The Corporate (Magic) Circle: Fun Work or Controlled Play?

Franz Coelho · Ana Maria Abreu

Accepted: 2 September 2022 / Published online: 16 September 2022
© Association for Educational Communications & Technology 2022

Abstract

Entertainment games have traditionally been articulated as leisure. However, they have also been used in the work context, in the form of serious games or gamification. In this qualitative research, we aimed to investigate the purpose of games used in the work context. To accomplish this, we conducted six semi-structured interviews and analyzed the discourses of the heads of the companies that produce serious games or gamification projects for work environments. Based on these statements, we assessed the views of the work context, the workers, and the projects the companies produce. We found that games have acquired different purposes, such as employee control to increase organizational results or enhance workers’ happiness and wellbeing. Although these purposes seemed to stand out in all the analyzed speeches, several other different purposes emerged, according to the conditions of entry into the market and the type of projects produced.

Keywords Corporate education · Employee control · Gamification · Serious games · Technology · Wellbeing

Introduction

Historically, games predate human existence and represent a voluntary dissociation from everyday life, an immersive activity that has its own rules and spaces, such as a magic circle, that is a new world outside reality (Duggan, 2016; Huizinga, 1980). In a more modern view, games are seen as a system of rules, with quantifiable results, where the player employs an effort and is emotionally attracted to perform activities with negotiable consequences (Juul, 2005; Stenros, 2016).

Over the years, games have been produced for consumption through a phenomenon known as ludification of culture, for which the game industry has gained importance with the advance of digital and mobile technologies (Glas et al., 2019). The ludification of culture brings a playful lens to understand the culture concerning media and play, which has influenced the way people interact with each other, repurposing the environments and society (Glas et al., 2019). Games have emerged from a leisure activity to invade everyday reality, spreading the play as a practice, and transforming public and private spaces into ludic environments, denominated as the Era of Games or the emergence of Ludic Society (Mäyrä, 2017). Here, we aim to analyze and discuss games that were once a social activity of leisure but found a new context of use: work.

Free time should be understood as any time freed from work occupations, part of which can be focused on leisure activities (Elias & Dunning, 1986). These authors state that the degree of the routine of everyday life activity can be categorized in a spectrum with the following categories: 1) free time routines, which represent most routine activities, such as family routines; 2) training activities, self-satisfaction, and self-development, such as volunteering work; 3) leisure activities, which represent fewer regular activities, such as social activities, playing and games. According to this theory, the work routine is situated as the most regulated and controlled activity of modern societies, which can exert strong social pressure on the person, while leisure represents a form of relaxation to produce stimulation and joy, providing, for a brief time, the eruption of strong pleasant feelings that are often absent in usual life. Work activities may be
related to job stress, which is negative to the mental health and well-being of employees while also negatively affecting productivity and job satisfaction (Bagheri Hosseinabadi et al., 2018; Jebelli et al., 2018; Park et al., 2020). On the Other hand, leisure activities may facilitate stress alleviation, enhance well-being and positively affect mental health and cognitive and physical functions (Sala et al., 2019; Shen et al., 2022). In this vein, some organizations have used leisure at work, integrating leisure activities inside the workspace, as it can increase employee personal expressiveness and flourishing, which is related to authenticity (i.e., freely behaving, and thinking by core values), well-being, mental health, and happiness, positively impacting work identification, engagement, resilience, and performance (Fabricio et al., 2020; Haddon, 2018; Lacanianeta et al., 2019).

The use of games within the corporate setting is not something new and it is accomplished in the form of serious games and gamification. Serious games have been used since 1970. These consist of problem-solving activities built as models of reality, or indirectly connected to it, which have a fun approach, usually for an educational purpose (Deterding et al., 2011b; Flores, 2019; Larson, 2019; Wilkinson, 2016). Gamification, on the other hand, is a much newer concept that emerged in 2008 and consists of the use of game elements, integrating other processes or contexts with parts of a game, to motivate, engage and stimulate its users (Deterding et al., 2011b; Larson, 2019). Both terms derive from “game” and can be applied in non-digital (analog) and digital environments (Deterding et al., 2011a, b). Non-digital promote a more interacting environment, give the players a wider sense of choice, and are more flexible in design, content, and platforms (Talan et al., 2020). On the other hand, digital environments are related to computers or other electronic tools, they are more complex and realistic structures and normally attract digital native people, i.e., those who have been influenced by digital technology since they were born (Talan et al., 2020).

