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Uncovering the dark side of gamification at work: Impacts on engagement and well-being☆

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ABSTRACT

Rethinking the workplace experience as a means for enhancing the well-being of frontline employees (FLEs) represents a key priority for services. The well-being of frontline employees leads to improved performance and better customer service, such that it enhances the firm's overall competitive advantage and revenue. Therefore, engagement-facilitating technologies that can increase FLEs' well-being, such as gamified work, hold promise in terms of their effects on job satisfaction and engagement. Using a mixed-method design, including in-depth interviews with FLEs and their managers, and two large field experiments, this research considers two key sectors in which FLEs are critical: retailing and telemarketing. The results highlight the negative impacts of gamified work on employee engagement and well-being, although the willingness of employees to participate in such gamified work moderates these negative impacts. By revealing how gamification affects FLEs' well-being, job engagement, and job satisfaction, this research provides actionable insights for managers.

1. Introduction

In recent years, there has been a rising interest in "well-being" research. Although originally developed as a result of the growing field of positive psychology (Simonton & Baumeister, 2005), well-being research is becoming central in a variety of disciplines, such as positive organizational behavior, humanistic management, and social innovation (Aksoy, Alkire, Choi, Kim, & Zhang, 2019; Avey, Luthans, Smith, & Palmer, 2010; Kabadayi et al., 2020; Simonton & Baumeister, 2005). This focus on "well-being" has triggered the development of the transformative service research (TSR) movement. Evolving at the intersection of transformative consumer research (TCR) and service research (Anderson et al., 2013), TSR "focuses on improving consumer and societal welfare through service" (Rosenbaum et al., 2011, p. 3) and advocates the essential goal of enhancing well-being for *everyone* (Anderson et al., 2013; Gustafsson et al., 2016).

Despite the relatively quick success of TSR in attracting service academics, the majority of the research focuses on customer well-being (Alkire et al., 2020). In 2015, Ostrom and her colleagues identified "understanding organization and employee issues relevant to successful service" and "improving well-being through transformative service" as the key service research priorities, calling for "designing service-oriented Human Resource Management (HRM) practices that yield positive employee and customer outcomes" (Ostrom, Parasuraman, Bowen, Patrício, & Voss, 2015, p. 134). The key reasoning behind this focus is grounded in the early implications of well-being on FLE performance, customer service, and ultimately firms' overall competitive advantage and profitability (Bakker & Schaufeli, 2008; Nasr, Burton, & Gruber, 2015; Nasr, Burton, Gruber, & Kitshoff, 2014; Schepers, Nijssen, & van der Heijden, 2016). Such effects seem particularly pertinent, as new technologies—including artificial intelligence (AI), wearable devices, chatbots, virtual agents, and consumer-facing robots (Bolton et al., 2018)—fundamentally alter the meaning of the organizational frontline (De Keyser, Köcher, Alkire, Verbeeck, & Kandampully, 2019). Research on frontline technology is exploding, though usually by considering its impacts on consumers' experiences and engagement (Belk, 2013; Huang & Rust, 2018; Kannan & Li, 2017; Llamas & Belk, 2013). Nevertheless, less research has considered the impact of these technologies on FLEs

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(van Doorn et al., 2017) and their well-being. Therefore, we seek to determine the impact of employee engagement-facilitating technologies on FLEs' well-being, with the recognition that workplace well-being entails not only job satisfaction but also employees' job engagement (Bakker, Schaufeli, Leiter, & Taris, 2008).

Engaged employees tend to be dynamic, enthusiastic, and determined to perform their jobs (Menguc, Auh, Fisher, & Haddad, 2013). New practices can facilitate such engagement by supporting resource exchanges, interactions, and reciprocal well-being (Burroughs & Rindfleisch, 2002; Hollebeek, Srivastava, & Chen, 2019). However, such engagement requires diligent management (Larivière et al., 2017). Some service companies have experimented with creating fun experiences as a means for enhancing employee engagement, with the sense that fun can increase employees' job satisfaction and engagement and ultimately improve their well-being and performance (Bowen, Tews, & Baloglu, 2019). For example, inspired by the popularity of games, especially video games, proactive managers have used game-based design principles to structure work experiences in a process called gamification (Mitchell, Schulster, & Jin, 2020; Robson, Plangger, Kietzmann, McCarthy, & Pitt, 2016).

Defined as "a process of enhancing a service with affordances for gameful experience to support users' overall value creation" (Huotari & Hamari, 2017, p. 25), various fields, from banking and education to healthcare and retailing, practice gamification. The existing literature confirms its effectiveness in regard to customers' engagement (Eisingerich, Marchand, Fritze, & Dong, 2019; Shankar, 2016), creativity (Agogué, Levillain, & Hooge, 2015; Scheiner, 2015), learning (Landers, 2014), behavior change (Hamari & Koivisto, 2015; Mülcahy, Russel-Bennett, & Iacobucci, 2020), technology adoption (Müller-Stewens, Schlager, Häubl, & Herrmann, 2017), and enjoyable experiences (Hammedi, Leclercq, & Van Riel, 2017; Höllig, Tumasjan, & Welpe, 2020). However, little evidence details the role of gamification in a workplace context or from an employee perspective (Oppong-Tawiah et al., 2020; Vesa, Hamari, Harviainen, & Warmelink, 2017). Moreover, the effectiveness of gamification is somewhat questionable. Some evidence suggests that gamification may result in increased stress, overparticipation, and demotivation (Friedrich, Becker, Kramer, Wirth, & Schneider, 2020; Vesa et al., 2017). Thus, empirical research is needed to identify effective implementations that minimize the risks of counterproductive and unintended effects (Leclercq, Hammedi, & Poncin, 2018). Finally, gamification in the workplace represents a particularly interesting context for analysis because gamification requires voluntary participation for it to be effective, whereas employees may feel required or coerced to participate. That is, by imposing gamification, managers inevitably violate the condition of voluntary participation (e.g., Vesa et al., 2017; Oppong-Tawiah et al., 2020), which makes this employee context notably different from the customer context that defines most prior studies. Therefore, investigating the role of gamification and its effect on employee engagement and well-being is crucial. As such, we seek to address the following questions:

- What impact does gamified work have on frontline employees' job satisfaction and engagement?
- Does voluntary participation moderate the effects of gamified work?

To answer these questions, we adopt a mixed-method design. In particular, we use qualitative data to elaborate on the phenomenon of workplace gamification and then use quantitative data to test the associated relationships (Davis, Golicic, & Boerstler, 2011). Leveraging the findings from in-depth interviews with FLEs and their managers, we construct a research framework and design two field experiments conducted in two different sectors: retailing and telemarketing. The combined results highlight a counterintuitive negative impact of gamified work on employee satisfaction, engagement, and performance, although as predicted, the willingness of employees to participate in gamified work moderates these negative impacts.

In turn, we make three main contributions to the TSR literature. First, this research adds new empirical insights for addressing the challenge of engaging FLEs and enhancing individual and collective well-being, including opportunities to introduce gamification into the workplace (Cardador, Northcraft, & Whicker, 2017; Mitchell et al., 2020; Oppong-Tawiah et al., 2020). We explore and test a three-stage model describing the effects of gamification on employees' well-being and subsequent performance. Second, we challenge the growing body of research on transformative gamification services that reports the benefits of gamification on participants' well-being (Johnson et al., 2016; Mülcahy et al., in press; Tanouri, Mülcahy, & Russell-Bennett, 2019) and add more nuance by outlining some risks related to such practices. We show that gamification mechanisms may cause stress and disengagement, resulting in a reduction in employees' well-being and a decrease in their performance, especially when these mechanisms are not coupled with appropriate management. Third, in response to calls for a better understanding of how gamification works (Deterding, 2019; Landers, 2019), our findings provide insight explaining the mixed results found in the current academic literature on the effectiveness of gamification (Leclercq, Poncin, & Hammedi, in press; Lucassen & Jansen, 2014). Indeed, prior research has investigated the effects of gamification in contexts where audiences decide and are motivated to take part in gamified activities (e.g., retailing and social media). In contrast, this study contributes to understanding the effect of gamification mechanisms when a third party implements these mechanisms. This may be the case in not only HR management but also education or healthcare services. We isolate the impact of participants' willingness to participate and identify it as a key factor of the effectiveness of gamification. This research outlines the necessity for managers to consider their employees' willingness to use gamified tools when implementing such practices or the importance of promoting proper adoption by participants. In support of these contributions, we survey the relevant literature in the next section. We then develop and test a series of hypotheses in three mixed-method studies. Finally, we discuss our results and outline some managerial implications and research opportunities.

2. Literature review

2.1. Transformative service research and employee well-being

Despite the historically recognized importance of FLEs in services and their critical role in organizational success,[1] little research has addressed their well-being. In fact, FLE research gained prominence in the service research field in the 1990s and included widely encompassing topics such as FLE empowerment in services (e.g., Brymer, 1991), FLE job satisfaction (e.g., Rogers, Clow, & Kash, 1994), the importance of internal marketing (e.g., Rafiq & Ahmed, 2000), and the strong relationship between employee and customer satisfaction, which Heskett, Jones, Loveman, Sasser, and Schlesinger (1994) termed the service-profit chain. Nevertheless, although these studies contributed to the establishment of the importance of focusing on FLE performance within services as key for increasing customer satisfaction and organizational profitability (Wirtz & Jerger, 2016), they largely disregarded FLEs' well-being. Thus, recent TSR work has proposed that service organizations that appreciate the importance of FLEs and that strive to remain competitive in today's market should capitalize their efforts beyond the management of FLEs' performance and embrace the management of FLEs' well-being (Nasr et al., 2014, 2015). Interdisciplinary studies on employee well-being reinforce this focus, as they demonstrate the implications of health and well-being for employees, their organizations, and society at large (Danna & Griffin, 1999), as well as address the recent call for studies that uncover and analyze various service management aspects that affect the well-being of FLEs (Ostrom

[1] For a full review, please see Wirtz and Jerger (2016).

et al., 2015).

In this context, one cannot overlook the merit of occupational health psychology and human resource literature in studying employee well-being. Researchers within these fields have acknowledged that employee well-being can potentially affect both employees and organizations (Danna & Griffin, 1999).

First, employees' well-being is linked to their individual productivity and job satisfaction, morale and motivation, engagement, and commitment (Robertson & Cooper, 2011). Those experiencing poor well-being are less productive, make poorer-quality decisions, are disposed to absenteeism, and contribute less to the organization (Boyd, 1997; Price & Hooijberg, 1992). Happy people are healthier, more sociable, and more successful (Lyubomirsky, Sheldon, & Schkade, 2005), which signals the close relationship between people's working lives and their health and well-being. As Mirabito and Berry (2015) provocatively asked, "How can we expect service providers to be at their best with customers if they do not feel their best?" (p. 336).

Second, the mental health of employees is vital for organizational survival (Weehuizen, 2008), and work characteristics strongly influence this aspect of well-being (Bakker & Demerouti, 2007). For example, work pressure, role ambiguity, and emotional demands can cause exhaustion, sleeping problems, and health damages (Doi, 2005), which have significant impacts on an organization's performance (Cooper & Cartwright, 1994).

