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Guest Editorial

Gamification in marketing





Gamification today is a widely trusted and applied technique to encourage engagement. The strength of gamification as a phenomenon rests in redesigning services and systems to replicate experiences similar to those shaped by games, thus driving individuals towards a specific targeted behaviour (Koivisto & Hamari, 2019). Defined as a means to enhance the overall consumer experience (Huotari & Hamari, 2012), gamification is increasingly being used by marketers in varied ways to motivate customers to engage with brands. The concept has led to the integration of utilitarian and hedonic systems, making it one of the most assuring and compelling strategies of the future (Koivisto & Hamari, 2019)

Prior studies have widely acknowledged the impact of gamification elements in eliciting high levels of engagement (Hamari & Koivisto, 2014; Harwood & Garry, 2015; Kuo & Chuang, 2016; Krishen, Dwivedi, Bindu, & Kumar, 2021; Yang, Asaad, & Dwivedi, 2017). The use of gamification to increase engagement has been explored in the context of several domains, including business energy conservation, education, health and fitness, sustainable behaviour, crowdfunding (Morford, Witts, Killingsworth, & Alavosius, 2014). Recent studies have also strengthened the application of the concept in various areas of marketing, including Consumer Loyalty (Hwang & Choi, 2020), online reviews (Moro, Ramos, Esmerado, & Jalali, 2019), Brand Love (Hsu & Chen, 2018), Behavioural Engagement and Purchase (Ghosh, Sreejesh, & Dwivedi, 2021; Jang, Kitchen, & Kim, 2018), Customer engagement (Eisingerich, Marchand, Fritze, & Dong, 2019; Sreejesh & Ghosh, 2021), engagement in online co-creation communities (Leclercq, Hammedi, & Poncin, 2018) and intrinsic need satisfaction (Xi & Hamari, 2019).

Research in gamification is witnessing recent advancements, with scholars investigating its potential in new domains and recognizing its further applications in already investigated fields. Gamification Research in education, for instance, has seen an evolutionary trajectory. Researches are endeavoured to get a more profound understanding of how gamification can serve as an effective tool for better student learning and engagement and also understand how gamification works differently for different gender, generations, personality types, platforms, brand memory, and leaderboard positions (Legaki, Karpouzis, Assimakopoulos, & Hamari, 2020; Denden et al., 2021; Ghosh et al., 2021; Murillo-Zamorano, Sánchez, Godoy-Caballero, & Muñoz, 2021; Xu et al., 2021; Bai, Hew, Sailer, & Jia, 2021; Sreejesh, Dwivedi et al., 2021). Studies in sustainable behaviour also seem to have been drawn towards understanding the role of gamification in motivating individuals to engage in sustainable behaviours like backcasting, climate change, and recycling behaviour (Mandujano, Quist, & Hamari, 2021; Douglas & Brauer, 2021; Hsu & Chen, 2021).

Gamification has further found its grounding in crowdfunding

https://doi.org/10.1016/j.ijinfomgt.2021.102415 Received 10 August 2021; Accepted 19 August 2021 Available online 27 August 2021 0268-4012/© 2021 Elsevier Ltd. All rights reserved. related studies, and its application has been studied to examine its role in promoting participation and engagement in donation-based crowdfunding campaigns (Golrang & Safari, 2021; Behl & Dutta, 2020). The integration of gamification with cutting-edge technologies like augmented and virtual reality is also emerging as one of the potential future research areas (Donnermann et al., 2021; de Paula Porto, de Jesus, Ferrari, & Fabbri, 2021; Spil, Romijnders, Sundaram, Wickramasinghe, & Kijl, 2020; Chávez, Rodríguez, & Gutierrez-Garcia, 2020; Nguyen & Meixner, 2020).

Despite strong evidence supporting gamification as an established technique to promote positive behaviours, researchers are interested to understand the dark side of gamification. Recent publications have attempted to investigate its dark side and have proven its negative impact on employee engagement and well-being (Hammedi, Leclercq, Poncin, & Alkire, 2021). Further, Yang and Li (2021) proved that competition and interactivity, considered as key gamification design components, invade individuals' privacy, leading to overload and exhaustion.