Organizations have sought to use serious games and gamification in the corporate context to improve the performance, engagement, happiness, wellbeing, learning, and motivation of employees (Darejeh & Salim, 2016; Ferreira et al., 2017; Gerdenitsch et al., 2020; Hammredi et al., 2021; Hookham & Nesbitt, 2019; Korn et al., 2015; Wanick & Bui, 2019). According to the literature (Ferreira et al., 2017), the main dimensions related to the use of serious games and gamification are 1) The Human Resources Management System, i.e., employee selection, talent management, training, performance, communication, and innovation practices; 2) Psychological states, i.e., motivation, well-being, enjoyment, engagement, emotions, stress, and creativity; 3) Organizational results, i.e., productivity, team performance, and team productivity.

The diversity in culture, age, and gender aroused new needs for corporate training, specifically related to psychological, emotional, and ethnographic aspects (Larson, 2019). Thus, companies of all sizes have adopted serious games or gamification to enhance their educational and development program, as they have the potential to improve the capability of the workforce and increase self-efficacy (Larson, 2019), by making sense of playfulness and fun (Darejeh & Salim, 2016). Thus, the use of serious games or gamification within the context of work seems to symbolize an attempt to blend leisure with the corporate world.

Considering the extant literature on this subject, there are some limitations. First, there are few studies concerning the variations of gaming applications within different cultures and organization profiles (Wanick & Bui, 2019). Second, researchers tend to consider digital applications only (Hookham & Nesbit, 2019). Third, investigations on this subject are recent and have gained relevance in the scientific environment of various areas of knowledge, but there are still few studies concerning serious games or gamification within the corporate context, compared to other contexts, such as the educational one (Bozkurt & Durak, 2018). Finally, to our knowledge, there is no research seeking to qualitatively understand how companies that produce serious games or gamification view the purpose of implementing those projects in their clients’ corporate settings. We aim to fill these gaps by exploring the phenomenon of gamification and serious games in corporate settings with a qualitative approach, evaluating how the companies are applying gamification and serious games, and why they are doing so.

Having said that, we address four hypotheses:

H1: Since gamification is a more recent phenomenon, it has implied different purposes for using serious games or gamification in corporate settings.

H2: Since the application of serious games and gamification can be analog or digital, we propose that those different applications have implied distinct purposes in corporate settings.

H3: The work context is seen as stressful for workers and serious games, or gamification are being used to promote well-being and happiness.

H4: The use of serious games or gamification has the purpose of controlling and monitoring the employees, which is related to corporate results.

Methodology

A qualitative approach was used in this research to analyze the speeches of the companies that develop serious games or gamification for corporate settings (Fig. 1).
Sampling

We used a criterion sampling strategy (Creswell & Cheryl, 2013), by choosing the companies that produce any kind of serious game or gamification for corporate settings located in the city of São Paulo, to afford physical access. We searched online for companies that produced analog or digital serious games or gamification and selected 14 of them. Then, we established an initial contact (by phone or email) to identify the projects developed by those companies and if the owner or a director of each of these companies might be accessible and interested in participating in an interview. From the 14 companies initially selected, which constituted those with interview potential, six of them agreed to schedule a meeting (Table 1). To attend to ethical issues and to preserve the identity of the interviewees, the companies in this research were labeled with a letter from A to F (Creswell & Cheryl, 2013). Henceforth, we will refer to “serious games or gamification” produced by the interviewed companies as “projects” to simplify the analysis. Also, we will refer to the interviewees as “company” and their clients (or any other business) as “organization”.

Data Collection

To collect data from an in-depth interview, we used a semi-structured script (Fig. 2), which was audio recorded and transcribed. The script was created to guide the interview and assure that we would understand the experiences, points of view, opinions, and reflections of the interviewee about the use of their projects in corporate settings. All the interviews took place in the offices of the companies and lasted approximately 1h30m (the translated raw data of the transcription is available in the Open Science Framework (OSF) repository at https://doi.org/10.17605/OSF.IO/7CF2N and can be accessed via this link: https://osf.io/7cf2n/?view_only=3847f1f49afec49aea746c0d4f606a379).

Data Analysis

According to our hypothesis, the influence of gamification may impact speech, as it is something newer in the world, and analog and digital projects may serve different purposes (Deterding et al., 2011a, b). Having said that, we considered the following variables: 1) conditions of entry into the market (influenced by gamification or not) and 2) types of projects the companies offer (digital and non-digital). By “conditions of entry into the market”, we refer to how the phenomenon of gamification (that is newer compared to serious games) might have impacted the companies founded post-gamification, possibly introducing different concepts into their speeches. We thus divided the interviewed companies into four slots, representing their position in the market. This division is illustrated in Fig. 3.