Third, Zwetsloot and Pot (2004) assert that employee well-being also has strategic importance. Expenditures to enhance employee well-being should be regarded not as costs but rather as investments with benefits for the organization and society at large (Bakker & Schaufeli, 2008). However, as Mirabito and Berry (2015) recognize, the service literature has largely overlooked the link between general well-being and work performance.

2.2. Job satisfaction and engagement

Most research considers job satisfaction to be the main indicator of employee well-being (Taris & Schreurs, 2009), using it to operationalize the construct of "happiness" at work (Wright, 2006). However, such a passive form of well-being can be complemented by more active forms, such as job engagement. Engaged workers have positive assessments of their work situation, and beyond mere satisfaction, they are motivated to expend energy to complete a task; they also perceive their own empowerment (Albrecht, 2010; Bakker, Albrecht, & Leiter, 2011; Rich, Lepine, & Crawford, 2010). Therefore, both job satisfaction and engagement appear essential for employees' well-being.

Job satisfaction refers to "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Lock, 1976, p. 1300). As a bidimensional construct, it is comprised of both intrinsic and extrinsic forms (Hirschfeld, 2000). Intrinsic satisfaction reflects how employees feel about the job tasks themselves; extrinsic satisfaction refers to their perception of the aspects of the work situation that are external to their job tasks (Hirschfeld, 2000). A meta-analysis of nearly 500 studies on job satisfaction reveals a strong correlation between job satisfaction and mental health (Faragher, Cass, & Cooper, 2005), such that employees with poor job satisfaction experience emotional burnout, reduced self-esteem, and higher levels of both anxiety and depression. Because of the substantial amount of time that most people dedicate to work, they likely feel sad, unhappy, or unfulfilled when work fails to provide them with adequate satisfaction or even causes dissatisfaction. Their diminished general mood and poor feelings of self-worth at work can culminate in the form of depression and anxiety (Rothmann, 2008).

Engagement, instead, is a psychological state that people experience when they feel absorbed by and focused on a particular action (Forgeard, Jayawickreme, Kern, & Seligman, 2011); it represents one of the seven subjective facets of well-being (Forgeard et al., 2011). This psychological state prompts actors to invest cognitive, behavioral, and emotional resources to achieve some specific objective (Alexander, Jaakkola, & Hollebeek, 2018; Hollebeek et al., 2019). However, other than Csikszentmihalyi (2020) famous "flow theory," which suggests that people enter a state of flow when they are deeply absorbed in an intrinsically enjoyable activity, even without pursuing any particular goals (Nakamura & Csikszentmihalyi, 2002), we know of no measures of psychological engagement. Engagement is still a relatively new concept in marketing, although it constitutes a growing stream of research in the customer management field (Islam, Hollebeek, Rahman, Khan, & Rasool, 2019; Jaakkola & Aarikka-Stenroos, 2019; Institute, 2016; Verhoef, Reinartz, & Krafft, 2010; Wilson, 2019). Most prior service literature about engagement refers to *customer* engagement rather than FLEs' job engagement.

Therefore, we distinctly define job engagement as employees' investment in their work tasks, employees, and coworkers (Christian, Garza, & Slaughter, 2011). It reflects their beliefs about the company, its leaders, and the workplace culture, as well as their feelings and emotions and the amount of effort they devote to their work (Kahn, 1990). Employee engagement should have positive effects on business growth and profitability because engaged employees display greater organizational commitment and lower intentions to quit (Menguc et al., 2013). Furthermore, an engaged employee positively enhances customer satisfaction (Harter, Schmidt, & Hayes, 2002) and perceptions of service quality (Guillaume, Dawson, Otaye-Ebede, Woods, & West, 2017). Thus, job engagement offers a valuable predictor of internal and external performance.

2.3. Transformative gamification service and fun at work

Initiatives to enhance happiness, enjoyment, playfulness, and pleasure at work, such as contests, social events, celebrations, and social outings, whether introduced by organizations or the employees themselves, appear to be associated with positive outcomes, including job satisfaction (Karl & Peluchette, 2006), work engagement, task performance, and organizational citizenship behavior (Mitchell et al., 2020; Mülcahy, Zainuddin, & Russell-Bennett, in press). Positive emotions at work can take different forms: *organic emotions*, which emerge from employees; *managed emotions,* which stem from managers; or *task-specific emotions*, which result from an interaction of employees with the tasks to which they are assigned. However, previous research has not extensively explored these facets of fun (Bowen et al., 2019).

New technologies, as well as the popularity of video games, offer a novel avenue for creating fun at work. That is, managers can use game-based design principles and adopt the structure, look, and feel of a game to make work experiences more positive, enjoyable, and fun for employees, which may also advance organizational goals (Oppong-Tawiah et al., 2020). In this gamification process, fun and engaging elements typically found in games are adopted to enhance people's commitment to and engagement in real-world productive activities (Chou, 2016; Oravec, 2015). Gamified apps and software are increasing in number and range across organizational settings (Vesa et al., 2017). Arguably, gamification may motivate employees not only by providing them with increased access to visible, comparable, and immediate performance information but also by making the work task more enjoyable and meaningful (Cardador et al., 2017; Suh, Cheung, Ahuja, & Wagner, 2017). To this end, gamification is commonly operationalized through individual and collective challenges that aim at generating a sense of achievement and continuous success by completing intermediate goals (Groening & Binnewies, 2019; Landers, Bauer, & Callan, 2017). This sense of accomplishment, leveraging appraisal, and feedback system encourage participants' engagement, with resulting influences on their emotions, cognitions, and behaviors (Mullins & Sabherwal, 2020).

Consider the following example. In call centers, Freshdesk transforms customer requests (e.g., telephone calls and comments posted on Twitter and Facebook) into virtual tickets randomly assigned to players (i.e., customer service employees). In the resulting real-time

Table 1
Study overview.

	Study 1	Study 2	Study 3
Objective	– Understand the process through which gamified work negatively impacts employee well-being and engagement over time	– Test the impact of gamified work on job performance – Test the mediation effect of job engagement on the effect of gamified work on job performance	– Test the impact of gamified work on job performance – Test the mediation effect of job satisfaction and engagement on the impact of gamified work on job performance – Test the moderating impact of employees' willingness to participate on the effect of gamified work on job satisfaction
Method	Qualitative inquiry	Field experiment, within-subject design	Field experiment, between-subject design
Field	Call-center (telemarketing)	Call-center (telemarketing)	Retailing
Data	26 in-depth interviews with FLEs and team managers	Work activity from 94 FLEs over a month	Self-reported measures completed by 200 FLEs

competitive environment, FLEs (as game players) compete to improve their performance and better serve their clients. Specifically, the gamified app lists all performance figures in terms of customer service (average waiting time, average call duration, and number of calls) and realized sales, thereby facilitating real-time contests, whether among different individuals or across teams. Call center employees often struggle with demotivation and stress, but the gamified app motivates them to keep on task and perform well, resulting in reduced response times to customer inquiries (Finley, 2012).

The influence of gamification on attitudes and behaviors has inspired the TSR literature (Tanouri et al., 2019). This growing body of research on transformative gamification services has strongly supported the benefits of game elements in activating intrinsic motivations, driving long-lasting behavioral changes, and improving individual and collective well-being (Johnson et al., 2016; Mulcahy, Russell-Bennett, Zainuddin, & Kuhn, 2018). Accordingly, gamification has found multiple applications, such as moderating alcohol consumption (e.g., Mülcahy, Russell-Bennett, & Rundle-Thiele, 2015), reducing energy use (e.g., Mülcahy et al., 2020), facilitating patients' compliance with the healthcare process (e.g., Allam, Kostova, Nakamoto, & Schulz, 2015) and promoting physical exercise (e.g., Harwood & Garry, 2015). While gamification has been generally described as a promising practice, leading to positive outcomes (e.g., Hamari, Koivisto, & Sarsa, 2014; Johnson et al., 2016; Lucassen & Jansen, 2014), some studies reveal neutral or even harmful effects in several contexts (e.g., Hanus & Fox, 2015; Leclercq et al., 2018). For instance, Maltseva, Fieseler, and Trittin-Ulbrich (2019) report the neutral and negative impacts of gamification on pro-environmental attitudes, intentions, and behaviors. In the context of education, Baxter, Holderness, and Wood (2016) and DeMarcos, Domínguez, Saenz-de-Navarrete, and Pagés (2014) highlight that employees/students who receive gamified training may score lower in terms of learning than might those who receive nongamified training. In line with these results, Hammedi et al. (2017) emphasize the potential misuse of gamified care services. Leclercq, Poncin, Hammedi, Kullak, and Hollebeek (2020) also show the backfiring effects gamification may have on social engagement in the context of online communities. Such inconsistency in the prior research has emphasized the need to better understand how gamification works to provide practitioners with guidelines for how to manage gamification and ensure positive results (Deterding, 2019; Landers, 2019; Lucassen & Jansen, 2014).

Several game elements and tools might differently shape player experiences and process outcomes (Huotari & Hamari, 2017; Robson, Plangger, Kietzmann, McCarthy, & Pitt, 2015). Therefore, the choice of gamification mechanisms, rewards, and appraisal systems should affect work experiences at both the individual and organizational levels (Friedrich et al., 2020; Warmeling, Koivisto, Mayer, Vesa, & Hamari, 2020). In that respect, the challenges, behavior monitoring, and feedback associated with gamification may alter participants' satisfaction with the activity undertaken (Mulcahy et al., 2018). However, the "strong belief in the effectiveness of gamification has mainly been based on self-sustained reasoning claiming that games are fun and intrinsically motivating. Any organization that uses the same design principles should also prove to be 'fun' and effective in invoking further positive organizational outcomes" (Vesa et al., 2017, p. 280). Caillois and Barash (2001) and Koster (2013) suggest that having fun in a game requires audiences to be free to participate or stop their participation whenever they want. The current research has mostly investigated the effect of gamification on audiences who are initially motivated to participate. However, service providers in contexts such as education (e.g., Domínguez et al., 2013), HR management (e.g., Landers et al., 2017), or healthcare (e.g., Hammedi et al., 2017) may gamify their services, while their audience may not be particularly motivated to play the game. The goals and rewards associated with gamification may then be perceived as a carrot-and-stick approach to control employees' performance, reducing their intrinsic motivations to do their job (Mitchell et al., 2020). Despite its widespread adoption and potential, the effectiveness of gamification remains questionable, and its outcomes for companies and employees remain insufficiently explored.

3. Study overview

To examine the effect of gamified work on FLEs' well-being and performance, we conducted three studies with a mixed-method approach, combining in-depth interviews (Study 1) with two field experiments (Studies 2 and 3). The studies were conducted in the telemarketing and retailing sectors (see Table 1), reflecting interesting contexts that are notorious for being stressful (Tuten & Neidermeyer, 2004) and reliant on a "sacrificial HR strategy" (Wallace, Eagleson, & Waldersee, 2000) that frequently and deliberately replaces employees to maintain enthusiastic levels of customer support. We conducted Studies 1 and 2 with two leading firms in Europe that specialize in call center activities/support. FLEs also advise customers on new products, services, and packages. To engage FLEs in these sales activities, both companies use gamification technologies by creating regular sales challenges, some of which last for an entire month, while others are short one- to two-day sales challenges for a specific product. These challenges can be either individual or team challenges. Each sale is converted into points, and the number of points varies according to the nature of the sale. The performance and associated number of points obtained by all employees are tracked and considered. After the contest period, a leaderboard is created based on the collected points, and the best seller is declared the winner. Winners received various rewards (e.g., pens or IT furniture). Managers expect all employees to participate in these gamified challenges.

