

TECHNOLOGY STAKEHOLDERS' PERCEPTIONS ON THE APPLICATION OF
GAMIFICATION IN THE CONTACT CENTER: A THEMATIC REVIEW OF THE
LITERATURE

by

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Technology stakeholders' perceptions on the application of gamification in the contact center: A thematic review of the literature

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Abstract

This thematic literature review examines technology stakeholders' perceptions regarding gamification use in contact centers. The study identifies and analyzes existing literature, drawing on various academic research sources, industry articles, and stakeholder opinions. The review highlights the potential benefits and challenges of gamification in the contact center and as a training utility while exploring the perspectives of different stakeholders, including managers and agents. The findings suggest that while gamification can improve employee engagement, performance, and customer satisfaction, it poses challenges, such as potential ethical concerns and the need for careful design and implementation. Overall, the review comprehensively analyzes the current research on gamification in contact centers and highlights critical areas for future research.

Keywords: gamification, technology stakeholders, gamified training, call, and contact center

Introduction

The idiom 'gamification' was initially devised by a British computer programmer, Nick Pelling, in 2002. Shpakova et al. (2019, as cited in Pelling, 2011) define gamification as "applying game-like accelerated user interface design to make electronic transactions both enjoyable and fast" (p.185). Gamification, as a tool, is being successfully applied throughout a range of business industries to enhance employee and consumer engagement, lower employee attrition, boost productivity, improve training, and increase revenue. Industry leaders are often tasked with improving the engagement levels between employees and their customers (Robson et al., 2016a). These interactions are a primary concern for organizations as they rely on performance outcome improvements by applying gamification in the contact center.

The distinction between a contact center and its predecessor call center differentiates among each solution's channels. For example, call centers depend on legacy voice phone systems, whereas contact centers revolve around the customer and utilize various omnichannel types of (often digital) media. These methods of "contact" usually comprise chat, email, SMS, social media, bots, and voice used by consumers to connect to businesses. According to Frost & Sullivan's 2015 report by Lee (2020), omnichannel is characterized as "seamless and effortless, high-quality customer experiences that occur within and between contact channels" (p.39). Driving the transformation from call to contact center is digital innovation and customer engagement.

Problem statement

The literature indicates that gamification can increase stakeholder engagement when appropriately planned and implemented. However, qualitative investigations are required to reveal how various gamified elements fit into different contact center contexts. Therefore, this qualitative study investigates how stakeholders

perceive the application of gamified technology and the deficiencies in training development within a contact center framework.

Purpose of the Study

The study intends to examine the perceptions of gamification in the contact center from stakeholders and as a training utility.

Research question

Answers to the following research question will be sought to fulfill this overall goal:

RQ: What recurring themes can be identified from current literature underscoring stakeholders' perceptions concerning the application of gamification in the contact center and as a catalyst to facilitate training?

Literature Review

Hamari et al. (2014) state that gamification employs technology and processes to modify behavior and attitudes. However, game design features within gamified systems cannot segregate the "human" element; as McGonigal (2011) points out that these elements encompass strategic thinking, motivation, engagement, and a sense of purpose (p.21). Typically, a gamified application will have a substantial chance to encourage involvement and engagement if users feel interested in something enjoyable (Grenbaum, 2011). Moreover, we can use the amount of time people spend on a particular task to gauge their level of engagement, which may vary depending on user interactions (Zichermann & Cunningham, 2011). However, motivation, fueled by physiological and emotional demands, such as proficiency, competence, and affiliation, is frequently linked to engagement (Rigby, 2015). When these game-like techniques are applied, they can motivate customers, employees, or students to perform in a particular way. Gamification as a motivational strategy encourages competition and provides practical milestones, tapping into our competitive nature and drive for success. Considered a tremendously potent instrument with great potential, matching psychological needs to elements of game design that immediately express the outcome of a player's actions can lead to a euphoria of competence (Sailer et al., 2017).

Correspondingly, Fischer (2017) underlined that gamification offers game-like logic designed to increase corporate productivity. Numerous consumer markets employ gamification through business websites, points, leaderboards, and incentives (Huotari & Hamari, 2017). Successfully used gamification techniques can enhance customer engagement and delineate distinct types of employees and customers who act as 'players' during gamified interactions. Gupta and Gomati (2017) analyzed how gamification changes human behavior by implementing game activities to increase employee engagement. Incentivizing through gamification offers awards and badges to encourage employees, improve productivity, and foster a better working atmosphere (Prasad et al., 2019). Researchers consider a system "gamified" when it employs game-like features in a non-game setting to modify participants' behavior (Herzig et al., 2015).