Notwithstanding the tremendous enthusiasm around the phenomenon, gamification is still in the exploratory phase of its trajectory (*Koivisto & Hamari, 2019*; Helmefalk & Marcusson, 2019). There is a lack of coherence in research models studied to establish gamification in diverse contexts and further methodological gaps, lack of uniformity in measurement models and instruments (*Koivisto & Hamari, 2019*) and an absence of strong evidence-based research in understanding individual psychological characteristics on gamification adoption.

It is also imperative to understand the long-term outcomes of engaging with a gamified system. There can be undiscovered positive outcomes and unknown negative consequences of engaging with such platforms over an extended period. Also, very few studies have focused on and appreciated the differential effect of gamification on individuals with varying demographic and psychographic characteristics. The practicality of the technique nevertheless requires strong pieces of research evidence to be adopted by the industry. Exploration into the dark side of gamification is in the initial stages, and much is still unknown and needs to be examined and explained. Does gamification intuitively and positively encourage behaviours or manipulates the outcomes? Similar ethical concerns related to gamification should be questioned and understood before accepting it as an approved and superior mechanism.

Thus, there seems to be a growing and pertinent need to provide new scholarly insights to comprehend its true strength and applicability. This special issue aims to provide a renewed perspective to the concept of gamification by bringing out the influences of gamification in many new research contexts. It also seeks to fulfill the gaps posed by past researches and reviews on gamification.

This special issue attracted submissions from gamification researchers worldwide. After a rigorous review process, seven articles were selected to be included in the special issue. The following section briefly describes the contribution of each of the selected articles to the gamification literature.

Acknowledging the paucity of research linking gamification to impulse buying in e-commerce, Zhang, Shao, Li, and Feng (2020) develop a theoretical model to test the impact of gamification mechanisms of rewards giving and badges upgrading on impulse buying during the "Double Eleven" shopping festival. The study provides unique insights by splitting gamification into economics-related (rewards giving) and achievement-related (badges upgrading) categories and then analyzing their respective roles in influencing consumer buying behavior in the online marketplace. Their empirical results suggest that the two mechanisms are positively associated with perceived enjoyment and social interaction, which in turn influence consumers' impulse buying. Using multi-group analysis, the study further demonstrates the differential effect of gamification mechanisms on gender and age by establishing that achievement-related gamification mechanism is preferred more by males and younger digital natives. In comparison, females and older digital natives are motivated by economics-related gamification mechanisms. The study is able to confirm the impact of gamification on impulse buying empirically. It provides practical guidelines for developers and operators of online purchase platforms to integrate effective gamification mechanisms and features to attract more participants and increase consumers' impulse buying across different groups of users.

Hollebeek, Das, and Shukla (2021) delve into the ramifications of using gamification within loyalty programs to improve their effectiveness through greater customer engagement. Using insights gained from a review of independent literature on gamification, customer engagement, and loyalty programs, they develop an interesting concept of Gamified Loyalty Program Engagement (GLPE) by analyzing the behaviors of members of loyalty programs. While purchase is a direct and more easily measured outcome, the researchers pay more attention to the indirect contributions (such as advocacy of the loyalty programs to others), which they classify using existing research, as autonomous (vs. interdependent)-, selfless (vs. self-seeking)-, control (vs. laissez-faire)-based-, collaborative (vs. competitive)-, individual (vs. generic)-, and calculated (vs. non-calculated). They propose intrinsic and extrinsic motivation as major drivers of this concept and use self-determination theory to develop a conceptual framework that exhibits the corresponding impact on customer brand engagement value (CBEV). Thus, they recommend a strategic path to increase the effectiveness of a GLP design by factoring in both intrinsic and extrinsic user motivations, with a higher focus on promoting users' indirect contributions.