Finally, Study 3 involves a worldwide sport retailing chain that uses gamification to engage FLEs and reinforce customer orientation within their company. Their use of gamification is more occasional than in the two call centers. The gamification process consists of contests among employees based on the ratio of the number of visitors to the store shelf and the generated sales. In Study 3, we organized two types of contests: pure competition and a cooperation-based challenge. The contest,

based on pure competition, consisted of collecting the performance of each employee separately to declare the winner. The cooperation-based contest consisted of summating the performance of employee teams to identify the winning team. In both cases, the winners received sports furniture.

4. Study 1: qualitative study with FLEs and managers

4.1. Design and sample

With a qualitative study, we seek to develop a theoretical framework that can be tested with qualitative inquiries. The in-depth, semi-structured interviews with FLEs and their managers feature open-ended, predetermined questions designed to generate theory from data collected in natural settings (Glaser & Strauss, 2009). We approached the companies and asked them to help us identify FLEs and managers to participate; we selected only interviewees who had been involved in the gamification process. We conducted the interviews during working hours; potential participants received the invitation to participate in the study in a separate room, they were free to participate, and the anonymity of the discussion was guaranteed.

We developed an extensive interview guide based on a literature review. Although it provided some structure for the interviews, participants were free to share other issues and ideas that were not included in the interview questions. After discussing their work, their job experiences, what they liked and disliked, and their motivations for choosing this type of work, we asked for information about the gamification practices they used at work. We prompted them to share their thoughts about the game challenge design, including their perceived impacts.

Overall, we conducted 21 interviews with FLEs and five interviews with team leaders over one week in the first company and over three weeks in the second company. The mean age of the interviewees was 38 years (27–59 range), 11 (42%) were women, and they averaged six years of experience with the company (0.5–21 range). The interviews had a mean duration of 22 min. The company constrained the duration because the interviews took place during working hours. All interviews were recorded and transcribed verbatim (Stewart & Shamdasani, 2007), producing a corpus of 223 pages and 98,394 words. All transcripts were translated from French to English. Participants were guaranteed strict confidentiality and that their specific answers would never be conveyed to the management team.

4.2. Qualitative data analysis

We used an iterative hermeneutical process to analyze the interview transcripts, following established procedures for inductive qualitative data analyses. Through constant comparisons, we collected and analyzed the data simultaneously, comparing and contrasting newly collected data against existing insights (Glaser & Strauss, 2009). In line with this constant comparative method and Strauss and Corbin (1998) coding procedures, we applied three types of coding procedures to analyze the transcripts. First, we read the transcripts closely to grasp the meaning of the whole interview (Giorgi, 1994) and gain a holistic, solid understanding of FLEs' experiences with their work and gamification. Second, using open coding, we identified the first-order codes (core categories) specific to every individual transcript. During this stage, we sought to reduce the vast textual data into manageable groupings, using key phrases in the transcripts as open codes. The "in vivo codes" (Bowen, 2009, p. 143), using respondents' exact words, provide preliminary concepts for organizing larger chunks of data. Third, we used axial coding (Locke, 2001) to consolidate and link the theoretical categories generated from all the transcripts, which were more abstract than the core categories. In this process, we aggregated second-order themes using both inductive and deductive reasoning (Gioia, Corley, & Hamilton, 2013). Finally, the data collection process concluded when we reached theoretical saturation (Strauss & Corbin, 1998). Thus, we conducted the sampling, data collection, and data analysis simultaneously. By integrating the relevant literature and conducting joint discussions among ourselves, we finalized the themes to reflect the gamification experience of FLEs and team leaders and the underlying concepts that repeatedly appeared in the data (Glaser & Strauss, 2009).

4.3. Results

The data analysis reveals several key themes, which are grounded empirically in the data and well supported by evidence gathered from interview quotes.

Overall job experiences and coworker relationship quality. As mentioned by Sias (2005), workplace relationships are unique interpersonal relationships with important implications in terms of job experiences. Discussing FLEs' overall job experience, the quality of their relationship with their coworkers emerges as a key variable that affects employee well-being in call centers. The theme *coworker relationship quality* appears in eight interviews. Coworker relationship quality or peer relationships, also referred to as "equivalent status" relationships (Sias, Krone, & Jablin, 2002), are "relationships between co-workers with no formal authority over one another. These relationships represent the bulk of workplace relationships, as employees typically have only one supervisor but several peer co-workers" (Sias, 2005, p. 379). In the context of call centers, interactions with coworkers create a very positive atmosphere, which is mentioned as one of the positive aspects of the job by most of the respondents. For instance, as one employee mentioned, "The work atmosphere is really good, despite the stress inherent to this type of job" (C2, Interview 6).[2] Another employee stated, "What I like about this job is the atmosphere, colleagues; it is like a second family" (C2, Interview 11). In both companies, coworker relationship quality appears to be a motivating factor and makes it possible to deal with the stress inherent in this type of job. For some FLEs, coworkers represent the main positive element in their jobs; as one FLE stated, "I would say that the big positive point here in the job is the colleagues; it is really the colleagues who make us come here every day with a smile" (C2, Interview 7).

FLEs' experience with gamification. Most gamification challenges implemented by these two companies are centered around "sales challenges," though the call centers specialize in customer service. In this respect, the two companies consider customer service quality as well as FLEs' sales outcomes when evaluating their job performance. Most FLEs are not enthusiastic about the gamification challenges, which they consider peripheral to their jobs. As such, as one agent mentioned, "Only figures matter, they (i.e., company managers) do not take into account the person, the human" (C2, Interview 8). They perceive gamification as a carrot-and-stick strategy by management to improve their sales performance. Accordingly, FLEs consider gamification challenges as stimulating, as long as they enable them to win prizes (mentioned in eight interviews). As one interviewee explained, "The challenges are a good way to motivate people with objectives and rewards. I like to have an objective in mind and try to go ahead" (C2, Interview 4). Others reported gamification challenges as being a source of stress because their poor performance may cause them to get fired (mentioned in ten interviews): "The challenges are important here because we are judged based on our performance. If we do not perform well, then we have to follow extra training, or we risk being fired. However, I do not care about reaching the objectives and my performance. I just feel physically and psychologically exhausted" (C2, Interview 6). The few FLEs who mentioned positive experiences with gamification (three interviews) noted, for example, that "competition, it is always fun" (C2, Interview 11) or that the game "creates a good

[2] Company 1 is referred to as C1, and company 2 is referred to as C2.

atmosphere; it is nice" (C1, Interview 6).

Gamification impacts on FLEs. In the interview guide, after discussing FLEs' overall job experience, motivations, and satisfaction, specific questions related to the "impacts of gamification" were asked to gain deeper insights into FLEs' experiences with gamification. Three main impacts emerged: those on job satisfaction, those on job engagement, and those on job performance.

First, job satisfaction appears essentially related to personal objectives and motivations. The theme *job satisfaction associated with gamification* appears in ten interviews. For instance, as one employee mentioned, "When you solve the customer problem, and finally, they thank you… you feel you are helpful; that is what I like in this job" (C2, Interview 5). As another employee stated, "Only the quality of the call matters for me, so helping the customer to solve the problem" (C2, Interview 6). In terms of job satisfaction, challenges related to "service quality" are mentioned, with employees noting that gamification boosted their job satisfaction because, for example, "You feel useful; you are happy with yourself actually. It is an autosatisfaction to see that you have good scores" (C2, Interview 15). However, others mentioned the heightened stress "due to the objectives (i.e., additional objectives related to "sales challenges") we have to achieve" (C1, Interview 6). Respondents also cited low job satisfaction, regardless of the presence of gamification, such as the recognition that "It is true lately, when I come to work, I am demotivated; I come because I need this job" (C2, Interview 8). It seems that people who are already dissatisfied with their jobs might not have a positive experience with gamification; it might even make the situation more unbearable. For employees who are more satisfied, such that they adopt a positive outlook, gamification offers an added benefit, even though their main satisfaction still comes from helping customers.

Second, the nature of the gamified contest may determine its effects on job engagement. The theme *job engagement associated with gamification* appears in twelve interviews. If the game is not directly related to employees' role or personality, then FLEs regard it as an impediment to their engagement. Most contests refer to sales performance, whereas FLEs do not see sales as their primary job, so "they (managers) organize contests to motivate for the sales, but I do not care; only solving customer problems matters to me" (C1, Interview 5). Furthermore, personalities might clash with gamification; as one employee recognized, "I am not playing. I am not a competitor. I do my job. That is it" (C2, Interview 6). As another employee confirmed, "Personally, it does not boost me; I work for my team leader. I do not try to do much because there is a new contest. I do not do more; I do not try to sell more because of that" (C2, Interview 7), Furthermore, as another employee stated, "Contact with clients and good relationship with colleagues; they are my motivation" (C2, Interview 16).

Personal willingness to participate. Team leaders were particularly aware of the need to manage these different personalities and profiles. The theme *personal willingness to participate* appears in six interviews. Particularly, one of the managers mentioned that differences in FLE personalities matter, by stating, "There are people who will always stay motivated, and then, you will have those who are always refractory. It is with those that it is necessary to find the right tool to be able to just unlock this aspect… in this case, as team leader, you have to make it clear and say you have to do it because there is something to gain but also because it is your job" (C2, TL,[3] Interview 2). Several managers stressed the importance of "*the willingness to participate.*" For instance, as one manager stated, "There are those who are of the mentality to say to you 'no, I do not want to participate'… and there are those who naturally do; they adore this" (C2, TL,[4] Interview 2); as another manager argued, "If you have a team of 60 agents, maybe only 10 will say "I like this." Honestly, there are not many (laughing)" (C1, TL, Interview 2).

A related influence on job engagement is the gamification reward. When employees receive a tangible reward for participating or winning, they tend to be more engaged, such that "the better the reward/gift of the contest, the better the impact on the work atmosphere" (C2, Interview 7). Furthermore, "When you win, and there is no reward nor gift, it is frustrating; it is ridiculous" (C2, Interview 1). Finally, as another employee mentioned, "We are going to perform for the team only if there is a good reward/gift like an entertainment activity for the team, something worthwhile" (C2, Interview 2).

