

Aug 10th, 12:00 AM

Gamification and Marketing Management: A Literature Review and Future Agenda

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Recommended Citation

Yang, Xinyi; Xi, Nannan; Tang, Hairui; and Hamari, Juho, "Gamification and Marketing Management: A Literature Review and Future Agenda" (2023). *AMCIS 2023 Proceedings*. 1.
https://aisel.aisnet.org/amcis2023/meta_res/meta_res/1

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Gamification and Marketing Management: A Literature Review and Future Agenda

Completed Research Full Paper

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Abstract

Given the motivational effect of game elements and mechanisms on user experience in various non-game contexts, gamification has widely been used as an effective marketing technique to enhance the performance of business practices. In the past decade, a variety of studies have explored and investigated the value that gamification can provide in consumer-facing marketing activities. However, there is still a dearth of granular understanding of how gamification in marketing has been studied in the current literature. This paper follows the PRISMA literature review process and systematically reviews 93 papers consisting of 111 empirical studies on gamification and marketing management. The synthesized findings provide a holistic picture of the adopted research methods, different investigated gamification affordances and advergaming, various gamified industries, and marketing performance indicators regarding products, services, and brands. Five agenda points, mainly relating to methodology and themes, are further suggested.

Keywords

Gamification, Games, Advertising, Brand, Loyalty, Purchase Intention.

Introduction

Gamification is one of the representative motivational and persuasive information systems (IS) which has been believed to offer game-like experiences and enhance engagement (Koivisto and Hamari 2019). Especially in marketing and business contexts, gamification has been employed and investigated by practitioners and researchers in fields such as online communities (Xi and Hamari 2020), fitness (Jang et al. 2018), and e-commerce (Poolperm and Thongmak 2021) for achieving business goals. Notably, many companies have applied gamification techniques to their marketing strategies to achieve idealized marketing outcomes like the Starbucks loyalty program (point collection system) and the Mars video game Eye Spy Pretzel. Considering the successful use of gamification in several fields and especially in marketing, it is expected that the trend for gamification will keep expanding, and the gamification market size is expected to reach USD 37.00 billion by 2027 (Media and Entertainment 2020).

A rich body of academic research on using gamification to optimize marketing performance has accumulated in the past decade, and is still rapidly developing. In the IS literature, prior studies conclude that the framework of gamification comprises game mechanisms, psychological outcomes, and behavioral outcomes at a general level (Hamari et al. 2014; Koivisto and Hamari 2019), but this framework has yet to be adequately exemplified in the context of marketing. Besides the broad concept, existing studies in the gamification context sporadically cover different aspects. For example, studies relate to loyalty (e.g., Wu and Chien 2015), brand attitude (e.g., Yang et al. 2017), and purchase intention (e.g., Poolperm and Thongmak 2021), to name a few. A more granular understanding of existing studies can provide researchers with ideas for future studies and help marketers develop effective strategies. However, to our knowledge, the literature on gamification studies related to marketing performance has not yet been synthesized from

perspectives such as the commonly employed research methods, popularly used gamification forms, regularly investigated study contexts, and frequently studied marketing performance dimensions.

To address this gap, we aim to review the current gamification literature related to marketing management and answer the research questions: (1) “*How have different gamification forms been studied, and in what marketing contexts?*” and (2) “*How does gamification influence different marketing performance evaluation objects?*” By following the PRISMA literature review process, this study systematically reviewed 93 papers consisting of 111 empirical studies.

Background

Gamification

Despite games originally being designed primarily for entertainment, researchers have also found that games can motivate individuals to develop skills (Subrahmanyam and Greenfield 1994) and to assist behavior change (De Freitas 2006) as games can bring fun to individuals and improve their engagement. Based on these potentials, other systems that use game elements in non-game contexts have sprung up in the field of marketing in the last decade, and the term of gamification was coined (Deterding et al. 2011; Hamari et al. 2014). Gamification can afford similar motivations as seen in games by following the theoretical frameworks based on the Stimulus-Organism-Response (SOR) Model drawn from IS literature – i.e., game mechanisms (stimulus) can lead to psychological outcomes and further lead to behavioral outcomes (Koivisto and Hamari 2019). As an inclusive term, it has become an umbrella concept that encompasses other relevant areas like serious games (games with purposes of learning) and persuasive technologies (Hamari 2019; Koivisto and Hamari 2019). Nowadays, a more holistic definition of gamification is proposed by Hamari (2019), which refers to any technologies or practices that aim to provide individuals with positive gameful experiences, thus generating psychological and behavioral outcomes.