We adopted the Data Analysis Spiral Strategy to organize and evaluate all the collected information (Creswell & Cheryl, 2013). First, we transcribed and read the recorded material to organize ideas, classify data, and group the similarities of the speeches into clusters, i.e., codes, e.g., some companies said that people who interact with the projects are young while others said that people of all ages interacted, so we separated the speeches into two codes: “young” and “all ages”. Second, we aggregated several similar codes to form a common idea in categories, i.e., themes, e.g., we aggregated the “young” and “all ages” codes into the “generation” theme. Third, we grouped themes in broader categories of information, i.e., major themes, e.g., together with “generation”, we discovered that other themes described the

| Company | Foundation | Type of project | Observation |
|---------|------------|----------------|-------------|
| A       | 1997       | Digital        | Started to work with projects only after 2012 due to the birth of gamification |
| B       | 1999       | Analog         | Started to work with projects since 1999 |
| C       | 2001       | Digital        | Started to work with projects since 2001 |
| D       | 2001       | Digital        | Started to work with projects since 2001 |
| E       | 2003       | Analog         | Started to work with projects only after 2012 due to the birth of gamification |
| F       | 2013       | Digital        | Started to work with projects since 2013 due to the birth of gamification |
Fig. 2 Interview script

Date:

Place:

Company:

Interviewee:

Questions:

1. How old is the company?
2. What do you understand by gamification and serious games?
3. What types of serious games or gamification do you produce?
   a. When did you start to produce them?
   b. What are the differences that you see between the types you mentioned?
4. Please describe the company process, from client prospecting to production.
5. Who are your clients?
6. In your opinion, how has the market performed in the last years?
7. Which are the 2 biggest cases (projects) of the company?
   a. What were the results of these cases (projects)?
8. Do you use serious games or gamification with the workers of your clients?
   a. Do they participate?
   b. How do they feel?
9. How do you see the future of this market?

Fig. 3 Slot constitution in function of the different variables of interest
worker who interacts with the projects, so we put all those themes together under the major theme of “worker”. Fourth, we interpreted the data and created visual representations to explain the relationship between the codes, themes, and major themes, constructing models to better understand the collected speeches, e.g., the work context demands training, but as the workers are young and defocused, they need games to pay more attention. Thus, codes are the smaller unit of information, themes are the medial unit of information, and major themes are the broader units of information. To illustrate this fourth step, we added examples of projects produced by the companies and some excerpts from the interviews. However, the information related to the projects is scant because the clients themselves prohibit this type of disclosure.

Results

From the analysis of all the data collected from the interviews, we discovered that the interviewees articulated their discourses to define the way their products were built (the projects) by the way they imagine the work context and their clients’ workers to whom they direct their products. Thus, we divided the data into several codes and themes that were grouped into three major themes (Fig. 4): 1) the work context, 2) the workers, and 3) the projects. The coding and theming of the information was conducted by the researchers, reflecting an interpretative aspect of qualitative research. However, the gathered information translates the perceptions of the participants, i.e., the interviewed companies.

The Work Context

When analyzing the speeches of all interviewees, we grouped the similarities (codes) into categories (themes) of what the interviewees said about their clients’ work context (major theme). We found that some expectations and projections occur in the interviewees’ discourse, concerning this major theme of work context, which requires the themes: 1) recruitment and integration, 2) excitement and control, and 3) focus and concentration. These themes are formed by different codes, according to Fig. 5, and represented differently by each group of analysis (Table 2).

Recruitment and Integration

The clients’ work context in the eyes of the interviewed companies requires different ways of recruiting and integrating their employees, since they demand that their workers pay attention and increase their participation in training (slots 1 and 2), participate and interact in digital systems, and tools (slot 3) and engage in all business processes and activities (slot 4). In this theme, we will analyze the aspect of recruitment of new employees and the integration of current workers. We note that, in slot 4, the influence of gamification resizes the applicability of projects within the context of work beyond the specific use in training, defending its use in the more global dimension of the work environment, to which workers must adhere and commit to the organization culture, demonstrating involvement and engagement within their corporate context.
Excitement and Control