The effect of gamification on team and coworker relationship quality is another important aspect of job engagement. For example, some employees see the game as creating stronger bonds: "Thanks to contests, we speak more among ourselves; this has a positive impact on the ambiance of the group" (C2, Interview 7). The majority of respondents offer a less positive view; one employee expressed wariness of privacy breaches and the potential shaming as a result of gamification: "I think it is not good to communicate the performance of other agents in the team; it has to be private. It is like when you go to the doctor; it is my opinion… otherwise, it might create a bad atmosphere" (C1, Interview 3). Another employee mentioned the potential for heightened jealousy that could arise among team members because "when you make a sale, then you must announce it and put it on the board, and the agents who do not make sales, when they see it, either they are demotivated, or they want to do the maximum to get there" (C2, Interview 8). Finally, the extra pressure to succeed and win might push some employees to cheat. As one FLE mentioned, "…Some of the coworkers were cheating in order to win… it had created conflicts in the work team" (C1, Interview 1). Team contests, as opposed to individual contests, seem to be more appreciated by FLEs because they "create some positive dynamics in the team" (C1, Interview 6), so "I only participate when it is a team contest" (C2, Interview 14). However, managers acknowledge negative impacts, including the following: "The risk is that eventually, they are no longer motivated by that when it is an integral part of their work" (C2, TL, Interview 2), such that "when it lasts too long, there is a risk of running out of breath" (C1, TL, Interview 1). Overall, the impact of gamification on job engagement varies, with both positive and negative implications.

Third, job performance emerged as a critical topic. Respondents did not make specific claims about the direct impacts of gamification on job performance, but we observed an overall sense of apathy regarding this topic. The theme *job performance associated with gamification* appears in ten interviews. Employees seemingly felt that given their lack of satisfaction with the contest and job, their overall job engagement and job performance were suffering. As one employee mentioned, "At first, it worried me because I wanted my contract (i.e., temporary job contract) to be renewed, but now I do not care" (C2, Interview 12). FLEs also appear to be unwilling to evaluate their own performance, despite the promise of anonymity, suggesting a possible fear of retaliation if they admit to their own declining performance. Finally, personal job performance is subjective, and some people consider their performance to be better than the objective performance indicators indicate.

4.4. Hypotheses

The findings from our qualitative inquiry reveal that FLEs may perceive the gamified practices imposed by management as an attempt to regulate their work performance through a carrot-and-stick approach externally. This external regulation may stimulate FLEs by satisfying their needs for external rewards or engendering stress by emphasizing the focus on job performance. Gamified work may affect job satisfaction, engagement, and performance according to the FLE's willingness to participate. These results are in line with organismic integration theory (OIT), a subtheory of self-determination theory (Deci & Ryan, 1985).

OIT postulates that motivations may be positioned along a continuum, indicating the extent to which extrinsic motivation is

[3] TL: team leader
[4] TL: team leader

internalized (Deci & Ryan, 2002). On one end of this continuum, the most externalized motivation refers to the motivation to engage in an activity to receive the associated rewards or avoid potential punishment. Extrinsic motivations require external regulations, such as rewards or punishments, to be activated. They may be internalized progressively. On the other end of the continuum, intrinsic motivations reflect the motivations to undertake an activity for its own sake. Individuals who are intrinsically motivated initiate behaviors independent of any incentives. We highlight satisfying intrinsic motivations as strongly related to satisfaction and behaviors.

In that respect, the objectives and rewards associated with gamification may be perceived as either (1) an external regulation or (2) an opportunity to feel competent, thus satisfying intrinsic motivations (Friedrich et al., 2020; Mitchell et al., 2020). FLEs who demonstrate low intrinsic motivations to participate in the gamified activity will focus either on the rewards or on the potential punishment. They will consider gamification as a carrot-and-stick approach imposed by the organization, which negatively affects their job satisfaction, engagement, and ensuing performance. In contrast, the more FLEs are willing to participate in the gamified activity, the less they will perceive gamification as an external regulation. Huotari and Hamari (2017) and Eppmann, Bekk, and Klein (2018) explain the effect of gamification mechanisms through the experience these mechanisms afford to customers. In that respect, gamification affects employees' evaluation of their work experience by making activities more fun. A high satisfaction level with these experiences stimulates employees to further invest their resources in similar activities/tasks. Consequently, they feel more engaged in their job, which in turn improves their performance (Cardador et al., 2017; Suh et al., 2017).

Based on the extant research and our qualitative study findings, we propose the following hypotheses, as depicted in Fig. 1:

H1a. Gamified work has a negative impact on job engagement and job performance.
H1b. Job engagement mediates the negative impact of gamified work on employees' performance.
H2: Job satisfaction mediates the negative impact of gamified work on employees' engagement.
H3: Employee willingness to participate moderates the negative impact of gamified work on job satisfaction.

Studies 2 and 3 test these hypotheses through two field experiments carried out in the telemarketing and retailing sectors.

5. Study 2

For this field experiment, in a call center context, we organized a contest and analyzed employees' effective engagement and resulting performance over time. To test H1a and H1b, we assessed the impact of gamified work on employees' performance, mediated by their level of job engagement. We examined the effect of performance-based contests as a gamification mechanism, which companies widely use to incentivize employees' day-to-day performance.

5.1. Procedures

We launched a day-long contest within a single call center, featuring competition based on sales obtained by each employee and confirmed by managers. Lottery tickets were rewarded to the best performers. Managers promoted the event through posters and personal messages to each employee to ensure that they were aware that a contest had started and knew the rules. With a within-subject design, we compared employees' job engagement and performance before and after the contest.

5.2. Measures

We collected weekly measures of employees' engagement and performance over an entire month, from two weeks before to two weeks after the contest. Engagement refers to the level of resources workers invest in their activities, so we measured it as the number of calls that each employee answered. In addition, we measured job performance as the number of sales made by each employee.

5.3. Results

Ninety-four employees participated in the contest. Their mean age was 34 years, and 46% were women. The means of job engagement and performance over time are displayed in Appendices A and B, respectively.

The data analysis featured a three-step procedure. First, we carried out a comparison of employees' job engagement and performance two weeks and one week before the contest, during which no gamified activity occurred. The results do not reveal any significant differences ($M_{Eng\_TwoWeeksBefore}$ = 157.98, $SD_{Eng\_TwoWeeksBefore}$ = 82.07; $M_{Eng\_OneWeeksBefore}$ = 150.76, $SD_{Eng\_OneWeeksBefore}$ = 85.8; $M_{Perf\_TwoWeeksBefore}$ = 13.60, $SD_{Eng\_TwoWeeksBefore}$ = 15.26; $M_{Perf\_OneWeeksBefore}$ = 14.03; $SD_{Eng\_OneWeeksBefore}$ = 14.29). That is, these two metrics remain relatively consistent over time when unaffected by a contest.

The within-subject mediation analysis enables us to examine the impact of gamified work on employees' performance and the potential mediating effect of job engagement. We use the MEMORE PROCESS macro (Version 2.0; Montoya & Hayes, 2017), which estimates the direct, indirect, and total effects in mediation models by using two-instance within-subject designs as the independent variable. As detailed in Table 2, a simple mediation model (Model 1, bootstrapped sample = 5000) reveals the differences in job engagement one week before and one week after the contest, showing that gamified work has a negative impact on job engagement ($\beta_{gamified\_work}$ = −38.18, SE = 6.52; $p < .001$), which positively affects job performance (β_{Job_eng} = 0.06, SE = 0.02; $p < .001$). The model indicates a direct, significant, and negative effect of gamified work on job engagement ($\beta_{gamified\_work}$ = −2.65; t = −2.27; $p < .05$), indicating the partial

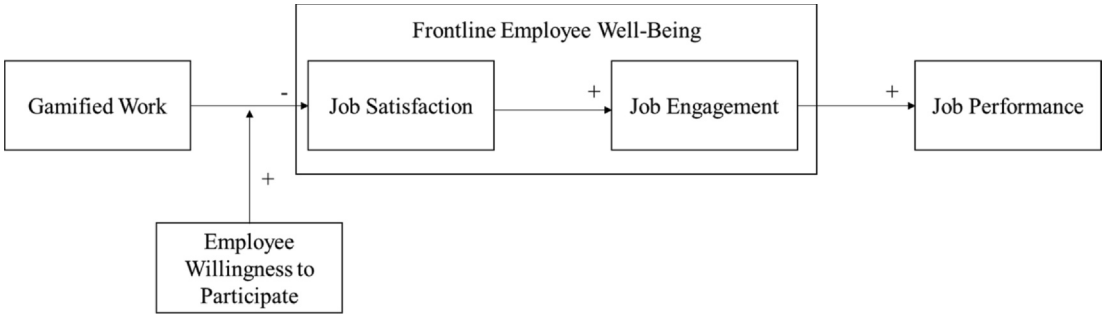


Fig. 1. Conceptual Framework.

Table 2
Study 2 Results.

	Dependent variables							
	Model 1: Job engagement one week after the gamified contest		Model 2: Job performance one week after the gamified contest		Model 3: Job engagement two weeks after the gamified contest		Model 4: Job engagement two weeks after the gamified contest	
	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
Gamified work (difference in means before and after the gamified contest)	−38.18***	6.52	−2.65*	1.17	−61.61***	7.29	−0.80	1.49
Job engagement (difference between before and after the gamified contest)			0.06***	0.02			0.09***	0.02
Job engagement (average between before and after the gamified contest)			−0.04*	0.02			−0.2	0.02
R^2			0.25					0.32
F-statistics			F(2,91) = 14.94***					F(2,91) = 21.78***
Cohen's f2			0.33				0.47	

*p < .05; ** p < .01; *** p < .001

mediation of the effect of gamified work on job performance through job engagement (Zhao, Lynch, & Chen, 2010).

In a similar analysis, we assessed the impact of gamified work on job engagement and performance two weeks after the contest. The results indicated a negative effect of gamified work on job engagement ($\beta_{gamified\_work} = -61.61$, SE = 7.29; $p < .001$) and a significant positive relationship between job engagement and work performance ($\beta_{gamified\_work} = -0.09$, SE = 0.02; $p < .001$).

These results support H1a and H1b by highlighting the negative impact of gamified work on job performance, which persists even two weeks after the contest, mediated by job engagement.

6. Study 3

To test H2 and H3, we conducted a second field experiment and tested the extent to which employees' well-being, represented by job satisfaction, mediates the negative impact of gamified work on job performance. We also examine the moderating effect of employee willingness to participate. To ensure robustness, we tested the effect of win/lose decisions, two likely outcomes of gamification, and two different gamification mechanisms, namely, competition and cooperation. Competition mechanisms consist of one participant or group winning, and the others losing; cooperation mechanisms rely on participants working together to achieve a common goal, so all participants receive rewards if they are successful. These game elements are both key aspects of gamification (Leclercq et al., 2018; Leclercq, Poncin, & Hammedi, 2017). For this study, we collaborated with a worldwide sports retailing chain. We included employees from five stores who are responsible for helping customers find the best customized solutions to their needs.

6.1. Procedure

In the between-subject design for this study, we manipulated the type of gamification mechanisms, namely, cooperation versus competition and the win/lose decision. Four of five conditions implied the use of gamified work, such that employees could participate in a day-long contest related to the number of clients served. The best performers would receive financial rewards. The different conditions imposed various rules. That is, in competition-based contests, employees who served the most customers were rewarded, whereas in the cooperation-based contests, employees working in the same store teamed up against those in other stores. For each type of contest, we manipulated the gamification outcome in terms of win/lose decisions. Employees did not have any opportunity to communicate their results with others to avoid any performance comparisons. The fifth condition represented a control group, and we administered the questionnaire to stores without any gamified work initiative. We created dummies for each manipulation.