Affordance is a commonly used practice, which refers to game design elements with an aim to invoke gameful experiences and further support users’ value creation (Hamari 2013; Hamari et al. 2014; Koivisto and Hamari 2019). Prior research in the IS literature has shown that most of the affordances can be divided into three categories: 1) the achievement/progression-oriented group which aims at enhancing individuals’ accomplishment feelings through mechanisms such as points and badges; 2) the social-oriented group that enables individuals’ social interaction through mechanisms such as cooperation and competition; 3) the immersion-oriented group that aims to facilitate individuals’ feelings of immersion, through the utilization of, e.g., avatars and storytelling (Koivisto and Hamari 2019; Xi and Hamari 2019).

In the realm of business and marketing, gamification often takes the form of standalone games, particularly in advertising. Unlike in-game advertising which involves adding advertising content to video games, advergaming are specific games designed to deliver marketing content and achieve advertising objectives. Previous research on advergaming has shown that they have great potential to enhance companies’ marketing performance, such as by reinforcing brand recognition (Arce-Lopera et al. 2018), impacting consumers’ behaviors (Chen 2017), and optimizing brand attitude (Yang et al. 2017).

Marketing Performance

Marketing performance presents the bond or connections between companies’ marketing activities and their business performance (Clark and Ambler 2001). It is critical for companies to measure their marketing performance because this type of measurement is positively associated with firm performance and is helpful for firms to outperform their competitors (Mintz and Currim 2013; O’Sullivan and Abela 2007).

There are different perspectives on understanding marketing performance, and companies adopt different marketing performance indicators (evaluation objects) according to their business contexts. The measurement of marketing productivity and brand equity are two main research streams in the current literature (e.g., Järvinen and Karjaluoto 2015; O’Sullivan and Abela 2007). Marketing productivity stands for the extended value to shareholders that comes from marketing activities (Rust et al. 2004), which in turn affects companies’ financial performance. Brand equity represents the special preference and response that a product or service obtains from its brand identification (Datta et al. 2017). In other words, it refers to the power of brands to dominate consumers’ minds and hearts (Keller and Swaminathan 2019), i.e., how consumers think and feel about the brand.

As important shareholders, consumers usually play an essential role in measuring marketing performance because they are the ultimate audience of marketing strategies. Thus, this study focuses on evaluating consumer-facing marketing activities that have the potential to generate economically measurable indicators of marketing performance, such as purchase intention (Poolperm and Thongmak 2021), loyalty (Bauer et al. 2020), and brand attitude (Yang et al. 2017). By doing so, three of the most commonly used marketing objects of exchange that connect buyers and sellers (Finch and Geiger 2010) are selected; namely products, services and brands. These three objects form the core of the company's profit, which itself forms most companies' primary objective (Järvinen and Karjaluoto 2015).

Methodology

This study follows the Reporting Items for Preferred Systematic Reviews and Meta-Analyses (PRISMA) statement of the systematic literature review and records screen process (Page et al. 2021), which includes refining the research questions or objectives, defining the search scope, searching for literature in the selected database, screening the identified records and removing unqualified records, extracting data and synthesizing the literature, presenting the results for main outcomes, generating an interpretation of the results and implications, and identifying limitations.