Considering this, a company could leverage gamification to balance meaningful goals and people's needs within an organization. Moreover, gamification can be used as a catalyst to facilitate a collaborative effort, engaging contributors in the company, such as stakeholders, partners, and employees, to interact (Nacke & Deterding, 2017). However, this demonstrates that the application context affects gamification as well. For example, Seaborn and Fels (2015) observed that gamification is ubiquitous in various fields, such as education, health training, self-management, community engagement, innovation, culture, employee engagement, marketing, and crowdsourcing. It is critical when considering the specific framework and goals. Thus, examining gamification from the stakeholders' perspective can highlight disparate views and implications on training that are not apparent in the organization.

Methodology

Essential articles involving studies on gamification's use and impact were examined and assessed with a narrative review (Jones, 2004). From the key articles in Table 1, forward and backward citation searching was used to find many articles from industry-related content. The date range constraints for key articles require that all studies are from the past 10 to 15 years of eligibility. Furthermore, by skimming the titles and abstracts of articles with empirical data or literature reviews found through searches in GALILEO, Google Scholar, SAGE Journals, and IACIS journals with the terms “gamification,” “call/contact center,” and “gamified training.” The abstract text had to meet this researcher's criteria for relevance to be included. Finally, the author utilized a constant comparison method to curate a theme matrix documenting the analysis, as Glaser and Strauss (1967) suggest that studies can be conducted solely with documents without using a priori hypotheses to identify themes. This analytical procedure entailed finding, selecting, appraising, and synthesizing data contained in article studies, then organizing the relevant data into major themes and categories, specifically through content analysis (Labuschagne, 2003).

Data Analysis

A thematic analysis was utilized to show the relevance and comparison of the data. This analytical procedure entails finding, selecting, evaluating, comparing, and synthesizing data in the researched articles, then organizing the data into major themes and categories, including standard codes. The thematic narrative review was applied to 20 key articles and 67 on-topic articles. As presented in Table 1, the contributions from the key articles were identified and grouped into three emerging themes, accompanied by a set that provides a theoretical framework and methodologies for all themes. In addition, a table legend defining abbreviations and acronyms is included. The three themes that emerged were: (1) Examining management stakeholders’ observations on the application of gamification, (2) Navigating agent stakeholders’ user experiences and perceptions of gamification, and (3) Exploring the influences and effectiveness that gamified training imposes.

TABLE 1: Theme, Reference, and Main Contribution of Key Articles

Theme	Authors (Year)	Main Contribution
1	Hammedi, Leclercq, Poncin, and Alkire (2021)	A mixed-method interview of FLEs and their managers
1	Algashami, Vuillier, Alrobai, Phalp, and Ali (2019)	Qualitative research on the lack of gamification risk identification and management strategies
1	Leclercq, Hammedi, and Poncin (2018)	This research examines the losing phenomenon impact on customers in a gamified setting
1	Wanick and Bui (2019)	This analysis identifies and contextualizes gamification in the field of management
1	Leclercq, Poncin, Hammedi, Kullak, and Hollebeek (2020)	A study of how gamification affects member-perceived distributive and procedural justice
1	Ciuchita, Heller, Köcher, Köcher, Leclercq, Sidaoui, and Stead (2022)	The study aims to unite gamification literature and highlight its importance in service research
1	Lucassen, and Jansen (2014)	A literature review examining the expected adoption rate of gamification
1	Ulmer, Braun, Cheng, Dowey and Wollert (2020)	The research reviews enterprise gamification tactics