6.2. Measures

Every participating employee completed a questionnaire with measures of job engagement, job satisfaction, customer orientation, and willingness to participate. Because competition and cooperation mechanisms relate to relationships, we controlled for coworkers' relationship quality. These constructs were measured using multi-item scales, which used 5-point Likert scales (1 = "Fully disagree," 5 = "Fully agree"). We measured job engagement with an 18-item scale developed by Rich et al. (2010). For employee job satisfaction, we administered the 3-item scale of Speier and Venkatesh (2002). We used a measure of customer orientation to assess employees' job performance. Employees' performance was evaluated based on the number of clients they help and the quality of their interaction. Therefore, we measured job performance with the 6-item scale developed by Thomas, Soutar, and Ryan (2001) that measures customer orientation. A 7-item scale controlled for coworker relationship quality. Finally, willingness

Table 3
Study 3 Results.

	Dependent variables					
	Model 1: Job satisfaction		Model 2: Job engagement		Model 3: Job performance	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Independent variables						
Constant	1.99***	0.51	1.72**	0.58	−0.31	0.62
Gamified work	−1.40***	0.32	−0.47	0.33	0.76*	0.33
Willingness to participate	−0.04	0.05	0.05	0.15	0.53**	0.17
Gamified work * Willing. to participate	0.38	0.08	0.16	0.09	0.06	0.09
Job satisfaction			0.50***	0.10	0.01	0.14
Job satisfaction * Willing. to participate			−0.01	0.03	0.00	0.05
Job engagement					0.86***	0.16
Job engagement * Willing. to participate					−0.15**	0.06
Losing	−0.10	0.10	−0.05	0.10	0.08	0.10
Cooperation	−0.05	0.10	−0.18	0.10	−0.09	0.10
Coworker relationship quality	0.59***	0.05	0.14*	0.07	0.16*	0.07
Gender	−0.00	0.10	0.01	0.09	−0.06	0.09
Age	0.05	0.06	−0.05	0.06	0.02	0.06
Job seniority	−0.08	0.05	−0.02	0.05	−0.04	0.05
Income	0.12*	0.05	0.01	0.05	−0.03	0.05
R^2	0.60		0.54		0.56	
F-statistics	F(10; 189) = 28.70		F(12; 187) = 18.27		F(14; 185) = 15.65	
Cohen f^2	1.5		1.17		*1,27*	

p-value < 0.05, p-value < 0.01, p-value < 0.001.

to participate in gamified work was measured with the 3-item scale from Taylor and Todd (1995). All the scales satisfy the reliability criteria.

6.3. Findings

We collected 200 complete questionnaires. Respondents' mean age was 28 years, and 44% were women. We assessed the impact of gamified work on job performance through the mediation of job satisfaction and engagement and tested the extent to which employees' perceptions of gamification utility moderate these impacts. The reward decision (winning vs. losing), gamification mechanism (cooperation vs. competition mechanism), coworker relationship quality, respondents' age, level of revenue, seniority in the company, and gender were all included in the model as covariates. Therefore, we ran a moderated serial mediation model with two mediators using the PROCESS macro (Model 92; bootstrapped samples = 5000; Hayes, 2017. Table 3 reports the results.

In the regression with job satisfaction as the dependent variable, the main effect of gamified work is negative and significant (β = −1.40, SE = 0.32; p < .001). The moderating effect of employees' willingness to participate is significant and positive (β = 0.38, SE = 0.08; p < .001). The Johnson–Neyman procedure (Hayes & Matthes, 2009) highlights that gamified work negatively affects (p < *.05*) job satisfaction only among respondents with a score for willingness to participate lower than or equal to 2.67. We also find a significant, positive relationship between employees' job satisfaction and levels of job engagement (β = 0.50, SE = 0.10; p < .001), which in turn positively affect employee performance (β = 0.86, SE = 0.16; p < .001). No direct impact of gamified work on job engagement and job performance was found. The total direct effect of gamified work on employee performance was nonsignificant for all levels of participants' willingness to participate. The total indirect effect using the two mediators reveals a significant negative impact of gamified work on employee performance for cases where employees' willingness to participate is lower (β = −0.23; BootSE = 0.08; LLCI = -0.42, ULCI = −0.10). The win/lose decision and gamification mechanisms (cooperation vs. competition) do not appear to affect our results. The coworker relationship quality positively affects job satisfaction (β = 0.59, SE = 0.05; p < .001), engagement (β = 0.14, SE = 0.07; p < .05), and performance (β = 0.16, SE = 0.07; p < .05). The results from the moderated serial mediation indicate an indirect-only mediation (Zhao et al., 2010), and they support H1a-b, H2, and H3. When employees take part in gamified work activities, they are less satisfied with their jobs, which induces a lower level of engagement and performance. However, this negative impact is reduced when employees are willing to participate in gamified work activities.

7. Discussion

As found in Study 1, gamification might be used to "[add] life and fun to the work context" (C1, Interview 1) and "improve the interaction between the employees" (C1, Interview 5). Job experience and coworkers' relationship quality emerge as the key drivers of FLEs' engagement and well-being. These results align with the existing literature on organizational climate, which refers to all organizational attributes (such as policies, practices, and procedures, including HRM practices) and includes the relational aspect of work. How individual employees interact with their colleagues, coworkers, and supervisors and the perceived quality of these relationships seem to be important components of employees' perceived work climate. These aspects have important impacts on employees' job satisfaction, engagement, and well-being. These results offer evidence of how gamification in the workplace and the organizational climate interact (Vesa et al., 2017). The overarching objective of gamified systems might be to infuse positive elements (fun and pleasure) into work, but our findings challenge whether such outcomes are even possible. By shedding light on this relationship, we show that the implementation of gamified systems has critical consequences for job satisfaction, engagement, and ensuing performance.

Gamification must be adopted carefully to have any potential to improve job satisfaction, job engagement, and job performance. The prior literature acknowledges the potential backfire effects of gamification (e.g., Poncin, Garnier, Mimoun, & Leclercq, 2017; Leclercq et al., 2020), and Study 1 reveals its negative impacts on the team in the short and long term, such that it results in lower individual and team engagement. In line with OIT (Deci & Ryan, 1985), Study 1 also reveals that when imposed, gamification may increase stress and disengagement for FLEs. Indeed, the rewards they may receive through gamification challenges influence their engagement, depending on their

willingness to participate, which indicates the extent to which they perceive these rewards as an external regulation of their performance (Friedrich et al., 2020).

Study 2 confirms, in a real-world setting, these results by identifying the negative effects of gamification on both job engagement and job performance, which persist over time. Despite the growing interest in gamification and widespread implementation of such practices, we show that these approaches often fail to deliver what they intend to achieve in terms of engagement and can even harm employees and the work environment. Indeed, the goals and rewards associated with gamified systems may be perceived by employees as a carrot-and-stick approach from managers to control their performance. Such external regulations tend to decrease employees' intrinsic motivations (Friedrich et al., 2020; Mitchell et al., 2020). Such findings are in line with the negative effects of rewards and progress tracking associated with gamified settings (Eisingerich et al., 2019).

In Study 3, we again confirm the negative main effect of gamified work in a retailing context. We also identify the mediating role of job satisfaction in explaining the effect of gamification on job engagement and performance. Finally, we highlight that FLEs' willingness to participate in gamified activities moderates the negative relationship between gamified work and job satisfaction. This study also supports Study 1′s results in revealing the critical influence of coworker relationship quality. From this perspective, high-quality relationships among employees enhance both job engagement and job satisfaction. However, the negative results of gamification on engagement do not depend directly on losing a contest (Leclercq et al., 2018). Finally, our results indicate a significant positive relationship between employees' job satisfaction and their level of job engagement. Using gamification in a work context might backfire because when employees take part, they are less satisfied and engaged. This negative impact decreases when employees reveal their willingness to participate, suggesting the need to consider consent to participate in gamified experiences, which has not been widely studied thus far (Dale, 2014). While customer consent remains implicit when designing gamified tasks for employees, management should seek explicit consent (Robson et al., 2016). Otherwise, FLEs risk perceiving gamification challenges as external regulations of their performance, which may lead to stress and disengagement (Deci & Ryan, 2002).

Making participation voluntary is highly recommended to increase receptivity to gamification, which does not seem fun to everyone. This result could be explained by the management literature, which makes a distinction between the intrinsic and extrinsic aspects of job satisfaction (Rothmann, 2008). Intrinsic satisfaction refers to how employees feel about the nature of the job tasks themselves, including the freedom to choose their own method of working. Therefore, in case of the absence of other alternatives to do the job, companies are asked to be transparent about the objectives behind gamification, which may be considered new work methods, and try to obtain explicit consent from their employees. This explicit consent will likely help moderate the negative effects that could be generated by the use of gamification technologies. Otherwise, this is likely to impact their level of intrinsic satisfaction. This issue should be taken seriously since the previous literature has shown that a modest decrease in intrinsic job satisfaction levels is associated with an increase in the risk of employee burnout and ill-being (Penn, Romano, & Foat, 1988; Wang, Zheng, Hu, & Zheng, 2014; Wolpin, Burke, & Greenglass, 1991).

7.1. Theoretical contributions

The recent service literature has emphasized the high rate of turnover among service FLEs due to the high stress and anxiety that characterize their job (Subramony et al., 2017). Accordingly, managerial initiatives to promote positive work climates, enjoyable work experiences, and employee empowerment hold great promise (Subramony et al., 2017). That is, managers are tasked with increasing engagement among employees, and game elements seemingly might increase fun at work and thus job satisfaction and well-being. However, based on three studies conducted in different service settings, our paper contributes to the TSR stream.

First, this study investigates the effect of gamification on FLE well-being and performance, an area that remains underexplored in the TSR literature (Mitchell et al., 2020; Oppong-Tawiah et al., 2020). This study helps uncover that employees' well-being is affected by a specific managerial strategy, namely, gamification. In so doing, we also respond to calls for further research on employees' experience (Subramony et al., 2017) and provide in-depth insights into how gamification might contribute to employee well-being and support their performance (Leclercq et al., in press). Therefore, we propose and empirically confirm a three-stage process explaining the effect of gamified work on employee well-being and performance through job satisfaction and engagement. Beyond the individual level, this paper also sheds light on the effects of gamification at the organizational level (Wünderlich, Gustafsson, Hamari, Parvinen, & Haff, 2020). Although the work climate has received some attention in the literature, understanding how climates are created, sustained, and changed remains a priority (Hong, Liao, Hu, & Jiang, 2013). Our paper contributes to the extant management research by answering calls to explore gamification technologies in the workplace (Cardador et al., 2017; Colbert, Yee, & George, 2016; Vesa et al., 2017). In particular, we offer some answers to the question of whether gamification can contribute to the creation of what is called a "new workplace experience" (Colbert et al., 2016; Mitchell et al., 2020).

