 2013; Makanawala et al., 2013), and short-term engagement (Farzan et al., 2008). Thus, more research is needed to understand how and when gamification in intra-organizational settings leads to favorable outcomes.

2.3 Customer level outcomes

The experts of our Delphi study predict that gamification will be widely applied to the customer interface. They predict that 80% of the Forbes 2000 companies will apply gamified loyalty programs within the next five years. Further, 75% of the experts expect a high customer acceptance of mobile gamification applications which yield higher purchases because of the enhanced customer experience. Research indicates that gamification leads to a rich brand experience and higher sales (Conaway & Garay, 2014). However, empirical evidence on the impact of gamification on customer behavior through enhanced customer experience is lacking (Hamari et al., 2014; Sigala, 2015). As research has just started to explore short-term effects of

gamification (Bittner & Shipper, 2014; Harwood & Garry, 2015), more research which explores long-term effects of gamification on customer attitudinal and behavioral outcomes is warranted.

2.4 Transformative level outcomes

The experts of our Delphi study consider the healthcare sector as one of the most promising fields of application within the next five years. They see gamification as a highly effective means to strengthen patient activation and compliance. Gamification is expected to impact users' well-being beyond the healthcare sector; for example, gamification might guide customers to a more sustainable consumption behavior (Huber & Hilty, 2015) or positively impact health behaviors of employees (Seaborn & Fels, 2015). Exploring the transformative impact of gamification is an emerging field of research (Fijnheer et al., 2016) which has yet to investigate how game design elements influence transformative service outcomes, such as users' health and well-being (Mulcahy et al., 2018).

3. Contributions to this special issue

The following section summarize the highlights of this issue. The 11 papers we have chosen for this special issue cover the four emerging research areas of gamification that we have identified above.

3.1. Studies on in-game level outcomes

The selected articles address how game design elements, such as badges or leaderboards, impact in-game level outcomes, such as users' goal achievement, effort, emotional experience, and decision-making. The first article presented in this special issue addresses successful badge achievement in gamification. Gutt, von Reichenberg, and Kundisch investigate how successful goal achievement affects future levels of effort to attain the next goal in a recurring goal framework. Based on a dataset of a question and answer community, they find a positive impact on effort via the use of badges as long as goals remain challenging.

The findings of Höllig, Tumasjan, and Welpe underline the importance of leaderboard design to provide an appropriate fit with user characteristics. Based on two experimental studies, the authors show that users' trait competitiveness impacts the usage intention of gamification through perceived enjoyment. This relationship is strengthened when a team-based (rather than a player-based) leaderboard is employed. Mullins and Sabherwal's conceptual study illustrates how a gamified design creates emotional experiences. The authors provide a fresh theoretical lens—the cognitive-emotional view of gamification—that integrates literature in psychology and neuroscience to better understand the alignment of desired cognitions, emotions, and game mechanics. Lackes, Siepermann, and Vetter indicate that the employment of game design elements, such as leaderboards, need careful consideration because it impacts the user's decision-making.

3.2. Studies on intra-organizational level outcomes

The selected articles address how gamification in intra-organizational settings can lead to better satisfaction, motivation, enjoyment, flow, and knowledge-sharing behavior. Mitchell, Schuster, and Seung highlight the impact of gamification in a workplace context. They argue that sustainable gamification design should provide benefits that are meaningful to and valued by employees. Their cross-sectional survey study shows that extrinsic motivation, such as social pressure or internalized guilt, affects employees' psychological satisfaction and their intention to use the gamified application. However, when employees perceived high personal value through gamification, their psychological satisfaction and behavior intention is strengthened.

Warmelink and colleagues provide a review of literature on gamification of production and logistics. Their findings indicate that objectives and goals, points, achievements, feedback, metaphorical or fictional representations, and levels and progress are currently the most often employed affordances within the field. They also show that research has focused on examining motivation, enjoyment, and flow as the main psychological outcomes of gamification. Friedrich

and colleagues conducted a systematic literature review to explore the effects of game mechanics on motivation and knowledge-sharing behavior. They conclude that gamification can be a feasible approach to increase employee motivation for knowledge-management activities. The authors argue that the full potential of a gamified knowledge-management system can only unfold in a corporate culture and organizational climate that promotes such activities.

3.3. Studies on customer level outcomes

The two selected articles on gamification at the customer interface level illustrate how gamification can help firms foster customer commitment, loyalty, willingness to pay, and referral behavior. The article by Wolf, Weiger, and Hammerschmidt examines the impact of motivational experiences (self-development, social connectedness, expressive freedom, and social comparison) on customer attitudes and behaviors, such as commitment, willingness to pay, and referral. Their findings from a cross-contextual study reveal that motivational experiences increase these outcomes to different extents. Among the experiences examined, self-development has the strongest effect on business outcomes. Hwang and Choi explore the effects of gamification in loyalty programs. Their results confirm that gamified loyalty programs increased consumer interaction with loyalty programs which, in turn, enhanced consumers' participation and app download intention.

3.4. Studies on transformative level outcomes

This special issue closes with two articles that show how gamification can contribute to sustainable behaviors of customers and employees. Mulcahy, Russell-Bennett, and Iacobucci's study uses a gamified app to encourage sustainable household energy usage. The authors analyzed app usage behavior, survey data, and energy bills to demonstrate that the gamified app influences energy-saving and word-of-mouth behaviors, and results in significant monetary savings for customers. Oppong-Tawiah and colleagues studied the pro-environmental behavior

of employees in the workplace. They utilized five design cycles to develop and test a gamified system that tracks employees' electricity usage on their computer-related equipment and encourages them to reduce their energy consumption. The results show that the gamified system decreases employees' electricity consumption and increases their motivation to continue engaging in pro-environmental behaviors.

4. Conclusion

This special issue contributes to current knowledge on the underlying mechanisms and drivers for the successful use of gamification in business settings. The selected articles address four emerging research areas that comprise the impacts of gamification: *in-game, intra-organizational, customer and transformative level outcomes.* With this special issue we hope to stimulate future research on gamification in business contexts.

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