For companies of slots 1 and 2, their clients’ work context needs more joy. Companies in slot 1 suggest that the use of analog projects is only occasional, and organizations need to relax workers, relieving their tensions of daily routines with a break. For slot 2, companies seem to have a much broader purpose, stemming from the influence of gamification, which aims to promote a pleasant work environment and provide greater well-being and happiness for workers. Conversely, companies that produce digital projects (slot 3) portray the work context as driven towards increased results, data measurement, and worker control. This slot also assumes that the phenomenon of using games in the business context is related to the fact that organizations (clients) use games as a way of appropriating the free time of workers, previously not destined for work. For the interviewees in slot 3, games are part of our daily lives and a way to fulfill our free time, so this time could be appropriated by organizations, transforming, through play, free time in working time, or converging a practice associated with free time to work. Slot 4 merges both views of the influence of gamification of group 2, with the controlling perspective of slot 3, highlighting the need for organizations to motivate their employees, and satisfy their needs, while increasing organizational results. For this slot, work requires the retention of its employees, since, for the interviewees, the constant departure of employees ends up being a problem for the organizations, which contextualizes the need to keep them happy.
Focus and Concentration

For all interviewees, their clients’ work context requires focus and concentration of their workers in work activities. For slots 1 and 3, a lack of focus occurs more frequently in young people, because they are constantly stimulated by the most diverse technologies in daily life, so it is necessary to motivate them correctly, i.e., through the projects, aimed to focus their attention. For slots 2 and 4, the lack of focus of workers is deemed to be caused by numerous digital stimuli emerging from mobile phones, social networks, and the Internet in general, but the interviewees do not relate these distracters to the age of workers, i.e., they are for everyone.

The Workers

Analyzing the speeches of all interviewees, we grouped the codes into themes of what the interviewees suggested about their clients’ workers (major theme). The major theme of work context described before is articulated to the characteristics of the clients’ workers, which constitutes the second major theme of this research. The themes that form the major theme of the workers were identified as 1) the humanized worker, 2) generations, and 3) subjectivity and interest. Each one of these themes is formed by different codes, according to Fig. 6, and represented differently by each slot analysis (Table 3).

![Fig. 6 Major theme: The workers](image-url)

| Codes | The humanized worker | Generations | Subjectivity and interest |
|-------|----------------------|-------------|--------------------------|
| Slot 1 | X                    | X           | X                        |
| Slot 2 | X                    | X           | X                        |
| Slot 3 | X                    | X           | X                        |
| Slot 4 | X                    | X           | X                        |
The Humanized Worker

All the companies surveyed, referred to their employees as "collaborators" or "people", and not as workers, during their discourses. When the interviewed companies built the image of the work context that recruits their employees through training, support, and engagement, they conceive that these workers, when recruited, should integrate into the organization by seeking the goals outlined together, and valuing their importance.

Generations

For slots 1 and 3, the workers that interact with the projects are viewed as generally young and lacking focus. According to these slots, young people are dynamic, they often use various technologies, and they are often on multiple screens in their daily life: mobile phones, tablets, computers, and TV, sometimes simultaneously. Thus, for these slots, young people adapt more easily to interactive (digital) technologies.

For slots 2 and 4, the contemporary worker need not necessarily be young, but rather, happy. Thus, slots 2 and 4 argue that there are different ways to develop projects, according to the public, but fun is inherent to such activities and required by everyone, regardless of age. That is, it considers the projects as a springboard for the full happiness of workers and not to solve a one-off problem of the organization.

Subjectivity and Interest

For slot 1, the worker's image is of a young person who shows disinterest and inattention to the training processes of the organization, and for slot 3 this disinterest is associated with the distractions stemming from the use of digital tools and processes. For these slots, inattention, and disinterest in work happen because of various stimuli that young people get throughout the day, resulting from technologies and the Internet, which compromises their concentration and focus on work activities.

For slots 2 and 4, since they are more influenced by gamification, they argue that the lack of interest and focus arises from a demotivation that generates unhappiness associated with the work environment. For slot 4, this unhappiness ends up being so important that the need to keep workers happy at work is crucial to retain them, and avoid turnover, otherwise, workers might change jobs, i.e., unhappy workers are seen as disloyal.

The Projects

Analyzing the speeches of all interviewees, we grouped the codes into themes of what the interviewees said about their projects, which were implemented inside their clients (major theme). Considering the discourse concerning the elements that are mainly used in the construction of a project, we created the major theme of the projects resulting from the aggregation of the following themes: 1) objectives and rules; 2) fun and playful elements; 3) rewards and prizes; 4) feedback; 5) challenges and recognition; and 6) autonomy. Each one of these themes is composed of different codes, as described in Fig. 7, and represented differently by each slot analysis (Table 4).