Acknowledging the exemplary rise of Pokémon Go as one of the most popular and profitable games since its launch in 2016, Hsiao and Tang (2021) present a pioneering study investigating the role of continuous play and the players' willingness to visit tourist attractions to catch rare Pokémon. The research employs the stimuli-organism-response (S-O-R) model and treats players' post-adoption behaviors as the outcome response of the players' internal states (gamified experience), triggered by environmental stimuli (i.e., social and media influences). The results show that stimulus effects, such as social stimuli (critical mass and social interaction) and media stimuli (content timeliness and media richness), have a significant impact on the players' internal gamified experience (attachment and conformity), which in turn affect their visit intention to catch creatures at certain attractions and to continue playing Pokémon Go. Thus, there are many useful insights for both academicians and practitioners from the study, including suggestions for enriching content, designing promotional plans, live broadcasts and creation of a critical mass of game players that can generate better business for game companies, stores as well as tourism sites.

Advertisements are often perceived as an intrusion when they break the flow of a program, content, or online game. Therefore, In-game advertising (IGA) needs to be designed in a more meaningful manner if marketers want to leverage its high potential to maximize their returns. Adopting an amalgamation of psychological ownership and schema theory, Mishra and Malhotra (2020) examine the impact of gameful experience (GFUL) on the attitudes of online gamers. They argue that perceived in-game advertisement effectiveness (PAE) and psychological ownership towards game (PO) can counter the unfavorable outcomes of advertising intrusiveness (AI). The research results provide specific insights both to advertisers and gaming communities and attest that with better-designed advertisements aiming to create a greater sense of ownership, adverse effects of advertisement intrusiveness can reduce. It is explicated that if games are designed with lower difficulty levels, enjoyment and engagement increase as gamers become more involved and believe that they will score a win. Gamers' psychological ownership of the game increases their association with the game, and the presence of IGA does not intervene in their response to the game. Thus brands and game developers need to customize the game preference of the players for more effective and acceptable advertising styles.

As data continues to be the new oil of the world, effective information management holds the key. It is particularly tricky when the information exchange is happening between different people as the challenge is to be able to provide the right information, at the right time, in the right place, in the right way, and to the right person. Against this background, Weretecki, Greve, Bates, and Henseler (2021) investigate whether gamified experiences in a multi-actor service ecosystem can be used to encourage and improve customers' information exchange behavior. This study is the first to apply a holistic experiential value approach using value-attitude-behavior (VAB) model to a gamified experience to assess the many simultaneous interactions and dynamic relationships within multi-actor service ecosystems in multisensory physical environments. The authors study antecedents and outcomes to provide a scalable measurement instrument that can be applied successfully to gamified experiences ranging from simple to complex customer-interface interactions for better strategic implementation.

Another impactful, interesting and yet underdeveloped area of application of gamification is sustainability marketing. In their paper, Whittaker, Mulcahy, and Russell-Bennett (2021) use a gamified app that encourages test participants to adopt sustainable energy behavior of turning off electricity switches. The authors utilize affect-as-information theory to analyze the interrelationships between flow, customer engagement, value-in behavior, and intentions to perform sustainable behavior. The study provides important theoretical and practical insights into how consumers' experience and engagement with a gamified system can transfer into improving sustainability outcomes, namely, the value consumers perceive in performing sustainability actions and their intentions to perform sustainability behavior, which has always been a challenge for sustainability marketers.

Aydinliyurt, Taskin, Scahill, and Aysegul (2021) investigates the dual effect of Behavioral Activation System (BAS) and Behavioral Inhibition System (BIS), with the former indicating natural motivational propensity towards reward and the latter towards eluding punishment. The study introduced reward systems to examine their role in determining individuals' satisfaction and continuance intention to engage in gamified mobile applications. The study presented quite interesting and insightful results contradicting some hypothesised assumptions. It was found that BAS drive did not play any significant role in influencing satisfaction and post-adoption engagement with the gamified mobile application. However, BAS fun seeking did have a positive effect on continuance intention but none on satisfaction. Alternatively, BIS negatively influenced satisfaction but seem to have no role in driving continuous intention. The study provides significant implications both for theory and practice by proving the supremacy of rewards over goals and that punishment cues should be carefully introduced as they might make the gamified environment intensely negative, leading to dissatisfaction and possible future disengagement.