1	Ahmadi (2020)	A comprehensive understanding of the capabilities of gamification in enhancing business outcomes
2	Lu and Ho (2020)	The study analyzes how game mechanics impact users' gaming behavior and promote brand loyalty
2	Rapp (2015)	A qualitative study designed to capture UX and intrinsic motivation within gamified systems
2	Huschens, Rothlauf, and Rothe (2019)	Empirical research examining the influences and perceived pressure that gamification induces
2	Makanawala, Godara, Goldwasser, and Le (2013)	Analysis of how gamification has increased CSA productivity, morale, and engagement at work
2	Witt, Scheiner, and Robra-Bissantz (2011)	A quantitative case study on gamification's social psychology indicators and derives implications
3	Larson (2020)	A literature review that analyzes gamification training in the workplace
3	Hamza and Tóvölgyi (2023)	A mixed method case study measuring the effects of gamified E-learning
3	Armstrong and Landers (2018)	This research paper focuses on the scientific understanding of gamified employee training and the effectiveness of gamified learning while dispelling misconceptions
4	Alsawaier (2019)	A study of methodological themes relevant to gamification
4	Mullins and Sabherwal (2020)	Research paper on cognitive gamification framework
4	Zainuddin, Chu, Shujahat, and Perera (2020)	Literature review examining the theoretical foundations of gamification

Note. FLE = Frontline Employee; UX = User Experience; CSA = Customer Service Agent; E-learning = Electronic learning is the delivery of learning and training through digital resources; 1 = Examining management stakeholders' observations on the application of gamification; 2 = Navigating agent stakeholders' user experiences and perceptions of gamification; 3 = Exploring the influences and effectiveness that gamified training imposes; 4 = Theoretical framework and methodologies

Results

Theme 1: Examining Management Stakeholders' Observations on the Application of Gamification

This first theme was derived from nine research studies that assess business stakeholders' perspectives on gamification. It showcases their experiences, recommendations, and factors influencing employee behavior.

The first study (Hammedi et al., 2021) focuses on interviews with frontline employees (FLEs) and their managing supervisors. The authors utilized a mixed-method approach to offer managerial recommendations for enhancing the workplace experience of FLEs. Consequently, the results warn managers to exercise caution when implementing gamified technologies. Employees can perceive blind use or broad implementation of these systems as a way for managers to control performance using goals and rewards. Finding a balance between engaging employees and minimizing workplace stress is crucial for managers, as no universal solution works for everyone. In a complementary study (Lucassen & Jansen, 2014), researchers alert that inflating a sense of urgency and importance toward participating in gamification can produce a damaging effect. According to business stakeholders, gamification is a valuable tool for improving business practices, but it must be executed effectively and tailored to the target audience to be effective.

Algashami et al. (2019) investigate the potential for gamification-associated workplace risks in a teamwork environment lacking methods to identify and mitigate potential negative impacts. The research yields a taxonomy of risks, risk factors, and risk management tactics to maximize the benefits of gamification to achieve business goals. However, manager interviews reveal unforeseen consequences with gamification reporting metrics, exposing some supervisors and their teams as top performers, attracting undesired attention from peers, and increasing responsibilities. In furtherance of negativity, Leclercq et al. (2018) assess the impacts of agents losing a gamified challenge, examining whether winning or losing a game diminishes the advantages of gamification or negatively impacts customer engagement. The results indicate that the simultaneous use of cooperation and competition mechanics in a workplace ecosystem can detract from the overall benefits of gamification in terms of employee experience and engagement.

Participant behavior permeates the texts in another study (Leclercq et al., 2020). The authors highlight how gamification affects participants' perceived distribution and procedural fairness by influencing their behavior. In addition, incorporating uncertainty into gamification is essential to generating enjoyable and engaging experiences, especially for those who have historically had little involvement. The findings encourage managers who foster more community-oriented behaviors to remain transparent and provide information on gamification methods to manage behavioral patterns. Lastly, stakeholder behavior remains a focal point in a study by Ahmadi (2020). The adoption of gamification tactics by managers in private and public sectors has become a widespread practice to shape stakeholder behavior. Through gamification, organizational management teams encourage employees toward desirable behaviors with better participation in achieving company objectives, cooperation, and knowledge sharing. Moreover, its adaptable and imaginative nature makes it a promising tool for transforming and enhancing various areas of management and businesses.

Two additional studies which helped derive this theme are a systematic review analyzing the perceptions of gamification in disparate industry management areas. Both Wanick & Bui (2019) provide a contemporary and inclusive review of gamification applications, an essential mechanism in innovative management. Ulmer et al. (2020) identified the Self Determination Theory (SDT) as the most commonly used theory in Gamification frameworks. According to SDT, people require autonomy, competence, and relatedness to achieve self-motivation, well-being, and growth. Gamification implementation can influence people and provide insights through engagements. Lastly, Ciuchita et al. (2022) identify and categorize gamification functions for relevance and audit ethical management concerns about manipulating and exploiting user behavior across domains.

