

# Guest editorial

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**S**pecial issue on “Gamifying human computer interaction for young consumers.”

## Introduction

Gamification refers to enhancing a service with game experience affordances to support the creation of overall value for the customer (Huotari and Hamari, 2016). It represents a shift away from the outdated belief that pecuniary incentives (e.g. cash and gifts) and instrumental motivations (e.g. knowledge-seeking) are the only options worth thinking about (Deterding, 2012). Age differences suggest that young consumers have higher expectations than the older age group to buy the gamified product, find it more useful and perceive it as fun and amusing (Bittner and Schipper, 2014). What is yet to be established is how ads can be differentiated from content in a self-regulated industry that concentrate on brand preference (Terlutter and Capella, 2013). Companies should offer millennials a fun interface and an environment that is easier to use for the Generation X to be successful in gamification (García-Jurado *et al.*, 2019).

In an increasingly interactive world, gamification is steadily reconfiguring our relationships with everyday tasks and experiences. To “gamify” is to use game mechanics, such as leveling, points and goals, in nongame contexts to reward users and drive engagement. These strategies, which motivate people on an emotional level, recognize that consumers want to participate in something enticing and rewarding and engaging and fun. As the digital space has become increasingly overcrowded, companies looking to stand out have been imitating the competitive, connected and personalized world of online gaming. In 2011, Gartner even predicted that by 2014, more than 70% of the top 2,000 global companies would have created at least one type of gamified application. Likewise, in a survey conducted by Pew Research Center, 53% of respondents said that gamification would be widespread by 2020.

Introducing gaming principles to the shopping experience can provide consumers with a similar sense of achievement, especially when there is a competitive element. Competition alone can be a significant motivator, but when combined with other gaming elements, such as status or social connectedness, the challenge and potential reward can hold significant appeal for people.

Recently, firms have started to use game elements to understand how young consumers react to it (e.g. Nike and Netflix) and have started running preliminary experiments to explore which game element and/or combination of elements can benefit them more. Studies have reported ethical issues in the use of game elements as it disrupts the natural behavior of the user and forces them to react to the stimuli. A different school of thought also provokes firms to use advanced analytical techniques such as artificial intelligence and robotics to unravel mysteries of human behavior. As gamification evolves further, there will be a need to understand it from theoretical, practical and hybrid approaches. As the digital population and competition grow rapidly, there is an immediate need to transform learning to practice and vice versa.

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The field of gamification has reformed human–computer interaction space. The tool, which was once a source of entertainment, has been used to unleash the power of customers by engaging them on digital platforms for learning, e-commerce activities, well-being, crowdsourcing, marketing, human resource engagement, information retrieval and development. The literature and understanding of gamification are mostly case-based or experimental. Despite this progress, research on gamification still faces a variety of practical and theoretical challenges. Moreover, as the target user group is youth for most of the firms because of its varying degree of engagement on digital platforms, it becomes essential to address some key research questions:

*RQ1.* How can interdisciplinary theories help explain end-user engagement on digital platforms?

*RQ2.* How can gamification be extended to new research fields such as artificial intelligence and neuromarketing to understand end users' behavior better?

*RQ3.* Which new game elements can be used by digital platforms to engage and retain customers?

*RQ4.* How ethical is it to use game mechanics to disrupt human behavior?

The special issue publishes papers that answer some of these questions by discussing and debating critical issues related to gamification in various disciplines and extending theoretical and managerial implications.

### **Contributions to the special issue**

The special issue features nine papers that link gamification with over the top (OTT) platforms, consumption patterns of young consumers, mobile health and loyalty, e-learning, finance and gender-related studies. Here is a snapshot of the published works.

The first paper, titled “Gamifying OTT: A study on consumer attitudes toward game elements and OTT media service provider brands in gamification,” aims to examine consumer attitude toward gamification in the context of OTT media service. The study finds that the three elements of in-game mechanics demonstrated a multiplicative effect. The different combinations of game mechanics elements would elicit different consumer attitudes toward gamification and brand. Despite one combination that attained a high positive consumer attitude toward gamification in OTT, that same combination was ineffective in creating a high positive attitude toward the OTT provider brand. The findings demonstrate the need for OTT providers to be clear of their gamification objectives before selecting the combination of game mechanics.

The second paper titled “How Over-the-top (OTT) platforms engage Young Consumers over traditional pay television service? An analysis of Changing Consumer Preferences and Gamification” aims to analyze how the top over-the-top (OTT) platform is becoming a preferred source of entertainment amongst young consumers over traditional pay TV service (cable TV/DTH) in India and what factors play a vital role in such preferences along with gamification of content. The study follows the theoretical framework of use and gratifications theory and Niche analysis. Empirical results and discussion insinuated the five factors which affect consumers' choices concerning entertainment, i.e. content and viewing behavior, expenses incurred on services, shifts influenced by offerings/incentives, convenience and telecom.