The literature search was conducted on 23/09/2022 and yielded 3298 records from the Scopus database. The Scopus database was selected because it can provide a comprehensive overview of the worldwide research output from the fields of science, technology, medicine, social science, and the arts and humanities. The following search string was applied: (TITLE-ABS-KEY (gamif*) AND TITLE-ABS-KEY (market* OR consum* OR customer* OR purchas* OR buy* OR commerce OR sale OR sell* OR business OR shop* OR service* OR product* OR promotion* OR advert* OR brand*)) OR TITLE-ABS-KEY (advergence) AND (LIMIT-TO (DOCTYPE,"cp") OR LIMIT-TO (DOCTYPE,"ar") OR LIMIT-TO (DOCTYPE,"ch")) AND (LIMIT-TO (LANGUAGE,"English")). The keyword "gamif*" was chosen because it stands for all possible forms derived from the root, and includes "gamification" and "gamify" in all forms. The keywords "market* OR consum* OR customer* OR purchas* OR buy* OR commerce OR sale OR sell* OR business OR shop* OR service* OR product* OR promotion* OR advert* OR brand* OR advergence" were used to include literature related to the potential marketing outcomes. The search terms were used for title-abstract-keywords, and the search was limited to peer-reviewed papers in journals, conferences, and book chapters.

To manage, organize, and categorize the search results, all the records were collected in Microsoft Excel and Zotero reference management software. Figure 1 presents the seven steps of the literature review process: 1) 3298 papers were identified; 2) duplicate studies identified by the reference management software were deleted; 3) papers that did not thematically match with either gamification or marketing by reading titles, keywords and abstracts were omitted, such as papers only mentioning gamification as an example; 4) papers were removed if they did not seem to address both gamification and marketing, for example production-related papers where "market" appeared on a general level; 5) papers that did not hold relevance for the field of marketing performance defined by this study were removed, such as papers that only focused on engagement (Hollebeek et al. 2021) and experience (Liu and Tanaka 2018); 6) 20 other papers were deleted, where 7 papers were still inaccessible after contacting the authors through academic social network tools like ResearchGate to request the full version, 2 were not full papers, and 11 were literature review papers; 7) 4 records were added by doing forward and backward checks. In the end, 93 papers were identified as papers that qualified for being reviewed¹.

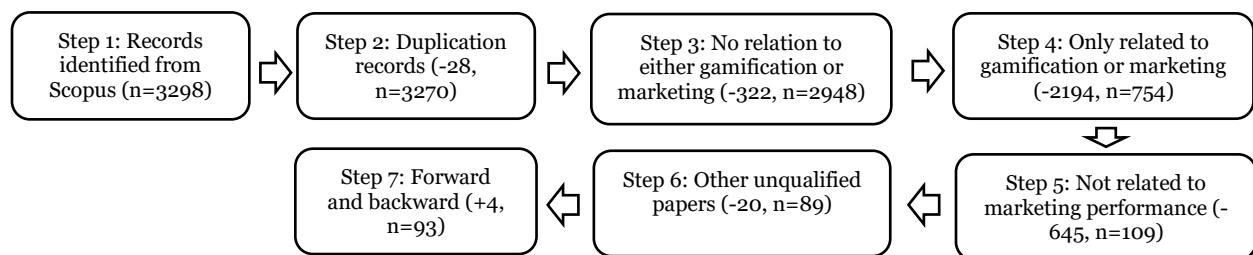


Figure 1. Literature Review Process

¹ [Reference list.docx](#)

Findings and Discussion

The 93 reviewed papers consisted of 74 journal articles, 15 conference papers, and 4 book chapters (Figure 2). More than half of the reviewed papers (n=57) were published between 2020 to 2022 which indicates a blooming period for gamification-marketing performance literature. The reason behind this phenomenon could be that gamified marketing strategies have become more and more acceptable in both academic and business fields. Furthermore, these 93 papers consist of 116 empirical studies; 111 of which fall inside the scope of the presented study, and five fall outside such as studies that focus on understanding engagement without any further analysis of the aspects related to marketing performance as defined in this study.