As detailed in the previous section, this special issue consists of 7

articles covering different dimensions of gamification as a technique. The papers included in this special issue provide some very interesting and valuable theoretical and practical insights into the applicability of gamification as a technique and its effective utilization in promoting diverse behaviours. Some significant future directions that emerge from the special issue propose using longitudinal, experimental, and neuropsychological designs in gamification research, studying gamification design elements in isolation to understand how different are their individual and synergistic contributions, acknowledging gender and age disparities in designing gamified platforms, employing new theoretical lenses to examine and analyze emergent nomological networks and exploring the potential and applicability of gamified ecosystems in B2B and multi-actor service contexts.

Despite the relevant contributions made by the accepted papers and the recently published scholarly work exploring gamification in novel domains, there is still an urgent need for further research in the gamification space to establish its acceptability as a superior technique of the future and recognize perspectives and viewpoints that still hugely remain untouched and unexplored.

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References

- Aydinliyurt, E. T., Taskin, N., Scahill, S., & Aysegul, T. (2021). Continuance intention in gamified mobile applications: A study of behavioral inhibition and activation systems. *International Journal of Information Management.*, Article 102414. https://doi. org/10.1016/j.ijinfomgt.2021.102414.
- Bai, S., Hew, K. F., Sailer, M., & Jia, C. (2021). From top to bottom: How positions on different types of leaderboard may affect fully online student learning performance, intrinsic motivation, and course engagement. *Computers & Education*, 173, Article 104297. https://doi.org/10.1016/j.compedu.2021.104297.
- Behl, A., & Dutta, P. (2020). Engaging donors on crowdfunding platform in Disaster Relief Operations (DRO) using gamification: A Civic Voluntary Model (CVM) approach. *International Journal of Information Management*, 54, Article 102140. https://doi.org/10.1016/j.ijinfomgt.2020.102140.
- Chávez, O. L., Rodríguez, L. F., & Gutierrez-Garcia, J. O. (2020). A comparative case study of 2D, 3D and immersive-virtual-reality applications for healthcare education. *International Journal of Medical Informatics*, 141, Article 104226. https://doi.org/ 10.1016/j.ijmedinf.2020.104226.
- de Paula Porto, D., de Jesus, G. M., Ferrari, F. C., & Fabbri, S. C. P. F. (2021). Initiatives and challenges of using gamification in software engineering: A Systematic Mapping. *Journal of Systems and Software*, 173, Article 110870. https://doi.org/10.1016/j. jss.2020.110870.
- Denden, M., Tlili, A., Essalmi, F., Jemni, M., Chen, N. S., & Burgos, D. (2021). Effects of gender and personality differences on students' perception of game design elements in educational gamification. *International Journal of Human-Computer Studies*, 154, Article 102674. https://doi.org/10.1016/j.ijhcs.2021.102674.
- Donnermann, M., Lein, M., Messingschlager, T., Riedmann, A., Schaper, P., Steinhaeusser, S., & Lugrin, B. (2021). Social robots and gamification for technology supported learning: An empirical study on engagement and motivation. *Computers in Human Behavior*, 121, Article 106792. https://doi.org/10.1016/j.chb.2021.106792.
- Douglas, B. D., & Brauer, M. (2021). Gamification to prevent climate change: A review of games and apps for sustainability. *Current Opinion in Psychology*, 42, 89–94. https:// doi.org/10.1016/j.copsyc.2021.04.008.
- Eisingerich, A. B., Marchand, A., Fritze, M. P., & Dong, L. (2019). Hook vs. hope: How to enhance customer engagement through gamification. *International Journal of Research in Marketing*, 36(2), 200–215. https://doi.org/10.1016/j. ijresmar.2019.02.003.
- Ghosh, T., Sreejesh, S., & Dwivedi, Y. K. (2021). Examining the deferred effects of gaming platform and game speed of Advergames on memory, attitude, and purchase intention. *Journal of Interactive Marketing*, 55, 52–66.