The third paper titled “Do gamified elements affect young people's use behavior on consumption-related mobile applications?” aims to investigate whether gamified elements affect the user behavior of young people (between age 12 and 25 years) on consumption-related mobile applications. The results showed that use behavior on consumption mobile

applications was affected by gamification. Mobile app designs and characteristics could improve user experience by efficiently performing their search and buying processes.

The fourth paper, titled “Examining the importance of Gamification, Social Interaction and Perceived Enjoyment among young female online buyers in India,” has dual motives. First, this study aims to evaluate the effect of gamification on the behavioral intention (BI) of young female consumers to use online websites for making purchases. Second, it examines the role of social interaction and perceived enjoyment (PE) – two antecedents that are considered to impact the female buying behavior in e-commerce. Gamification exhibits a favorable influence on BI of young female consumers. Gamification also has a favorable and indirect influence on BI through social interaction and PE. Online retailers need to offer an enjoyable and interactive experience to female consumers so that the influence of gamification is sustainable.

The fifth paper, titled “A Preliminary Investigation of Gamification from the Young Consumer’s Perspective,” conducted two studies using a mixed-methods approach to gain a foundational understanding of young consumers’ perceptions of gamification. This paper aims to explore and provide preliminary evidence on young consumers’ perceptions of gamification and the ethics involved in these strategies used by firms. The findings indicate that consumers have positive attitudes toward gamification tactics as long as the rewards are sufficient. Further, consumers do not find gamification unethical as long as they have control over opting in. This research offers two studies as a first step in investigating young consumers’ perceptions of gamification tactics firms use and offers several future directions.

The sixth paper is titled “Mobile Health (mHealth) Application Loyalty in Young Consumers” to study the determinants that help increase young consumers’ mHealth application loyalty. This study integrates self-determination theory, gamification elements and engagement to examine loyalty. Most mHealth application downloaders are continually shifting between applications because of the hyper-competition, making achieving loyal consumers challenging. The three psychological needs: the need for autonomy, competence and need for relatedness, showed a positive impact on intrinsic motivation. Only the first two showed a positive impact on extrinsic motivation from the gamification factors, perceived playfulness, challenge and social interaction level.

The seventh paper, titled “Gamification in Banking: A Review, Synthesis and Setting Research Agenda,” aims to explore and extend the existing literature on the use of gamification in banking by performing a systematic review of the literature. The study emphasizes the use of social and psychological theory building in the banking industry. Further, the game elements are unexplored in the banking domain, whereas they are well-exploited in other contexts.

The eighth paper titled “The e-learning persuasion through gamification: An Elaboration Likelihood Model perspective” performs a theoretical study to introduce a conceptual model to investigate e-learning persuasion through gamification elements using the social psychology theory of elaboration likelihood model (ELM). This study contributes to the existing literature by identifying an ELM-based conceptual model, which can be used to investigate the e-learning persuasion using gamification elements empirically. This study contributes significant findings to the e-learning research by introducing a conceptual model based on the social psychology theory of ELM.

The ninth paper titled “Gamification of financial applications and financial behavior of Young Investors” investigates the moderating role of gamification on the relationship of financial attitude, financial self-efficacy and financial planning activity of individuals on the financial behavior of individuals. It also provides a conceptual background on financial management behavior, financial attitude, financial self-efficacy and financial planning activity of individuals. The current study results highlight the fact that gamifying

features tend to significantly moderate the influence of financial attitude and financial planning activity on the financial management behavior of individuals. However, according to the results, gamifying features in financial apps do not significantly affect the influence of financial self-efficacy on the financial management behavior of individuals.

### Future scope of research

Gamification has gained importance in recent times. Its applications can be seen in marketing, finance, supply chain operations, health care, information technology, psychology and many more business and social sciences disciplines. The pressing need to engage end-user organically has attracted practitioners to use and implement gamification. There have been multiple studies that have performed reviews of various aspects of gamification. However, there is not enough discussion about the future of gamification. The special issue addresses some of the concerns to a large extent; however, some critical questions remain unanswered. The editorial note offers a systematic review of literature on gamification using the guidelines of [Tranfield et al. \(2003\)](#) and highlights research gaps. However, four key themes have missed prominence attention in the literature.