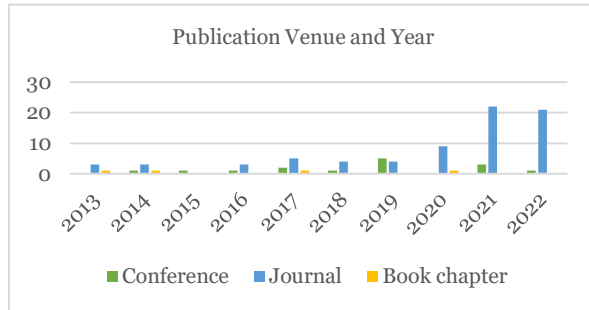


Figure 2. Number of Publications

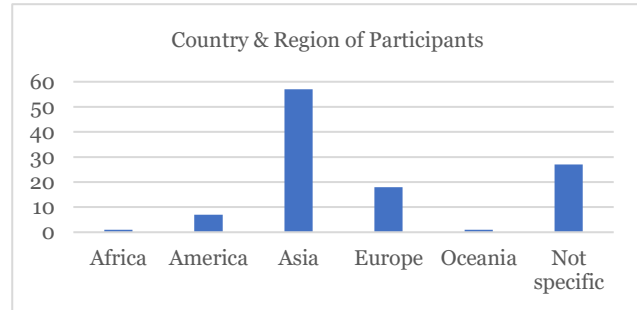


Figure 3. Country and Region of Participants

Research Methods

The data collected by the reviewed studies (n=111) cover various countries and regions, especially countries in Asia, like China, India, and Indonesia (Figure 3). The popularity of the research methods identified among the selected studies differs from that of other fields (Table 1). This current study shows that survey-based methods (n=47) and experiments (n=46) have a similar use. However, Koivisto and Hamari (2019) demonstrate that the frequency of survey-based methods is more than double that of experiments. An explanation for this may be that gamified marketing strategies are still in the early stages of development, which requires experiments to build novel scenarios and ideal data collection environments. The usage of mixed methods (n=6) and field studies (n=6) are tied. Longitudinal studies (n=3), interviews (n=2), and case studies (n=1) are relatively less adopted compared with other methods.

Research method	Number of studies	Research method	Number of studies
Survey based	47	Longitudinal study	3
Experiment	46	Interview	2
Mixed method	6	Case study	1
Field study	6	Total	111

Table 1. Research Methods

Forms of Gamification

Summarizing the existing gamification forms related to marketing can give marketers a checklist for developing strategies and help researchers to quickly find which gamification forms have been studied in previous marketing literature. This study categorizes the gamification forms used in the selected studies (n=111) into three types: affordances (n=64), video games (advergames, n=42), and extended reality (XR) systems (n=4) which encompasses augmented reality (AR), virtual reality (VR), and mixed reality (MR). The XR system is listed separately because it not only covers specific affordances and advergames, but can also be applied to standalone systems like displays. The number of XR-related studies is significantly less than the other two groups because the use of XR in marketing strategies is still in its infancy (Xi and Hamari 2021). There is also one study that did not mention what gamification form was used (Lounis et al. 2013). The next two sub-sections aim to explain the affordances and advergames identified in the selected studies.

Gamification Affordances

Most of the affordances can be grouped into achievement-oriented, social-oriented, and immersion-oriented groups (Koivisto and Hamari 2019; Xi and Hamari 2020). Among the selected studies (n=111), we

identified 36 different types of affordances. The achievement-oriented group is the most widely used, followed by the immersion-oriented and social-oriented groups. Uncategorized affordances are counted in miscellaneous, and 12 studies did not specify which affordances were used (Table 2).

This study finds that the popularity of affordances for marketing purposes is slightly different from other fields. Our analysis reveals a new set of frequently used affordances among the achievement-oriented group, which includes rewards, prizes, and redeemable points (n=18). These affordances supplement those commonly reported in previous studies like points/scoring, challenges/goals, and leaderboards/rankings (Hamari et al. 2014; Koivisto and Hamari 2019). One possible explanation for the difference is that companies intend to use rewards like coupons to increase consumer purchase intention, which may not be suitable for other contexts. The immersion-oriented group shows a strong preference for avatar/character/virtual identity/profile (n=10) and narrative/storytelling (n=9). The social-oriented group tends to use competition/comparison (n=10) and social networking features/social connection (n=10) more frequently. The findings of these two groups align with Koivisto and Hamari's (2019) study.