Setting

For slots 1 and 2, the projects are only adopted when their clients have very clear processes, training, and objectives, because, in the view of these companies, the project acts as an accessory to facilitate the absorption of the content to be transmitted. We noticed that both the objectives and the rules of the project are conditioned to pre-existing material in the organization, i.e., the organization's mission or guidelines, which are incorporated into the activity more playfully, involving the workers in a fun situation for a one-off moment within working hours.

For the companies of slots 3 and 4, the presence of objectives and rules in the projects serves to measure the performance and behavior of the workers. As discussed before, companies from these slots are focused on digital environment projects at work and mention a greater need to monitor employees than other interviewed slots. For slots 3 and 4, this happens through the adherence of employees to digital tools and their interaction within a system developed with rules, which, in turn, identifies which behaviors fit better with the objectives that the organization defined. For these companies, the construction of a computational system allows greater traceability and storage of the players' (workers') data. Only slot 4 considered autonomy to be related to acting freely within a more rigid structure, where the "player" has the freedom to pursue the objectives, as the context allows, instigating a "ruled freedom".

Ludic

The ludic theme was also present in all companies' speeches, but in different ways. The fun of conventional entertainment games is present in the discourses of companies that produce analog projects (slots 1 and 2) and, for these slots, fun is tied to the projects by their character of stress relief by releasing routines (slot 1) and promoting happiness (slot 2). On the other hand, the use of the word "playful" to qualify the projects in the work context, mentioned in slots 3 and 4, has a different connotation. For those who produce digital projects, "playful" refers to the coercive character present in the projects, despite having intentions to make the activity more
enjoyable, only to be able to grab the workers’ attention. It seems that, in the view of these companies, the projects have the purpose of making the worker perceive their own work as more pleasant, which should motivate them to work better and increase performance.

**Incentive**

For slot 3, the reward is linked to an incentive for the user to participate in the (digital) project and to generate adherence to what is being proposed through the tool (which can be a training, process, or any of the organization activity). Thus, for this slot, by offering rewards the workers become focused and interested, maintaining constant interactions with the digital system that will be used to monitor and map their behaviors by the organization.

For slots 2 and 4, the idea behind the reward is the same. However, instead of perceiving workers as a homogeneous mass driven by incentives and fixed rewards, they recruit workers based on their profile and their possible motivations (intrinsic or extrinsic), to use these motivations as an artifice to make them happier to achieve a certain organizational goal, e.g., if a person likes to collect things, some achievement incentives could motivate that person; or if a person is very competitive, a leaderboard could be also a factor of motivation.

Beyond the reward, the notion of feedback is only present in the discourse of companies that work with digital projects (slots 3 and 4) and is tied, therefore, to the real-time automation of reactions and responses to the interactions that these systems allow. In these slots, beyond showing the worker the progress they have achieved in certain training, or activity, feedbacks also serve as information for control and monitoring by managers, who evaluate the performance of each user within the system.

**Competition**

For slot 4, the projects have the purpose of transforming the organizations’ goals into challenges to be achieved, which,
for them, motivates workers to pursue them, increasing organizational results. According to the companies in this slot, after achieving these results, it is up to the projects to provide recognition to players through medals, trophies, levels, motivational messages, or even through feedback, or rewards (as previously addressed), so that, in recognizing the workers’ achievements, they remain motivated to pursue the subsequent challenges, influencing their idea of social status.

**Visual Representations and Examples**

Here we discuss the existing relationships within the codes of the themes and major themes, articulating all the discourses of the different slots. Some interview excerpts and generic information about the projects that all companies produced are transcribed to better illustrate the attribution of the different codes.

Analyzing slot 1, workers are recruited through training, and, to achieve optimal recruiting, the work context needs greater focus and joy for the employees (who, in turn, are seen as young people who are defocused and disinterested in their activities) and control from the employers. Thus, for this slot, it is through fun elements of analog projects, linked to the objectives and rules of training, that the organization can train its employees more efficiently. This is described in the graphical representation in Fig. 8.