Theme 2: Navigating Agent Stakeholders' User Experiences and Perceptions of Gamification

With this theme, what surfaced as a common denominator that resonated across different study types and gamified environments were the psychological and workplace challenges that agent stakeholders endure within the context of gamification. Additionally, the user experience motivation factors stretch beyond the entertainment value and contact center business metrics, finding that stakeholder perceptions of gamification vary depending on the application and purpose. The preceding studies illustrate this second theme.

Lu & Ho (2020) found correlations between user-gamified behavior and consumer brand loyalty, suggesting that self-challenge, a byproduct of gamified interaction, directly affects product attitudes, continued use, and user enjoyment. In addition, the study illustrates that integrating game dynamics improves user experience and increases consumer engagement. Applying gamified tactics to a business strategy can eliminate many adverse effects on users, thus improving their involvement and enhancing consumer commitment practices. Rapp (2015) tracked the results of three gamified applications across varying industries in pursuit of heterogeneity of cases, recording participants' user experiences over a four-week session. The study produced a diary highlighting the results of each gamified application subcategory

and whether the participants noted progression or regression during the study's lifecycle. Participants' perceptions of using the gamified applications under examination found the application repetitive, boring, and seldom gratifying as their familiarity with the gamified features grew. The user experience pendulum pivoted from week one user assertions of being entertained and challenged to week four declarations of system manipulation and disregarding the services offered by the gamified application. Participant criticism was abundant, finding that a lack of variety and meaningful rewards resulted in the rapid decline.

Makanawala et al. (2013) explored customer service agents feeling stifled by monotonous tasks, reduced job satisfaction, declining staff morale, and high attrition within their ranks. This research presents concepts utilizing gamification components designed to boost employee engagement and make monotonous activities more enjoyable, resulting in more effective and efficient customer service agents. Additionally, the study investigates methods to enhance agents' output, motivation, and engagement while examining the challenges accompanying a gamified environment. Examples of these challenges manifest as; management stakeholders and potential customers may raise concerns with "games" in the enterprise, game elements becoming a distractor for agents, and agents prioritizing winning the competition over customer service objectives. However, selective game qualities and characteristics can be adapted to mitigate these challenges in business environments.

Witt et al. (2011) examined gamification competition's social psychology indicators and implications. The study leveraged a questionnaire through a survey, soliciting participants' perceptions of game mechanics meant to stimulate competition, namely game points, social points, and leaderboards. Data from the study underscores users' extrinsic and intrinsic motivations for competition, discovering that participants are a reward-driven collective that thrives on monetary and self-promotional incentives. Moreover, a participant's feedback stated, "gaining points made me happy" (p.11), a common respondent sentiment. These psychological motivators that resonate with users help identify mechanisms to enrich the efficacy of competing in gamification. Finally, Huschens et al. (2019) confirmed that providing a ranking boosts motivation, perceived pressure, and social comparison behavior within a gamified ecosystem. Significantly, the study discovered that the extent of an individual's social comparison habits could describe a large portion of the persuasive and pressuring effects as a catalyst to motivate, anchored in Self Determination Theory (SDT) (Ryan, 2009).

Theme 3: Exploring the Influences and Effectiveness that Gamified Training Imposes

Using gamification in training programs has garnered considerable attention in academic circles. Several studies have evaluated its impact on engagement, motivation, and curriculum retention as a pedagogical innovation (Buckley et al., 2017). These results emphasize that gamification can provide a more interactive and practical learning experience, leading to the more effective acquisition of new skills and knowledge. However, the effectiveness of gamified training may fluctuate based on numerous considerations, including the type of training and the target population. In comparison, some research has shown that gamification can be particularly useful in complex training and technical subjects, like software programming and medical procedures, or as a practical methodology for instruction (Manzano-León et al., 2022). At the same time, other studies suggest that it may be more beneficial for specific populations with unique learning needs and predilections. It is, therefore, essential to consider a training program's context, objectives, and audience before using gamification as a tool.