Achievement	Count	Immersion	Count	Social	Count	Miscellaneous	Count
Points, scores, XP	19	Avatars, characters, virtual identity, profile	10	Competition, comparison	10	Log in, sign in, check in	5
Challenges, tasks, goals, purposes	18	Narrative, storytelling	9	Social networking features, social connection	10	Gamified money (red packet)	3
Leaderboards, rankings, standings	18	Customization, personalization	6	Approval of others, social interaction	6	Location data	3
Rewards (e.g., discount), prizes (e.g., virtual goods), redeemable points	18	Empowerment	1	Cooperation, teams	6	Virtual pets	2
Badges, achievements, medals, trophies	17	Ownership	1	Sharing	3	Virtual worlds	1
Progress, status bars, staging	11	Self-expression	1			Animated teasers	1
Performance feedbacks, graphs, tracking data	11					Notifications	1
Virtual currency/coins	7					Reward schedule	1
Quizzes, puzzles	6					Virtual trees or fruits	1
Levels	5					Scratch cards	1
Prize raffle	2					Search	1
Awards	1					Unclear	12
Memberships (VIP users)	1						
Countdowns	1						

Table 2. Affordances Used in the Selected Studies

Advergames

Among the selected studies (n=111), 42 investigated advergames, and four studies applied two different advergames each. Therefore, 46 advergames are identified and classified into nine basic game genres (Table 3) (Arsenault 2009; Statista 2022a). The most popular genre is racing (n=11), which includes racing competitions like biking and driving due to many studies having been conducted for cars or bikes (e.g., Müller-Stewens et al. 2017). This is followed by the simulation genre (n=9) that intends to simulate real-world activities. The action genre (n=8) covers various physical challenge games like fighting and platform. Sports (simulate the practice of the sports, n=3) and strategy (emphasize thinking and planning to win the game, n=3) genres have the same popularity. Next are the puzzle (n=2) and role-playing (control the action of characters, n=2) genres. Adventure (exploration with an interactive story) and shooter genres only appeared once. Six studies did not mention what kind of games were investigated. Furthermore, we find that the advergame context might not match with particular product characteristics.

Game genre	Number of studies	Game genre	Number of studies
Racing	11	Role-playing	2
Simulation	9	Adventure	1
Action	8	Shooter	1
Sports	3	Unclear	6
Strategy	3	Total	46
Puzzle	2		

Table 3. Advergame Genres

Industries and Gamification Forms

This section provides an overview of gamified industries and the varied gamification forms utilized within them. The findings indicate that gamification's popularity differs across business contexts (Table 4). Overall, the selected studies (n=111) can be allocated to two major sectors: 1) the service sector (n=86) which includes sales, entertainment and leisure, asset management, hospitality, transport, and others; 2) the information sector (n=6) which is composed of publishing and mass media and education. These contexts are all customer-centric and conform to the attribute of gamification, i.e., human-technology interaction.

Industry	Context	Affordances	AdvergAMES	XR system	Not specific	Grand Total
Sales (n=48)	Online shopping platforms	16	2	1		19
	Food and drink	1	12			13
	Car manufacturer	1	3			4
	Offline store	4				4
	Bookstore	3				3
	Apparel	1	1			2
	Alcohol	1				1
	Fast moving consumer goods				1	1
	Furniture	1				1
Entertainment and leisure (n=11)	Fitness	7				7
	Sports products	1	2			3
	Bike		1			1
Asset management (n=10)	Mobile payment	2	2			4
	Bank	3				3
	Digital currency	2				2
	Credit card		1			1
Hospitality (n=4)	Coffee shop	2				2
	Restaurant		1			1
	Bakery		1			1
Transport (n=1)	Transportation services	1				1
Others (n=12)	Premium services (memberships)	4				4
	Tourism	3	1			4
	Sustainability		1	1		2
	Campus map			1		1
	Sharing bike	1				1
Publishing and Mass media (n=5)	Online community	2				2
	Audio-visual	1	1			2
	Instagram game filter			1		1
Education (n=1)	Language learning	1				1
Unclear (n=19)	Unclear	6	13			19
	Grand Total	64	42	4	1	111