“As time goes by, young people need more and more stimulation, as they are more dynamic and are more used to playing games, due to this technological diffusion that we had. It is more difficult today to let a 25-year-old person sit than a person who is 60 years old, who was a little more trained for this and who, given their age, is calmer and willing to stand still. (...) Mobile phones in a corporate training session room represent a dispute for attention with the teacher, and the game ends up being an efficient tool to hold that person’s attention instead of a mobile phone.” (Company B)

“Games end up being a relaxed environment, which is positive in companies, as it goes against the stress and rigid hierarchical relationships of organizations. When you watch a soap opera, you know that it’s all fake, but there comes a time when you immerse yourself in that context in a way that essentially connects with that; and the game provides the same thing. Often, the customer also knows that a person spends hours a day browsing on a computer, tablet, or mobile phone and ends up opting for the opposite direction, demanding

![Fig. 8 Graphical representation of slot 1 discourse](image-url)
that they take these people off those screens and do something in person.” (Company B)

As an example of a project from this slot, Company B developed for its client a training program in the marketing department, because employees needed to understand the entire process of the other related departments. Through a board game, a playful walkthrough was developed, based on the organizations’ processes. The players had a deadline to launch a product, and for this, they had to go through all the areas involved, understanding their roles and the position they had throughout the course. According to the interviewee, the organization used the same content that would be used in a training session, but people were amused and had fun.

For slot 2, workers are recruited and integrated through training that needs focus and greater control of their employees. However, instead of requiring only joy and tension relief, they need them to be happy at work, because this putatively leads to more efficient work. According to this slot, this demand occurs, because all workers need to be integrated, not only young people, since they are unhappy, defocused, and disinterested in their work. To achieve this engagement, analog projects are built by focusing on fun, objectives, rules, rewards, and prizes, to motivate employees to with what interests them the most. Figure 9 depicts the graphical representation of these ideas.

“People play because it’s fun, and fun […] has no age group. […] games have been present in civilizations in diverse ways, as Huizinga himself defended in his book, ‘Homo Ludens’. There may be a difference in the type and form of the game according to the audience, but not in the act of playing itself. It is necessary to assess what is interesting for that profile of people and for that context. Player acceptance in general is the best you can imagine. It’s much better for you to participate in a fun solution than for you to be there all day bored.” (Company E)

“Over time, we started to look at organizations as a place to be happy, but in the past, it wasn’t like that. The word ‘work’ came from the Latin tripalis, which was an instrument of torture used in the past. Therefore, work was related to painful things. Today we know that this is not true. Working is a very pleasant thing if you do what you want and if that is aligned with your values. Why not be happy at work? Why not be fun? When we ask ourselves why not be fun, we are automatically attaching games to context.” (Company E)

---

**Fig. 9** Graphical representation of slot 2 discourse
As an example of a project from this slot, Company E developed a group dynamic experience to instruct people to better manage their time, so that they might organize themselves to read emails, fulfill their daily activities, and complete undone work issues. Depending on how people proceeded, points, prizes and bonuses would be given to them as incentives to learn how to manage their routines. Even though no further information concerning this project was shared, the company reported that the learning results with the employees were great.

For slot 3, the recruitment and integration of employees occur through the adherence of workers to the organization’s digital tools. In doing so, the workers focus more, and it is possible to control and map them better. For the companies in this slot, the need to control occurs, because workers are mostly young people who are defocused and disinterested in their work, mainly due to the numerous stimuli they are exposed to, daily. Thus, the slot argues that digital projects offer rewards and prizes, feedback, and playful elements which motivate such young people to be more concentrated, while the objectives and rules of the system are used to map behaviors within the project. Figure 10 depicts the graphical representation of these ideas.

“The tools are interesting insofar as they can provide a mapping of what is being done, providing information for the company. Taking the assessment games as an example, it is possible to measure people’s behavior through games, as we score the person according to the actions he takes within a system. People in these games know they are being evaluated, but what companies are looking at are the decisions they make within the tool and not the results they get. What is interesting about these processes is that in person, after participating in the game, it is possible to reaffirm the same behaviors that people had in the game.” (Company C)

“Everyone plays anywhere, whether on their mobile phone or any other platform. Organizations are just taking (this information) and bringing it to their reality. The trend is that this will increase, because before the person worked all day to be able to play football on the weekend with friends since it was the only entertainment. Today, people are already challenging each other through their mobile phones in various games throughout the day. It is part of the current reality, so organizations are adapting to this reality. If everyone likes to play games, why not play games with themes that pertain to that organization?” (Company C)
The gamification processes are generally adopted because organizations can use the information to help improve internal processes and to increase productivity. Through these systems, it is possible to set an objective for the employee and encourage the employee to develop the necessary skills to achieve it. In this process, it is very important to access the registered employee information, to identify the strengths and weaknesses of the employees.” (Company D)

“This phenomenon has a lot to do with the current generation, as it is difficult to focus on something that is not of interest, as they easily disperse. If you bring content from their daily life, it is easier for them to retain it, as they are more used to that way of transmitting it, that is, through games.” (Company D)

As an example of a project from this slot, Company C developed a project to make employees of an organization aware of the new processes it was adopting that needed to be followed, as there had occurred a procedural change within the organization. As workers followed the correctly designed business processes, they were rewarded with scores, and, when they did not follow them properly, they were penalized. According to Company C, they learned the processes and became aware of the impact that their decisions had on the processes of other departments related to their own.