- Golrang, H., & Safari, E. (2021). Applying gamification design to a donation-based crowdfunding platform for improving user engagement. *Entertainment Computing, 38*, Article 100425. https://doi.org/10.1016/j.entcom.2021.100425.
- Hammedi, W., Leclercq, T., Poncin, I., & Alkire, L. (2021). Uncovering the dark side of gamification at work: Impacts on engagement and well-being. *Journal of Business Research*, 122, 256–269. https://doi.org/10.1016/j.jbusres.2020.08.032.
- Harwood, T., & Garry, T. (2015). An investigation into gamification as a customer engagement experience environment. *Journal of Services Marketing*, 29, 533–546. https://doi.org/10.1108/JSM-01-2015-0045.
- Helmefalk, M., & Marcusson, L. (2019). Gamification in a servicescape context: a conceptual framework. *International Journal of Internet Marketing and Advertising*, 13(1), 22–46. https://doi.org/10.1504/IJIMA.2019.097894.
- Hollebeek, L. D., Das, K., & Shukla, Y. (2021). Game on! How gamified loyalty programs boost customer engagement value. *International Journal of Information Management.*, Article 102308. https://doi.org/10.1016/j.ijinfomgt.2021.102308.
- Hsiao, C. H., & Tang, K. Y. (2021). Who captures whom–Pokémon or tourists? A perspective of the Stimulus-Organism-Response model. *International Journal of Information Management.*, Article 102312. https://doi.org/10.1016/j. iiinfomet.2021.102312.
- Hsu, C. L., & Chen, M. C. (2018). How gamification marketing activities motivate desirable consumer behaviors: Focusing on the role of brand love. *Computers in Human Behavior*, 88, 121–133. https://doi.org/10.1016/j.chb.2018.06.037.
- Hsu, C. L., & Chen, M. C. (2021). Advocating recycling and encouraging environmentally friendly habits through gamification: An empirical investigation. *Technology in Society*, 66, Article 101621. https://doi.org/10.1016/j.techsoc.2021.101621.
- K. Huotari J. Hamari Defining gamification: a service marketing perspective (2012). 10.1145/2393132.2393137.
- Hwang, J., & Choi, L. (2020). Having fun while receiving rewards?: Exploration of gamification in loyalty programs for consumer loyalty. *Journal of Business Research*, 106, 365–376. https://doi.org/10.1016/j.jbusres.2019.01.031.
- Jang, S., Kitchen, P. J., & Kim, J. (2018). The effects of gamified customer benefits and characteristics on behavioral engagement and purchase: Evidence from mobile exercise application uses. *Journal of Business Research*, 92, 250–259. https://doi.org/ 10.1016/j.jbusres.2018.07.056.
- Koivisto, J., & Hamari, J. (2019). The rise of motivational information systems: A review of gamification research. *International Journal of Information Management*, 45, 191–210. https://doi.org/10.1016/i.iiinfomgt.2018.10.013.
- Krishen, A. S., Dwivedi, Y. K., Bindu, N., & Kumar, K. S. (2021). A broad overview of interactive digital marketing: A bibliometric network analysis. *Journal of Business Research*, 131, 183–195.
- Kuo, M. S., & Chuang, T. Y. (2016). How gamification motivates visits and engagement for online academic dissemination–An empirical study. *Computers in Human Behavior*, 55, 16–27. https://doi.org/10.1016/j.chb.2015.08.025.
- Leclercq, T., Hammedi, W., & Poncin, I. (2018). The boundaries of gamification for engaging customers: effects of losing a contest in online co-creation communities. *Journal of Interactive Marketing*, 44, 82–101. https://doi.org/10.1016/j. intmar.2018.04.004.
- Legaki, N. Z., Karpouzis, K., Assimakopoulos, V., & Hamari, J. (2020). The effect of challenge-based gamification on learning: An experiment in the context of statistics education. *International Journal of Human-computer Studies*, 144, Article 102496. https://doi.org/10.1016/j.techfore.2021.120725.
- Mandujano, G. G., Quist, J., & Hamari, J. (2021). Gamification of backcasting for sustainability: The development of the gameful backcasting framework (GAMEBACK). *Journal of Cleaner Production*, 302, Article 126609. https://doi.org/10.1016/j. iclepro.2021.126609.
- Mishra, S., & Malhotra, G. (2020). The gamification of in-game advertising: Examining the role of psychological ownership and advertisement intrusiveness. *International Journal of Information Management.*, Article 102245. https://doi.org/10.1016/j. iiinfomet.2020.102245.
- Morford, Z. H., Witts, B. N., Killingsworth, K. J., & Alavosius, M. P. (2014). Gamification: The intersection between behavior analysis and game design technologies. *The Behavior Analyst*, 37(1), 25–40. https://doi.org/10.1007/s40614-014-0006-1.
- Moro, S., Ramos, P., Esmerado, J., & Jalali, S. M. J. (2019). Can we trace back hotel online reviews' characteristics using gamification features? *International Journal of Information Management*, 44, 88–95. https://doi.org/10.1016/j. ijinfomgt.2018.09.015.
- Murillo-Zamorano, L. R., Sánchez, J.Á. L., Godoy-Caballero, A. L., & Muñoz, C. B. (2021). Gamification and active learning in higher education: is it possible to match digital society, academia and students' interests? *International Journal of Educational Technology in Higher Education*, 18(1), 1–27. https://doi.org/10.1186/s41239-021-00249-y.
- Nguyen, D., & Meixner, G. (2020). A survey of gamified Augmented Reality systems for procedural tasks in industrial settings. *IFAC-PapersOnLine*, 53(2), 10096–10100. https://doi.org/10.1016/i.ifacol.2020.12.2733.
- Spil, T. A., Romijnders, V., Sundaram, D., Wickramasinghe, N., & Kijl, B. (2020). Are serious games too serious? Diffusion of wearable technologies and the creation of a diffusion of serious games model. *International Journal of Information Management*, 58, Article 102202. https://doi.org/10.1016/j.ijinfomgt.2020.102202. https:// www.sciencedirect.com/science/article/pii/S0268401219315555.
- Sreejesh, S., Ghosh, T., & Dwivedi, Y. K. (2021a). Moving beyond the content: The role of contextual cues in the effectiveness of gamification of advertising. *Journal of Business Research*, 132, 88–101. https://doi.org/10.1016/j.jbusres.2021.04.007.
- Sreejesh, S., Dwivedi, Y. K., & Ghosh, T. (2021b). How does a brand's psychological distance in an advergame influence brand memory of the consumers? *Journal of Consumer Behaviour*, cb.1950. https://doi.org/10.1002/cb.1950.