Table 4. Gamified Industries in the Selected Studies

The service sector is also known as the tertiary sector of the economy. This study finds that “sales” (n=48) is the most gamified industry, which refers to regular product sales. Online shopping (n=19) through e-commerce platforms like Amazon and Alibaba received the most attention, especially for using affordances (n=16, e.g., Wu and Santana 2022; Ye et al. 2019) for the reason that gamification techniques can help platforms to engage consumers during promotions. Conversely, in another well-studied context of food and drink (n=13), advergAMES were the preferred approach (n=12, e.g., Sreejesh et al., 2021; Yang et al., 2017) due to the ease of integrating food products like chips and cookies into game content, compared to affordances. However, only one XR system-related study is identified in this context (Lau and Ki 2021), which implies XR systems require more attention in the context of marketing. The second most gamified industry is “entertainment and leisure” (n=11). Within this industry, fitness applications with embedded affordances have been analyzed the most (n=7, e.g., Jang et al. 2018) because fitness contexts can arouse consumers' needs for competence, autonomy and relatedness, which can be satisfied by using affordances (Bitrián et al. 2021). In contrast, sports products tend to favor advergAMES (Müller-Stewens et al., 2017), potentially due to the popularity of sports as a game genre (Statista, 2022a). The “asset management” industry (n=10) is the next most prominent as mobile payment applications are gaining increasing attention in our daily lives (n=4, e.g., Zhou et al. 2022), and studies about affordances (n=2) and advergAMES (n=2) are equally popular.

The information sector is also called the quaternary sector of the economy. “Publishing and mass media” is explored most within this sector (n=5), such as online communities that use affordances (Xi and Hamari 2019, 2020) because gamification has abilities to motivate consumers to interact with each other. Another industry is “education” (n=1). Interestingly, while gamification techniques are widely used in the education field, it seems that the existing educational studies mostly examine topics other than marketing performance, and only one study is identified within our scope (Alvi 2022).

Marketing Performance Indicators

Having an overview of the marketing performance indicators examined in gamification literature can help marketers develop performance metrics, and researchers design research models. According to the marketing objects (products, services, and brands) chosen by this study, we identify six performance indicators regarding consumers' psychological and behavioral outcomes, which can help companies to measure the effectiveness of their gamified marketing strategies (Table 5): awareness (n=13), attachment (n=5), attitude (n=24), intention (n=60), loyalty (n=26), and equity (n=3). Awareness refers to consumers' abilities to recognize or recall a brand, which covers brand recognition and recall (Keller 1993). Thus, brand recognition, memory, and awareness itself can be allocated to this group. Attachment presents the bond between the brand and the self (Park et al. 2010), which covers self-brand connection and brand attachment. Attitude means the overall judgment and evaluation of all kinds of brand information (Keller 2003). Intention presents whether consumers want to buy or consume a product or service. Loyalty implies a commitment to repeat purchasing a product, service, or brand (Oliver 1999). Equity generally presents consumers' thoughts and feelings about the brand (Mizik and Jacobson 2008). Brand equity is listed separately from the other brand-related indicators due to some studies considering brand equity to cover other indicators like awareness (e.g., Xi and Hamari 2019), but a few studies mentioned it at a general level.

Objects	Awareness (n=13)	Attachment (n=5)	Attitude (n=24)	Intention (n=60)	Loyalty (n=26)	Equity (n=3)
Products				Purchase intention	Re-purchase intention	
Services				Intention to use	Service loyalty	
Brands	Brand recognition, memory, awareness	Brand attachment, self-brand connection	Brand attitude		Brand commitment, brand loyalty	Brand equity

Table 5. Marketing Performance Indicators

Future Agenda

This study synthesizes the extant literature regarding gamification and marketing performance according to adopted research methods, investigated gamification affordances and types of advergames, six indicators of marketing performance, as well as applied industries. Five different research agenda points in terms of methods and themes are offered, based on the synthesis of the findings.