Second, our findings challenge the growing literature outlining gamification as an infallible tool to support individuals' well-being and generate long-lasting behavioral changes (e.g., Mulcahy et al., 2018; Johnson et al., 2016). We show that when gamification mechanisms are proposed to an audience that is not initially motivated to play, the challenges and rewards associated with gamification may be perceived as an external regulation, embodied by a carrot-and-stick approach. However, most gamified activities imply prizes and reward systems to improve performance and foster goal achievements (Rapp, 2017). In line with OIT (Deci & Ryan, 1985), this perception of a carrot-and-stick approach may lead to counterproductive effects by lowering FLE motivations and performance. Indeed, employees may feel stressed about succeeding or not in the challenge suggested through the gamified activity. This may consequently harm their well-being and reduce their overall performance. Moreover, by providing extrinsic motivations, workers are deprived of the opportunity to find meaning in their work (Wrzesniewski, Dutton, & Debebe, 2003). FLEs have difficulties seeing what contributions they are actually making to themselves and the company (Rosso, Dekas, & Wrzesniewski, 2010; Steger, Littman-Ovadia, Miller, Menger, & Rothmann, 2013).

Finally, this paper also responds to multiple calls in the literature to better understand how gamification works (Deterding, 2019; Landers, 2019; Leclercq et al., in press). This research provides insight explaining the mixed results existing in the current academic literature (e.g., Baxter et al., 2016; Leclercq et al., 2020). We highlight that participants may negatively perceive gamification mechanisms, especially when a third party implements these mechanisms. This may be the case not only in HR management but also in education or even in healthcare services, where a team manager, teacher, or doctor may implement the use of gamification. Indeed, when FLEs demonstrate a low level of motivation in participating in the gamification challenge, they focus their attention on the potential rewards or punishments that they may receive if they succeed or fail in reaching their objectives. In contrast, when FLEs are willing to participate in the gamification challenge, they will perceive reaching the objective as being less important than focusing on their performance and the experience they may have.

7.2. Managerial contributions

Despite their widespread adoption and popularity, our study suggests that managers must be careful about the blind use or broad implementation of gamified technologies. Even if they appear trendy, to be effective, they must fit with and be embodied in the company's overall culture and strategy. They are not magical solutions, and it remains challenging for managers to find the right balance between keeping their employees engaged without adding more stress to their work. Regardless of how fun gamified practices might be, they cannot solve organizational problems, such as poor culture, team conflicts, silo-driven organizations, or low levels of job motivation. An employee with limited motivation to perform the work will likely see any gamification of the job experience as an imposition of just another set of work-related tasks. Furthermore, leveraging gamification and its psychological effects could have positive impacts on workplace challenges in certain conditions and if designed and implemented to fit the specific setting. In particular, it may require existing positive work environments; if job dissatisfaction is widespread, then using these practices will likely worsen the situation and evoke even more negative emotions and diminished job engagement and performance. To enhance the receptivity to and use of gamified practices, they should be made voluntary. When a gamified activity is mandatory, it loses its entertaining and fun value. Indeed, games are described by Salen, Tekinbaş, and Zimmerman (2004) as a magic circle—a space in which the normal rules and requirements from the world are suspended to foster deliberate, playful, and enjoyable experiences. In contrast, work is characterized by performance expectations and economic stakes. Gamifying work consequently leads to the collapse of play and work value. In making gamified work a duty rather than a choice, management may transform the magic circle of the game into an additional form of performance regulations from employees' point of view. Accordingly, even if the organizational environment favors their implementation, managers must carefully design and introduce gamification mechanisms (DeWinter, Kocurek, & Nichols, 2014). Therefore, managers should obtain explicit consent from FLEs who agree to participate, which can moderate some of the potential negative outcomes. In this respect, gamification should be meaningful for the participants (Deterding, 2019; Lucassen & Jansen, 2014; Poncin et al., 2017).

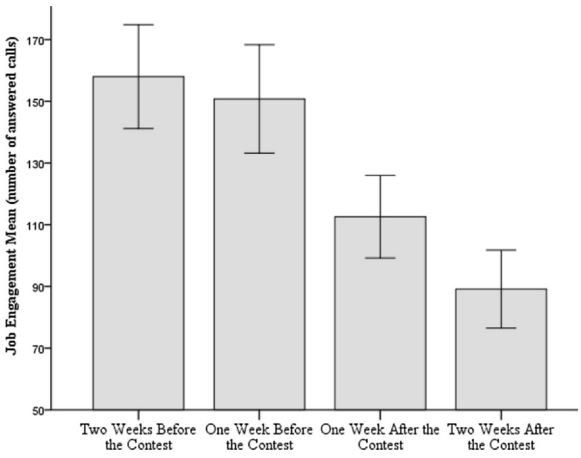
7.3. Limitations and directions for future research

This research has several limitations that offer avenues for future research. We focused on FLEs and the effects of gamification on their engagement and well-being. The service literature also notes a mirror effect, such that when FLEs display positive emotions, customers perceive the service encounter more favorably (Hennig-Thurau, Groth, Paul, & Gremler, 2015). If gamified activities are well designed and implemented, then they should generate positive emotions that in turn, help FLEs deliver higher-quality service experiences. However, gamification can also be harmful to FLEs' satisfaction and engagement, as our findings show, such that they pose the risk of great damage to employees and their organizations if poorly implemented. Studying customers' perceptions of the service quality delivered by an FLE participating in gamified services might thus be insightful. Customers seem to enjoy gamified activities, but employees seem to feel more stressed out by them. Empirical research that includes both sides of the service encounter could determine whether a contagion effect arises in such contexts.

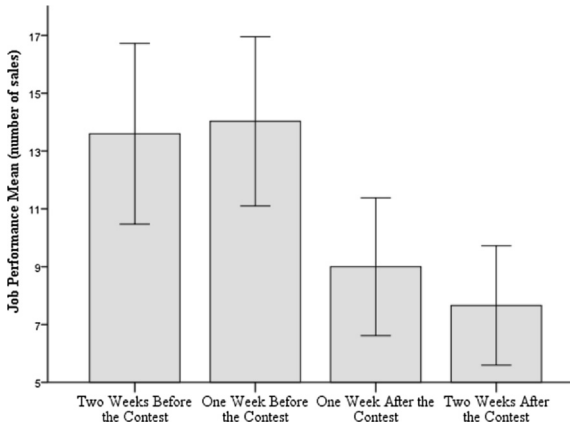
We also suggest further considerations of willingness to participate, which emerged as a key determinant of FLEs' engagement and well-being. For example, experimental studies might compare situations in which participation consent is obtained explicitly or implicitly and then evaluate the different impacts. Furthermore, the process by which employees accept integrating gamification into their work should be further investigated. Therefore, OIT might be a form of insightful theoretical support for understanding how external regulation may be internalized and become intrinsically motivating (Deci & Ryan, 2002). Such a process postulates the need to consider gamification through a longitudinal approach, thus requiring the understanding of the gamification journey (Leclercq et al., in press).

Finally, the selected exploratory qualitative methodology enabled a deeper understanding of the rich nuances of gamified work. These rich findings offer a fertile avenue for future research. Researchers are encouraged to measure how the identified consequences/impact of gamified works not only can be motivated by the level of subject knowledge, personality, and familiarity with the game but can also be supported by organizational factors, such as the hierarchical structure, the perceived managerial control within the company, the structure of the organizational hierarchy, and bureaucratic versus organic organizational forms. A combination of methods, including surveys and diary studies, is suggested. Moreover, experimental designs are highly recommended. Experiments can include stimuli in the form of a scenario describing various organizational structures. In addition, scales could be designed to help measure the various relationships and impacts and identify which ones are stable across different contexts, as opposed to those that are situation- or context-specific. Finally, as this study considered the perceptions of managers and FLEs, researchers are encouraged to employ a multi-actor approach (Svensson, 2006) in future investigations, as doing so could result in a more in-depth understanding of the service phenomenon.

Appendix A. Job engagement means over time



Appendix B. Job performance means over time



References

Agogué, M., Levillain, K., & Hooge, S. (2015). Gamification of creativity: Exploring the usefulness of serious games for ideation: Gamification of creativity. *Creativity and Innovation Management, 24*(3), 415–429.

Aksoy, L., Alkire, L., Choi, S., Kim, P., & Zhang, L. (2019). Social Innovation in Service: A Conceptual Framework and Research Agenda. *Journal of Service Management, 30*(3), 429–448.

Albrecht, S. (2010). *Handbook of employee engagement: Perspectives, issues, research and practice.* United Kingdom: Edward Elgar Pub.

Alexander, M. J., Jaakkola, E., & Hollebeek, L. D. (2018). Zooming out: Actor engagement beyond the dyadic. *Journal of Service Management, 29*(3), 333–351.

Alkire, L., Mooney, C., Gur, F., Kabadayi, S., Renko, M., & Vink, J. (2020). Transformative service research, service design, and social entrepreneurship: An interdisciplinary framework advancing wellbeing and social impact. *Journal of Service Management, 31*(1), 24–50.

Allam, A., Kostova, Z., Nakamoto, K., & Schulz, P. J. (2015). The effect of social support features and gamification on a Web-based intervention for rheumatoid arthritis patients: Randomized controlled trial. *Journal of Medical Internet Research, 17*(1), Article e14.

Anderson, L., Ostrom, A. L., Corus, C., Fisk, R. P., Gallan, A. S., Giraldo, M., ... Williams, J. D. (2013). Transformative service research: An agenda for the future. *Journal of Business Research, 66*(8), 1203–1210.

Avey, J. B., Luthans, F., Smith, R. M., & Palmer, N. F. (2010). Impact of positive psychological capital on employee well-being over time. *Journal of Occupational Health Psychology, 15*(1), 17.

Bakker, A. B., Albrecht, S. L., & Leiter, M. P. (2011). Key questions regarding work engagement. *European Journal of Work and Organizational Psychology, 20*(1), 4–28.

Bakker, A. B., & Demerouti, E. (2007). The job demand-resources model: State of the art. *Journal of Managerial Psychology, 22*(3), 309–328.

Bakker, A. B., & Schaufeli, W. B. (2008). Positive organizational behavior: Engaged employees in flourishing organizations. *Journal of Organizational Behavior, 29*(2), 147–154.

Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work and Stress, 22*(3), 187–200.

Baxter, R. J., Holderness, D. K., Jr, & Wood, D. A. (2016). Applying basic gamification techniques to IT compliance training: Evidence from the lab and field. *Journal of information systems, 30*(3), 119–133.

Belk, R. W. (2013). Extended self in a digital world: Table 1. *Journal of Consumer Research, 40*(3), 477–500.

Bolton, R. N., McColl-Kennedy, J. R., Cheung, L., Gallan, A., Orsingher, C., Witell, L., & Zaki, M. (2018). Customer experience challenges: Bringing together digital, physical and social realms. *Journal of Service Management, 29*(5), 776–808.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27–40.

Bowen, J. T., Tews, M. J., & Baloglu, S. (2019). Yielding the benefits of fun in the workplace. *Organizational Dynamics*.

Boyd, A. (1997). Employee traps-corruption in the workplace. *Management review, 86*(8), 9–10.

Brymer, R. A. (1991). Employee empowerment: A guest-driven leadership strategy. *Cornell Hotel and Restaurant Administration Quarterly, 32*(1), 58–68.

Burroughs, J. E., & Rindfleisch, A. (2002). Materialism and well-being: A conflicting values perspective. *Journal of Consumer Research, 29*(3), 348–370.

Caillois, R., & Barash, M. (2001). *Man, Play and Games (Les jeux et les hommes)*. Urbana and Chicago: University of Illinois press.