*Theme 1: gamification for bottom of the pyramid.*

*Theme 2: role of artificial intelligence to improve gamified systems.*

*Theme 3: dark side of gamification.*

*Theme 4: methodological debates in gamification.*

The first theme resonates into understanding how gamification can capture the attention span of people at the bottom of the pyramid (BoP). A common trend documented in most of the literature indicates that gamification works well for tech-savvy people. Although the community that is getting hooked to the internet and having smartphones is increasing rapidly, there still are many people resembling the BoP ([Hassan and Hamari, 2020](#)). Most of the gamified interventions have targeted technology-rich people; however, it is interesting to study how gamification can attract and sustain the attention span of the BoP task force. The BoP community is facing sanitation, education, nutritious food, clean drinking water, etc. It is a pressing need to address these concerns using the principles of game-based interventions that can help solve society's grassroot issues. Recent studies and case studies have shown evidence that gamification can be used to address one of the many issues under sustainable development goals ([Landers et al., 2018](#)). However, most earlier works have not been grounded in theory and not matched with practice. Thus, it is critical to understand how effective use of gamification can help address themes such as "scarcity," "avoidance" and "unpredictability" in the context of BoP. There lies limited evidence of gamification during uncertain times such as a natural disaster, the ongoing COVID-19 crises and financial and economic catastrophes ([Behl and Dutta, 2020](#)). Unlike people who are financially and economically sound, the BoP group gets significantly impacted. Game-based learnings can support them in strategizing their resources and donors to stay connected with a mission to help the needy class ([Mitchell et al., 2020](#)). The future of gamification lies in designing strategies for BoP, testing practical game mechanics to engage donors and firms, introducing game elements to resource planning and execution.

The proposed second theme is "Role of Artificial Intelligence to improve gamified systems." Points, badges and leaderboards are the most frequently used game elements by researchers and practitioners. Although there are a plethora of game elements available that should be picked based on the player types such as achievers, socializers, explorers and killers; it is seen that most of the firms stick to the use of one type of game elements

(Alsawaier, 2019; Koivisto and Hamari, 2019). As players are categorized based on their personality types, and more importantly, on the types of games they love to play, the “one size fits all” strategy to capture the end user’s attention might not work. It is essential to ask critical questions by the firms/researchers: what is being gamified, who are the users, why are we gamifying, how are we gamifying, where do we introduce game elements and the extent to which we gamify? The answers to these questions lie in the customization of game elements to develop a mind map of potential users. The use of analytics and artificial intelligence comes in handy, enabling understanding the users’ history and customizing the game elements to offer a customized experience. The future also lies in integrating the Internet of Things (IoT) with gamification, especially with young consumers connected to the online world and spend a lot of their time in the digital space. Thus, integrating AI and IoT with gamification can help firms understand youth behavior, and specific brands can customize their strategies to engage them better.

The third theme is exploring the dark side of gamification. This is an exciting area of work that has not been discussed quite often. Most of the studies in gamification have presented it as a tool that facilitates productivity improvement, enhances customer satisfaction, fosters a higher degree of engagement in stakeholders (Koivisto and Hamari, 2019; Warmelink *et al.*, 2020). However, it is less reported that the success of gamification is not always guaranteed. Some critical reasons include a choice of game elements, ethical concerns to understand gamification deployment, carefree attitude of users toward game elements, excessive use of game elements and gamification leading to excessive competition (Hammedi *et al.*, 2021; Trang and Weiger, 2021). Most of the works done in this area have not explored these themes from a theoretical or experiment-based perspective. Thus, it becomes interesting to conceptualize the dark side of gamification and then test it using experiment-based or longitudinal research design. The recent deployment of game elements in online learning and health fitness is one of the most important sectors which engages young people the most. It becomes worthwhile to understand the decline of interest levels of young consumers toward game elements when they are constantly being exposed to game-based activities. Although theories explain the relationship between motivation and gamification, it is worthwhile to understand theoretical explanations to link demotivation and gamification. Some recent studies have also discussed the negative psychological aspects of games and game elements based on young consumers (Bogost, 2014; Leclercq *et al.*, 2020). Although there lies lesser evidence to understand how the overuse of game elements may lead to psychological distress and loss of confidence among young consumers, it becomes interesting to explore this.

The fourth theme is “methodological debates in gamification.” Gamification literature asserts that researchers have predominantly used experiment-based studies and recently started to explore empirical research. The recently developed scale by Eppmann *et al.* (2018) and Liu *et al.* (2019) has directed scholars to understand how gameful experience can be used as an antecedent in various theoretical models. Thus, theory-focused research (either experimental or empirical) has mainly used primary data collected from users or potential users of the gamified application and has used them to test the hypotheses. However, few studies have qualitatively assessed the degree of adoption and post-adoption of gamification (Hassan and Hamari, 2020; Koivisto and Hamari, 2019). There is a pressing need to focus on the ontological, epistemological and methodological advancements, including the use of advanced technologies such as big data analytics, artificial intelligence, internet of things, data-driven decision-making and perceptual mind maps in the context of gamification.

Furthermore, there is a strict need to understand gamification from a macro and meso perspective as well. Recent methodological debate in gamification also indicates the use

of a case-based approach to developing theoretical arguments. On the flipside, gamification has also been used as a methodology to improve the efficiency of data collection. The age-old issue of nonresponse bias in empirical study can be controlled using gamification as game elements will make the participants engaged during their response to an online questionnaire. On a similar account, data collected using focused group discussions can be engaging and participative by introducing gamified elements. Thus, gamification is a double-edged sword that can be used both as a construct or methodology in the study (Klock *et al.*, 2020).

We hope that the special issue will bloom new ideas for researchers to pursue research in this area and investigate new themes and applications of gamification.

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### Further reading

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