Using gamification in the workplace as a training mechanism is often concerning in some corporate settings. However, Larson (2020) uncovered numerous benefits for companies that adopt gamification in their training programs, such as improved workforce recruitment and retention, higher program acceptance rates, and enhanced work performance. Nevertheless, despite these benefits, many companies still need to be bold in incorporating gamification in their training strategies, citing various obstacles such as organizational

hierarchies, company culture, demographics, ethics, and previous failures. Gamification has positively impacted learners' motivation and engagement across cognitive, emotional, and social domains. For example, according to Mullins and Sabherwal (2020), the theory of the cognitive structure of emotions suggests that a stimulus leads to a thought, generating specific emotions. These influences are essential to the epistemological beliefs that drive learning and the theory that supports gamification in the workplace (Bauer et al., 2004).

Similarly, Hamza & Tóvölgyi (2023) analyzed the effectiveness of gamified E-learning at a Lebanese financial institution. The findings of this research echo Larson's (2020) study, underscoring the shared features that gamification in the workplace can impact. Gamification demonstrates its value in shaping employee behavior by creating a competitive atmosphere and engaging employees through knowledge-based platforms. Hamza & Tóvölgyi indicate a positive correlation between gamified E-learning implementation and employee engagement, emphasizing that after implementing gamification, approximately 65% of employees reported increased work engagement, and 67% reported increased job satisfaction (p.80). This improvement solidifies a positive association between the gamified E-learning process and employees' commitment and overall job satisfaction.

Lastly, Armstrong & Landers (2018) underline misconceptions about gamification in the context of training in the workplace and correct some common misapplied strategies pervasive within the gamified learning industry. This call to action focuses on how gamification has become progressively widespread as an employee training method while our scientific interpretation of gamified learning has developed concurrently. In many respects, gamification is much more results-oriented than general game design. Present gamification research has a heavier foundation in contemporary social sciences than game research (Landers et al., 2018). Gamification is often a catalyst for improving a training outcome when existing or traditional training is lower than effectiveness expectations. The research suggests that game elements should be selected based on existing scientifically supported alignment to the outcome of interest to improve outcomes.

Discussion and Implications

The narrative review answered the study's research question: *"What recurring themes can be identified from current literature underscoring stakeholders' perceptions concerning the application of gamification in the contact center and as a catalyst to facilitate training?"* The review confirmed that varying perceptions and subsequent themes are inherent to technology stakeholders as they struggle to reconcile the cognitive trade-offs fundamental to their adoption, application, training, and use of gamified systems. Additionally, there are encouraging reasons to emphasize both management and agent/user stakeholders' perceptions to improve the effectiveness of gamification in the contact center. This review extends our knowledge of the perceptions and motivations surrounding gamification and thus has implications for management, agents, gamified training, and future research.

Implications for Management

In prior studies, industry-leading organizations, such as Freshdesk (Robson et al., 2016b), Microsoft (Smith et al., 2015), and Deloitte (Dale, 2014a), successfully implemented gamification. However, despite the success, management stakeholders' perception of gamification can seem clouded. Evaluating supervisors' and business managers' observations of gamification in the contact center is essential to confirm its value proposition. It can improve user job satisfaction and engagement but, more importantly, clarify management's assessment. Moreover, contact centers are not immune from change; fluctuations in technology can significantly change how work is organized and accomplished (Browning, 2020; Heim & Peng, 2010). In 2012, Webb & Cantú (2013) led a Pew Research study to conclude, "Playing beats working; gamification will take off if the enjoyment and challenge of playing can be embedded in learning, work,

and commerce" (p.317). Literature on gamified contact centers has brought some optimism to the industry, with Shenoy et al. (2020a) reporting, from an interview with a Wipro senior director, that "gamification has played an essential role in enhancing employee engagement" (p.44). However, it is worth noting that gamification designed for entertainment does not guarantee achievement (Berkling & Thomas, 2013).

This review identifies that organizational management teams that leverage gamification techniques can motivate employees, enhance customer engagement, and increase productivity. Therefore, after post-examining management stakeholders' observations on gamification, a reasonable conclusion indicates that management generally has a positive perception. Though a sense of caution looms, as there is no one-size-fits-all solution, heightening implications for management as concerns about gamification can vary from manager to manager depending on individual experiences, organizational models, business, and circumstances.