Cardador, M. T., Northcraft, G. B., & Whicker, J. (2017). A theory of work gamification: Something old, something new, something borrowed, something cool? *Human Resource Management Review, 27*(2), 353–365.

Chou, Y. K. (2016). *Actionable gamification.* Canada: Leanpub.

Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task performance. *Personnel Psychology, 64*(1), 89–136.

Colbert, A., Yee, N., & George, G. (2016). The digital workforce and the workplace of the future. *Academy of Management Journal, 59*(3), 731–739.

Cooper, C. L., & Cartwright, S. (1994). Healthy mind; healthy organizations-a proactive approach to occupational stress. *Human Relations, 47*(4), 455–471.

Csikszentmihalyi, M. (2020). *Finding flow: The psychology of engagement with everyday life.* UK: Hachette.

Dale, S. (2014). Gamification: Making work fun, or making fun of work? *Business Information Review, 31*(2), 82–90.

Danna, K., & Griffin, R. W. (1999). Health and well-being in the workplace: A review and synthesis of the literature. *Journal of Management, 25*(3), 357–384.

Davis, D. F., Golicic, S. L., & Boerstler, C. N. (2011). Benefits and challenges of conducting multiple methods research in marketing. *Journal of the Academy of Marketing Science, 39*(3), 467–479.

De Keyser, A., Köcher, S., Alkire, L., Verbeeck, C., & Kandampully, J. (2019). Frontline Service Technology infusion: Conceptual archetypes and future research directions. *Journal of Service Management, 30*(1), 156–183.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* New-York: Springer Science.

Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research.* Rochester: University Rochester Press.

De-Marcos, L., Domínguez, A., Saenz-de-Navarrete, J., & Pagés, C. (2014). An empirical study comparing gamification and social networking on e-learning. *Computers & Education, 75*, 82–91.

Deterding, S. (2019). Gamification in management: Between choice architecture and humanistic design. *Journal of Management Inquiry, 28*(2), 131–136.

DeWinter, J., Kocurek, C. A., & Nichols, R. (2014). Taylorism 2.0: Gamification, scientific management and the capitalist appropriation of play. *Journal of Gaming & Virtual Worlds, 6*(2), 109–127.

Doi, Y. (2005). An epidemiologic review on occupational sleep research among Japanese workers. *Industrial Health, 43*(1), 3–10.

Domínguez, A., Saenz-De-Navarrete, J., De-Marcos, L., Fernández-Sanz, L., Pagés, C., & Martínez-HerráIz, J. J. (2013). Gamifying learning experiences: Practical implications and outcomes. *Computers & education, 63*, 380–392.

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.

Eppmann, R., Bekk, M., & Klein, K. (2018). Gameful experience in gamification: Construction and validation of a gameful experience scale [GAMEX]. *Journal of Interactive Marketing, 43*, 98–115.

Faragher, E. B., Cass, M., & Cooper, C. (2005). The relationship between job satisfaction and health: A meta-analysis. *Occupational and Environmental Medicine, 62*(2), 105–112.

Finley, K. (2012). Freshdesk wants to make customer service fun with game mechanics. Sept., 17th, 2012. Retrieved from https://techcrunch.com/2012/09/17/freshdesk-wants-to-make-customer-service-fun-with-game-mechanics/.

Forgeard, M. J. C., Jayawickreme, E., Kern, M. L., & Seligman, M. E. P. (2011). Doing the right thing: Measuring well-being for public policy. *International Journal of Wellbeing, 1*(1), 79–106.

Friedrich, J., Becker, M., Kramer, F., Wirth, M., & Schneider, M. (2020). Incentive design and gamification for knowledge management. *Journal of Business Research. 106*, 341–352.
Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the gioia methodology. *Organizational Research Methods, 16*(1), 15–31.
Giorgi, A. (1994). A Phenomenological Perspective on Certain Qualitative Research Methods. *Journal of Phenomenological Psychology, 25*(2), 190–220.
Glaser, B. G., & Strauss, A. L. (2009). *The discovery of grounded theory: Strategies for qualitative research (4. paperback printing)*. New Brunswick: Aldine.
Groening, C., & Binnewies, C. (2019). "Achievement unlocked!"-The impact of digital achievements as a gamification element on motivation and performance. *Computers in Human Behavior, 97*, 151–166.
Guillaume, Y. R., Dawson, J. F., Otaye-Ebede, L., Woods, S. A., & West, M. A. (2017). Harnessing demographic differences in organizations: What moderates the effects of workplace diversity? *Journal of Organizational Behavior, 38*(2), 276–303.
Gustafsson, A., Högström, C., Radnor, Z., Friman, M., Heinonen, K., Jaakkola, E., & Mele, C. (2016). Developing service research – Paving the way to transdisciplinary research. *Journal of Service Management, 27*(1), 9–20.
Hamari, J., & Koivisto, J. (2015). "Working out for likes": An empirical study on social influence in exercise gamification. *Computers in Human Behavior, 50*, 333–347.
Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work?–a literature review of empirical studies on gamification. *2014 47th Hawaii international conference on system sciences* (pp. 3025–3034). .
Hammedi, W., Leclercq, T., & Van Riel, A. C. R. (2017). The use of gamification mechanics to increase employee and user engagement in participative healthcare services: A study of two cases. *Journal of Service Management, 28*(4), 640–661.
Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education, 80*, 152–161.
Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*(2), 268–279.
Harwood, T., & Garry, T. (2015). An investigation into gamification as a customer engagement experience environment. *Journal of Services Marketing, 29*(6/7), 533–546.
Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach.* Guilford Publications.
Hayes, A. F., & Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods, 41*(3), 924–936.
Hennig-Thurau, T., Groth, M., Paul, M., & Gremler, D. D. (2015). Not all smiles are created equal: How employee-customer emotional contagion impacts service relationships. In H. E. Spotts (Ed.). *Marketing, technology and customer commitment in the new economy* (pp. 254–254).
Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser, W. E. J., & Schlesinger, L. A. (1994). Putting the service profit chain to work. *Harvard Business Review, 72*, 164–170.
Hirschfeld, R. R. (2000). Does revising the intrinsic and extrinsic subscales of the Minnesota satisfaction questionnaire short form make a difference? *Educational and Psychological Measurement, 60*(2), 255–270.
Hollebeek, L. D., Srivastava, R. K., & Chen, T. (2019). S-D logic–informed customer engagement: Integrative framework, revised fundamental propositions, and application to CRM. *Journal of the Academy of Marketing Science, 47*(1), 161–185.
Höllig, C. E., Tumasjan, A., & Welpe, I. M. (2020). Individualizing gamified systems: The role of trait competitiveness and leaderboard design. *Journal of Business Research, 106*, 288–303.
Hong, Y., Liao, H., Hu, J., & Jiang, K. (2013). Missing link in the service profit chain: A meta-analytic review of the antecedents, consequences, and moderators of service climate. *Journal of Applied Psychology, 98*(2), 237–267.
Huang, M.-H., & Rust, R. T. (2018). Artificial Intelligence in Service. *Journal of Service Research, 21*(2), 155–172.
Huotari, K., & Hamari, J. (2017). A definition for gamification: Anchoring gamification in the service marketing literature. *Electronic Markets, 27*(1), 21–31.
Islam, J. U., Hollebeek, L. D., Rahman, Z., Khan, I., & Rasool, A. (2019). Customer engagement in the service context: An empirical investigation of the construct, its antecedents and consequences. *Journal of Retailing and Consumer Services, 50*, 277–285.
Jaakkola, E., & Aarikka-Stenroos, L. (2019). Customer referencing as business actor engagement behavior–Creating value in and beyond triadic settings. *Industrial Marketing Management, 80*, 27–42.
Johnson, D., Deterding, S., Kuhn, K. A., Staneva, A., Stoyanov, S., & Hides, L. (2016). Gamification for health and wellbeing: A systematic review of the literature. *Internet Interventions, 6*, 89–106.
Kabadayi, S., Alkire, L., Broad, G., Livne-Tarandash, R., Wasieleski, D., & Puente, A. M. (2020). Humanistic management of social innovation in service (SIS): An interdisciplinary framework. *Humanistic Management Journal, 4*(2), 159–185.
Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*(4), 692–724.
Kannan, P. K., & Li, H. (2017). Digital marketing: A framework, review and research agenda. *International Journal of Research in Marketing, 34*(1), 22–45 "Alice".
Karl, K., & Peluchette, J. (2006). How does workplace fun impact employee perceptions of customer service quality? *Journal of Leadership and Organizational Studies, 13*(2), 2–13.
Koster, R. (2013). *Theory of fun for game design.* Sebastopol: O'Reilly Media, Inc.
Landers, R. N. (2014). Developing a theory of gamified learning: Linking serious games and gamification of learning. *Simulation and Gaming, 45*(6), 752–768.
Landers, R. N. (2019). Gamification misunderstood: How badly executed and rhetorical gamification obscures its transformative potential. *Journal of Management inquiry, 28*(2), 137–140.
Landers, R. N., Bauer, K. N., & Callan, R. C. (2017). Gamification of task performance with leaderboards: A goal setting experiment. *Computers in Human Behavior, 71*, 508–515.
Larivière, B., Bowen, D., Andreassen, T. W., Kunz, W., Sirianni, N. J., Voss, C., & De Keyser, A. (2017). "Service Encounter 2.0": An investigation into the roles of technology, employees and customers. *Journal of Business Research, 79*, 238–246.
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.
Leclercq, T., Poncin, I., & Hammedi, W. (2020). Opening the blackbox of gameful experience: Implication for gamification process design. *Journal of Retailing and Consumer Services, 52*(1) in press.
Leclercq, T., Poncin, I., & Hammedi, W. (2017). The engagement process during value co-creation: Gamification in new product-development platforms. *International Journal of Electronic Commerce, 21*(4), 454–488.
Leclercq, T., Poncin, I., Hammedi, W., Kullak, A., & Hollebeek, L. D. (2020). When gamification backfires: The impact of perceived justice on online community contributions. *Journal of Marketing Management, 36*(6), 550–577.
Llamas, R., & Belk, R. (2013). *Living in a digital world.* New-York: Routledge.
Lock, E. A. (1976). The nature and causes of job satisfaction. In W. C. Borman, D. R. Ilgen, R. J. Klimoski, & I. B. Weiner (Eds.). *Handbook of industrial and organizational psychology* (pp. 1297–1343). US: Rand McNally College Publishing Company.
Locke, K. (2001). *Grounded theory in management research.* London; Thousand Oaks, California: Sage Publications.
Lucassen, G., & Jansen, S. (2014). Gamification in consumer marketing-future or fallacy? *Procedia-Social and Behavioral Sciences, 148*, 194–202.
Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology, 9*(2), 111–131.
Maltseva, K., Fieseler, C., & Trittin-Ulbrich, H. (2019). The challenges of gamifying CSR communication. *Corporate Communications: An International Journal, 24*(1), 44–62.
Marketing Science Institute (2016). Research Priorities 2016-2018.
Menguc, B., Auh, S., Fisher, M., & Haddad, A. (2013). To be engaged or not to be engaged: The antecedents and consequences of service employee engagement. *Journal of Business Research, 66*(11), 2163–2170.
Mirabito, A. M., & Berry, L. L. (2015). You say you want a revolution? Drawing on social movement theory to motivate transformative change. *Journal of Service Research, 18*(3), 336–350.
Mitchell, R., Schulster, L., & Jin, H. S. (2020). Gamification and the impact of extrinsic motivation on needs satisfaction: Making work fun? *Journal of Business Research, 106*(1), 323–330.
Montoya, A. K., & Hayes, A. F. (2017). Two-condition within-participant statistical mediation analysis: A path-analytic framework. *Psychological Methods, 22*(1), 6–27.
Mülcahy, R., Russel-Bennett, R., & Iacobucci, D. (2020). Designing gamified apps for sustainable consumption: A field Study. *Journal of Business Research, 106*(1), 377–387.
Mülcahy, R., Russell-Bennett, R., & Rundle-Thiele, S. (2015). Electronic games: Can they create value for the moderate drinking brand? *Journal of Social Marketing, 5*(3), 258–278.
Mulcahy, R. F., Russell-Bennett, R., Zainuddin, N., & Kuhn, K. A. (2018). Designing gamified transformative and social marketing services. *Journal of Service Theory and Practice, 28*(1), 26–51.
Mülcahy, R. F., Zainuddin, N., & Russell-Bennett, R. (2020). Transformative value and the role of involvement in gamification and serious games for well-being. *Journal of Service Management* in press.
Müller-Stewens, J., Schlager, T., Häubl, G., & Herrmann, A. (2017). Gamified Information Presentation and Consumer Adoption of Product Innovations. *Journal of Marketing, 81*(2), 8–24.
Mullins, J. K., & Sabherwal, R. (2020). Gamification: A cognitive-emotional view. *Journal of Business Research, 106*, 304–314.
Nakamura, J., & Csikszentmihalyi, M. (2002). The concept of flow. In C. R. Snyder, & S. J. Lopez (Eds.). *Handbook of positive psychology* (pp. 89–105). New York, NY: Oxford University Press.
Nasr, L., Burton, J., & Gruber, T. (2015). When good news is bad news: The negative impact of positive customer feedback on front-line employee well-being. *Journal of Services Marketing, 29*(6/7), 599–612.
Nasr, L., Burton, J., Gruber, T., & Kitshoff, J. (2014). Exploring the impact of customer feedback on the well-being of service entities: A TSR perspective. *Journal of Service Management, 25*(4), 531–555.
Oppong-Tawiah, D., Webster, J., Staples, S., Cameron, A.-F., de Guinea, A. O., & Hung, T. H. (2020). Developing a gamified mobile application to encourage sustainable energy use in the office. *Journal of Business Research, 106*, 388–405.
Oravec, J. A. (2015). Gamification and multigamification in the workplace: Expanding the ludic dimensions of work and challenging the work/play dichotomy. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 9*(3).
Ostrom, A. L., Parasuraman, A., Bowen, D. E., Patrício, L., & Voss, C. A. (2015). Service research priorities in a rapidly changing context. *Journal of Service Research, 18*(2), 127–159.
Penn, M., Romano, J. L., & Foat, D. (1988). The relationship between job satisfaction and burnout: A study of human service professionals. *Administration in Mental Health, 15*(3), 157–165.
Poncin, I., Garnier, M., Mimoun, M. S. B., & Leclercq, T. (2017). Smart technologies and shopping experience: Are gamification interfaces effective? The case of the Smartstore. *Technological Forecasting and Social Change, 124*, 320–331.
Price, R. H., & Hooijberg, R. (1992). Organizational exit pressures and role stress: Impact on mental health. *Journal of Organizational Behavior, 13*(7), 641–651.