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- Weretecki, P., Greve, G., Bates, K., & Henseler, J. (2021). Information management can't be all fun and games, can it? How gamified experiences foster information exchange in multi-actor service ecosystems. *International Journal of Information Management*. , Article 102391. https://doi.org/10.1016/j.ijinfomgt.2021.102391.
- Whittaker, L., Mulcahy, R., & Russell-Bennett, R. (2021). Go with the flow' for gamification and sustainability marketing. *International Journal of Information Management.* , Article 102305. https://doi.org/10.1016/j.ijinfomgt.2020.102305.
- Xi, N., & Hamari, J. (2019). Does gamification satisfy needs? A study on the relationship between gamification features and intrinsic need satisfaction. *International Journal of Information Management*, 46, 210–221. https://doi.org/10.1016/j. ijinfomgt.2018.12.002.
- Xu, J., Lio, A., Dhaliwal, H., Andrei, S., Balakrishnan, S., Nagani, U., & Samadder, S. (2021). Psychological interventions of virtual gamification within academic intrinsic motivation: A systematic review. *Journal of Affective Disorders*, 293, 444–465. https://doi.org/10.1016/j.jad.2021.06.070.
- Yang, H., & Li, D. (2021). Understanding the dark side of gamification health management: A stress perspective. *Information Processing & Management*, 58(5), Article 102649. https://doi.org/10.1016/j.ipm.2021.102649.
- Yang, Y., Asaad, Y., & Dwivedi, Y. K. (2017). Examining the impact of gamification on intention of engagement and brand attitude in the marketing context. *Computers in Human Behavior*, 73, 459–469.
- Zhang, L., Shao, Z., Li, X., & Feng, Y. (2020). Gamification and online impulse buying: The moderating effect of gender and age. *International Journal of Information Management.*, Article 102267. https://doi.org/10.1016/j.ijinfomgt.2020.102267.

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