Agenda 1: More empirical research is required to examine the long-term impact of gamification on marketing performance. The majority of extant studies either revealed consumers' immediate response to gamification based on experiments or self-reported general experience after interacting with gamification systems over a certain period of time by using surveys. Such investigations neither show whether gamification can achieve long-term and ultimate marketing objectives, nor do they describe how the marketing performance would change (e.g., grow, decline, stable) as consumers' experiences and responses are dynamic (Hamari et al. 2014; Koivisto and Hamari 2019). Thus, future studies can collect longitudinal data to explore gamification's long-term benefits (e.g., Xi and Hamari 2019).

Agenda 2: Considering cultural factors (beliefs, values, religions) when examining the role of gamification in consumer experiences. The literature review reveals that the majority of studies were conducted among consumers in Asian countries such as China, Japan and South Korea, which are heavily influenced by Confucianism and Taoism. These belief systems emphasize social and family hierarchy and balance, respectively. There is a reasonable belief that the findings from these studies might not be applicable to consumers influenced by Western culture. In addition, the different dimensions of cultural differences (see Hofstede's cultural dimensions theory, Hofstede, 1984) might also lead to different perceptions of gamification mechanisms regarding their importance and motivational effects.

Agenda 3: Investigating the gameful experience facilitated by cutting-edge technologies like metaverse and artificial intelligence (AI) through the lens of gamification. The use of emerging technologies is rapidly expanding, such as in the projected number of AR device users being estimated to reach 1.73 billion in 2024, more than double the figure in 2021 (Statista, 2022b). These technologies also offer the potential for more personalized and intelligent gamification experiences, such as integrating AI into gamification. Future research can explore whether AI-based gamification leads to greater marketing performance effectiveness when compared to traditional methods.

Agenda 4: Exploring the role of gamification in facilitating marketing and business towards sustainable development goals. Limited studies focus on using gamification to improve the intention to use sustainable-related services or brands (Table 4), even though this context is of global concern. Future research can explore the impact of gamification on improving consumers' purchase intentions toward green products, enhancing environmentally friendly and pro-social behavior, and reducing resource waste and carbon footprint in consumption.

Agenda 5: Performing more granular analysis on the effectiveness of gamification towards specific marketing performance indicators, as well as other boundary conditions. 36 gamification affordances and nine advergame genres are identified in this current study. Future studies should empirically examine the reasonable hypotheses that different forms of gamification may have varying impacts on the six aspects of marketing performance, as previously suggested (e.g., Yang et al. 2017) – for example, assessing whether using avatars can bring more purchase intention than using badges.

Conclusion

This literature review has considerable theoretical contributions and practical implications by deepening the understanding of motivational and persuasive IS. Following the PRISMA process, we synthesized the current literature on gamification in the marketing context with the guidance of its theoretical framework. Specifically, the use of game mechanisms on marketing performance indicators in various business contexts. The findings highlight several key points: 1) Survey-based and experimental methods are the most commonly adopted research methods. 2) A new set of affordances that are particularly used in the marketing context is revealed, including rewards, prizes, and incentives, and a table of nine advergame genres is presented. 3) The popularity of different gamification forms varies within different business contexts, and a table summarizing this information is provided. 4) Six types of marketing performance indicators related to consumer-facing marketing activities in the current gamification literature are identified. By reading this current study, marketers can quickly gain an understanding of how gamification is used in the context of marketing, discover suitable forms and elements to develop their gamified marketing strategies, as well as to design marketing performance metrics with appropriate indicators to measure the effectiveness of adopted strategies.

Even though this study follows the PRISMA procedure to ensure the quality of the review work, there are still a few limitations that should be noted. Scopus is considered to be the largest database of peer-reviewed literature, and was adopted by this study for the literature search. However, some relevant and important studies might be neglected due to the single database. Also, the reviewed papers are in English, but studies in other languages might also provide different insights. Additionally, further aspects should be taken into consideration, such as the types of moderators and mediators analyzed in the existing literature, as well as potential ethical concerns such as addiction, undesired competition, and off-task behavior.

Acknowledgments

This work has been supported by the KAUTE Foundation under Grant No. 20200531 (VIRTUMER); the Foundation for Economic Education under Grant No. 210301 (GAMETH); the Academy of Finland Flagship Programme under Grant No. 337653 (UNITE).

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