Rafiq, M., & Ahmed, P. K. (2000). Advances in the internal marketing concept: Definition, synthesis and extension. *Journal of Services Marketing, 14*(6), 449–462.
Rapp, A. (2017). From games to gamification: A classification of rewards in world of Warcraft for the design of gamified systems. *Simulation Gaming, 48*, 381–401.
Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: antecedents and effects on job performance. *Academy of Management Journal, 53*(3), 617–635.
Robertson, I., & Cooper, C. (2011). *Well-being: productivity and happiness at work.* Basingstoke, UK: Palgrave MacMillan.
Robson, K., Plangger, K., Kietzmann, J. H., McCarthy, I., & Pitt, L. (2015). Is it all a game? Understanding the principles of gamification. *Business Horizons, 58*(4), 411–420.
Robson, K., Plangger, K., Kietzmann, J. H., McCarthy, I., & Pitt, L. (2016). Game on: Engaging customers and employees through gamification. *Business Horizons, 59*(1), 29–36.
Rogers, J. D., Clow, K. E., & Kash, T. J. (1994). Increasing job satisfaction of service personnel. *Journal of Services Marketing, 8*(1), 14–26.
Rosenbaum, M. S., Corus, C., Ostrom, A. L., Anderson, L., Fisk, R. P., Gallan, A. S., ... Williams, J. D. (2011). Conceptualization and aspirations of transformative service research. *Journal of Research for Consumers, 19*, 1–6.
Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in organizational behavior, 30*, 91–127.
Rothmann, S. (2008). Job satisfaction, occupational stress, burnout and work engagement as components of work-related wellbeing. *Journal of Industrial Psychology, 34*(3), 11–16.
Salen, K., Tekinbaş, K. S., & Zimmerman, E. (2004). *Rules of play: Game design fundamentals.* MIT Press.
Scheiner, C. W. (2015). The motivational fabric of gamified idea competitions: The evaluation of game mechanics from a longitudinal perspective: Motivational fabric of gamified idea competitions. *Creativity and Innovation Management, 24*(2), 341–352.
Schepers, J. J., Nijssen, E. J., & van der Heijden, G. A. (2016). Innovation in the frontline: Exploring the relationship between role conflict, ideas for improvement, and employee service performance. *International Journal of Research in Marketing, 33*(4), 797–817.
Shankar, V. (2016). Mobile marketing: The way forward. *Journal of Interactive Marketing, 34*, 1–2.
Sias, P. M. (2005). Workplace relationship quality and employee information experiences. *Communication Studies, 56*(4), 375–395.
Sias, P. M., Krone, K. J., & Jablin, F. M. (2002). An ecological systems perspective on workplace relationships. *Handbook of Interpersonal Communication, 3*, 615–642.
Simonton, D. K., & Baumeister, R. F. (2005). Positive psychology at the summit. *Review of General Psychology, 9*(2), 99–102.
Speier, C., & Venkatesh, V. (2002). The hidden minefields in the adoption of sales force automation technologies. *Journal of Marketing, 66*(3), 98–111.
Steger, M. F., Littman-Ovadia, H., Miller, M., Menger, L., & Rothmann, S. (2013). Engaging in work even when it is meaningless: Positive affective disposition and meaningful work interact in relation to work engagement. *Journal of Career Assessment, 21*(2), 348–361.
Stewart, D., & Shamdasani, P. (2007). *Focus groups theory and practice* (3rd éd.). London: Sage Publications.
Strauss, A., & Corbin, J. M. (1998). *Grounded theory in practice.* London: SAGE Publications Inc.
Subramony, M., Ehrhart, K., Groth, M., Holtom, B. C., van Jaarsveld, D. D., Yagil, D., & Wirtz, J. (2017). Accelerating employee-related scholarship in service management: Research streams, propositions, and commentaries. *Journal of Service Management, 28*(5), 837–865.
Suh, A., Cheung, C. M., Ahuja, M., & Wagner, C. (2017). Gamification in the workplace: The central role of the aesthetic experience. *Journal of Management Information Systems, 34*(1), 268–305.
Svensson, G. (2006). Multiple informants and asymmetric interactions of mutual trust in dyadic business relationships. *European Business Review, 18*(2), 132–152.
Tanouri, A., Mülcahy, R., & Russell-Bennett, R. (2019). Transformative gamification services for social behavior brand equity: A hierarchical model. *Journal of Service Theory and Practice, 29*(2), 122–141.
Taris, T. W., & Schreurs, P. J. G. (2009). Well-being and organizational performance: An organizational-level test of the happy-productive worker hypothesis. *Work and Stress, 23*(2), 120–136.
Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research, 6*(2), 144–176.
Thomas, R. W., Soutar, G. N., & Ryan, M. M. (2001). The selling orientation-customer orientation (SOCO) scale: A proposed short form. *Journal of Personal Selling & Sales Management, 21*(1), 63–69.
Tuten, T. L., & Neidermeyer, P. E. (2004). Performance, satisfaction and turnover in call centers. *Journal of Business Research, 57*(1), 26–34.
van Doorn, J., Mende, M., Noble, S. M., Hulland, J., Ostrom, A. L., Grewal, D., & Petersen, J. A. (2017). Domo Arigato Mr. Roboto: Emergence of automated social presence in organizational frontlines and customers' service experiences. *Journal of Service Research, 20*(1), 43–58.
Verhoef, P. C., Reinartz, W. J., & Krafft, M. (2010). Customer engagement as a new perspective in customer management. *Journal of Service Research, 13*(3), 247–252.
Vesa, M., Hamari, J., Harviainen, J. T., & Warmelink, H. (2017). Computer games and organization studies. *Organization Studies, 38*(2), 273–284.
Wallace, C. M., Eagleson, G., & Waldersee, R. (2000). The sacrificial HR strategy in call centers. *International Journal of Service Industry Management, 11*(2), 174–184.
Wang, Y., Zheng, L., Hu, T., & Zheng, Q. (2014). Stress, burnout, and job satisfaction: Case of police force in China. *Public Personnel Management, 43*(3), 325–339.
Warmeling, H., Koivisto, J., Mayer, I., Vesa, M., & Hamari, J. (2020). Gamification of production and logistics operations: Status quo and future directions. *Journal of Business Research, 106*, 331–340.
Weehuizen, R. M. (2008). *Mental capital: The economic significance of mental health.* Nederlands: Universitaire Pers Maastricht.
Wilson, H. N. (2019). Collective engagement: Four thought-shackles and how to escape them. *Industrial Marketing Management, 80*, 24–26.
Wirtz, J., & Jerger, C. (2016). Managing service employees: Literature review, expert opinions, and research directions. *The Service Industries Journal, 36*(15–16), 757–788.
Wolpin, J., Burke, R. J., & Greenglass, E. R. (1991). Is job satisfaction an antecedent or a consequence of psychological burnout? *Human Relations, 44*(2), 193–209.
Wright, T. A. (2006). The emergence of job satisfaction in organizational behavior: A historical overview of the dawn of job attitude research. *Journal of Management History, 12*(3), 262–277.
Wrzesniewski, A., Dutton, J. E., & Debebe, G. (2003). Interpersonal sensemaking and the meaning of work. *Research in organizational behavior, 25*, 93–135.
Wünderlich, N. V., Gustafsson, A., Hamari, J., Parvinen, P., & Haff, A. (2020). The great game of business: Advancing knowledge on gamification in business contexts. *Journal of Business Research, 106*, 273–276.
Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research, 37*(2), 197–206.
Zwetsloot, G., & Pot, F. (2004). The business value of health management. *Journal of Business Ethics, 55*(2), 115–124.

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