As another example, Company D developed a gamified career platform, in which the employees could visualize their career plan within the organization and what would be the requirements needed to move up. Through a job guide, mapping of the necessary competencies, feedback, progression, and narrative, workers were encouraged to seek their self-development and professional improvement.

Finally, for slot 4, worker recruitment is done through the adherence of employees to digital tools and their engagement with the entire work process, which requires focus and happiness. Such a demand occurs because there is a need to increase the productivity of employees through more control. To justify this issue, the workers’ image for slot 4 is also constructed based on characteristics of defocus, uninterest, and unhappiness, and this is reflected in all employees and not only in young people. This subtended employee unhappiness is assumed to be so intense that it can cause a worker to be disloyal to their organization, which is also linked to the need for control, associated with the retention of employees. To solve this scenario, this slot advocates the presence of rewards and prizes, feedback, playful elements, challenges, and recognition to motivate and generate focus and engagement of employees with work. The objectives and rules ensure the control and measurement of the results expected by the organization, while the workers may have

![Fig. 11 Graphical representation of slot 4 discourse](image-url)
the autonomy to act freely inside the structure. The graphical representation is illustrated in Fig. 11.

“What we do is to promote these tools as something that will bring engagement and motivation, as it will attract younger people, who will know right away that this is a game; and the older ones, who will see that this is also something serious. Concern about the type of tool that will be developed is much more linked to behavior, context, and time of use, than actually to age group.” (Company A)

“There are several research and scholars linking happiness to productivity and good results, that is, the quality of life of employees and their happiness at work are reflected in better results for the organization. We are living in a time wherein the whole society is having a greater concern for well-being. Will my worker work better if he is feeling good? (...) Gamification allowed people to be happier working, by inserting game elements into their work routine, ensuring more lightness to routines. The phenomenon is a response that emerged organically in the context of the search for well-being.” (Company A)

“Gamification is about engagement to involve people with a brand, customer loyalty, improvement in knowledge transmission, improvement in learning verification, team integration, and adherence to the organization’s mission, vision, and values, among other things, within an organization.” (Company F)

“There are two very different visions of defining the process: one that makes the most of the work environment, promoting the relationship between people and the company, making them more satisfied; and the other that focuses on improving targets, increasing results, and monitoring indicators. We believe in the mix of these two things and that gamification will be something so fundamental that it will be the basis of any work to be done.” (Company F)

As an example of a project from this group, Company A developed a gamified platform to support call-center employees. It was developed to guide and manage commercial teams, so workers could verify the company’s procedures, interact with other employees, evaluate their daily goals, and challenge each other to earn points through their performance, which could be exchanged for various rewards, defined by the company itself. According to Company A, the tool, while motivating workers, allowed real-time management of the workers' actions, directly informing the managers of the area, responsible for setting the goals to be achieved.

As another example, Company F developed a project that systematized all the internal processes and norms of an organization. To stimulate participation and cooperation among employees, a virtual table was developed, which contained all the organization's ongoing projects, in which players could update them, change their status and complete their activities, so that they could help each other in exchange for points and experience. There were also other game mechanics such as feedback, challenges, prizes, and recognition that also provided goals to be achieved by players according to the number of interactions they made within the system.

Discussion

The construction of the discourse concerning the work context and the worker is articulated with the way companies build their projects for their clients. The ideology concerning the projects produces an image of their clients about the relations between the work context and the workers because this logic enhances the value of the projects.

Our analyses showed that for all slots, the purpose of using the projects is to control the employees and enhance organizational results, through the increase of worker focus, as workers are generally depicted as defocused or uninterested people. According to the interviewees, this lack of focus of the workers is an organizational problem and this is caused by the stimuli and distractions that they have in daily life, caused by the intensive consumption of technologies and media, which is in line with previous literature on the subject (Dontre, 2021; Orhan et al., 2021; Tarafdar et al., 2020). However, despite these similar elements, there are differences between the slots, confirming H1 (gamification influences the purpose of the projects) and H2 (analog and digital applications influence the purpose of the projects).