Implications for Agents

This research highlights agent stakeholders' benefits and trepidation while participating in a gamified ecosystem. First, every organization's persistent challenge is motivating and engaging employees (Robson et al., 2015). According to Whittaker (2015), incorporating game-like elements into an enterprise can reduce detachment via intrinsic motivator drivers that cause users to engage with a system and eventually positively affect organizational outcomes. Consequently, mundane activities become more fun, productive, and fulfilling for the user, enhancing their work experience (Simpson & Jenkins, 2015). As a result, gamification benefits user engagement and experience, improves performance and user satisfaction, and increases the organizations' competitive advantage (Korn et al., 2015).

Gamification is more than just awarding points and prizes; it can be an invaluable instrument when performed well. It offers an alternative strategy for developing a nurturing environment that can increase people's drive, aptitude, and psychological capital, hence, their attempts to adjust behavior (Kinley & Ben-Her, 2015). A particular concern perception voiced by agent participants in Klasen's (2016) study highlighted whether the gamified program would be fairly administered instead of becoming a device for exerting favoritism. Some agent participants indicated that if a gamification approach is fundamentally flawed, the results could be counterproductive and negatively influence staff and the company. Similarly, Brigham (2015) asserted that some corporate settings are inappropriate for gamification. It is important to note that while gamification can have constructive implications for agent users, it is not a panacea; agents need a balance between company goals, satisfying game element rewards, and content that aligns with their customers.

Implications for Gamified Training

Based on this review, gamified training is prevalent throughout different industries. Gamification strategies are widespread across technology domains, including real-time performance, contact centers, sales, development groups, employee onboarding, and civic engagement (Shenoy et al., 2020b). Finding traction in customer service, online learning, and corporate training benefits higher education and assesses employee retention and satisfaction (Kanazawa, 2019). Likewise, game mechanics have permeated training, marketing, education, and wellness initiatives (Anderson & Rainie, 2012). Gamified training has allowed companies to reduce training time, save money, and get new employees orientated faster. Nonetheless, Landers (2019) acknowledged that while businesses attempt to capitalize on the popularity of gamification, they frequently err by introducing game-like aspects and accompanying lexicons without providing a framework for understanding and supporting the applications that make games fun.

Gamification in learning can increase employee information retention and reduce learning time by making it more enjoyable. However, gamification in the workplace has inevitably resulted in unanticipated effects (Callan et al., 2015), virtual rewards do not always result in increased engagement (Zainuddin et al., 2020), and people may resist new approaches like gamified systems due to a tendency to fear change (Petrosyan, 2015). In addition, businesses may face difficulties implementing gamification due to established hierarchies and organizational structures (Dale, 2014b). Therefore, organizational training departments should evaluate the trade-offs of gamification to ensure it serves the best interest of all technology stakeholders.

Conclusion

This thematic review offers a qualitative research analysis of the perceptions on applying gamification in the contact center and as a gamified training apparatus. Specifically, this literature review examines emerging themes curated from studies involving technology stakeholders' usage of gamified systems and the effects and implications of training in their workplace.

The thematic review reveals certain limitations that point toward potential avenues for future research. First and foremost, the search query method cannot guarantee comprehensiveness and freedom from bias. Earlier review studies recommended using a keyword list to identify pertinent articles, but the diverse terms employed to describe gamification could have improved the incorporation of all studies. Additionally, the current research focused primarily on a thematic literature review of gamification in call/contact centers. A formal analysis would be beneficial in determining the success rate and effectiveness of specific empirical research to gain a more inclusive understanding of gamification's impact on the global industry.

Critical questions that require careful consideration include: How will gamification and game mechanics benefit beyond the contact center boundaries? How will the ethical implications of gamification be addressed, particularly concerning issues such as manipulation and exploitation? How should gamification and related tools be implemented to improve business and training practices within the contact center? How will gamification's potential cultural and societal impacts be evaluated and addressed? Finally, how can correlational research be conducted to uncover accurate results when applying gamification strategies in call/contact centers and training?

This thematic review encompasses the implications for future research on gamification initiatives, including technology stakeholder perceptions, using gamification for organizational goals, and examining feedback from workplace research studies. Researchers should explore various areas to understand gamification's effectiveness, sustainability, and impact, particularly investigating the influence of cultural and societal factors and potential negative consequences. Additionally, the review highlights the need for more qualitative research, based in part on Alsawaier's (2019) Methodological review of gamification studies spanning 16 years, to explore gamification's fundamental principles and potential applications beyond correlation analysis. Finally, developing new theories and concepts to understand the role of gamification in motivating user behavior is suggested as a promising area for future research.

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