The slots not influenced by gamification (1 and 3), compared to the ones influenced by gamification (2 and 4), have a less apologetic speech about the projects and the interviewees defend that the projects have objectives to solve a specific business situation, and are elaborated mainly with young people in mind, not everyone, as the lack of focus, is inherent to them and they are more used to playing games. There is increasing exposure of children and young people to digital screens, technologies, and games (Kabali et al., 2015; Paudel et al., 2017; Samson et al., 2021) which contextualizes this discourse centered on the assumption that young people are increasingly interested in games and, therefore, are more likely to adhere to these tools in the workplace, which is why organizations have adopted such strategy. Slots 2 and 4 are more holistic and apologetic in their speeches, covering all the employees of the organization, not just the young employees, and attributing to the projects the function of providing happiness in the context of work, as workers are seen as unhappy and disloyal people that will change their jobs if they are not satisfied. We note that there is a discourse related to workers as consumers of their work, i.e., they need
to feel satisfied and happy with it, otherwise, they would change jobs, very similar to what happens in the context of leisure, e.g., if a person does not like an entertainment game, that person will just buy another one. This idea is supported by the literature on the influence of job satisfaction on the decrease in turnover rate (Chen et al., 2019; Lin & Huang, 2020; Ramalho Luz et al., 2018). This positioning is perceived in all companies influenced by gamification, since they evaluate work as a place to be happy and, therefore, to consume something that satisfies the personal desires and motivations of the worker. All this ideological inversion is very interesting, because, while work seems to be seen as an environment of leisure and consumption; games, which originated from this environment of leisure and entertainment, seem to also be considered as control tools.

Our research also confirmed H3 (serious games or gamification are used to enhance well-being and happiness) and H4 (serious games or gamification are used to control). However, it seems that H4 might carry more weight than H3, i.e., the speeches show that the control element is stronger than employee well-being, as all the slots sustained the control element in their speech. However, there are differences between the slots. The organizations from slots 1 and 2 expect the participants to increase joy by using the projects during a learning process in a corporate training session; while for slots 3 and 4, as they focus on digital technology, the objective of the projects is to increase the adherence of the employees to a digital system, wherein people must interact to execute an activity while the organization can track them and ultimately increase worker productivity. For these last slots, the control behind the use of the project is more evident and this may happen because, according to the literature, the digital transformation inside companies, i.e., making the organizational processes digital, increase job demands for employees; intensifies the use of Information and Communication Technology to connect people and to instill collaborative work; and increases the competencies required for employees, demanding more measurements of organizational and individual results (Schwarzmüller et al., 2018).

Previous investigations argue that supervision and control of work performance are important issues and are always on the agenda in business management and human resources, but there is an increasing concern about the well-being of workers (Guest, 2017; Somers et al., 2021), what is the interesting point of this investigation. Worker happiness and well-being together with a fun work environment bring both personal and organizational benefits, i.e., employees may have better health, work learning, and career satisfaction while the company may have a better social environment, engagement, involvement, performance, and less turnover. (Atan et al., 2021; Bataineh, 2019; Gu et al., 2020; Joo & Lee, 2017; Michel et al., 2019; Tetteh et al., 2021; Tews & Noe, 2019; Tews et al., 2012; Tsaur et al., 2019). Thus, it is possible to better perceive the context in which games are being increasingly used within the corporate environment, since, according to our analyses, games mediate the relationship between the subjective side of the worker; and the contextual side of the organization involving performance and results. This movement is interesting as the subjective side of workers (i.e., happiness and well-being) is being discussed inside organizations through a more humanized form of management.

Currently, this subject gains even more relevance, since the COVID-19 pandemic brought numerous changes into people's routines, enhancing telework (Mendonça et al., 2022) and lighting up discussions about productivity and motivation (Prodanova & Kocarev, 2022), together with well-being and mental health of people within this new global reality (Carillo et al., 2021; Giorgi et al., 2020; Impact et al., 2021; ShahriariRad et al., 2021). Gamification, during COVID-19 quarantine, showed positive results for the well-being and relief of the tension of people in confinement (Manzano-León et al., 2021) and showed a potential positive effect on leveraging both motivation and employee engagement (Pura, 2022). As discussed in above, serious games and gamification have the general purpose of improving productivity, motivation, well-being, and mental health. Therefore, it also represents a potential tool to make telework more interesting for the employee and increase organizational results.

We conclude that the phenomenon of using serious games and gamification inside the organizations may be an opportunity to discuss the importance of mental health and quality of life, while also taking into consideration the essential aspects of performance and control in corporative settings. Both performance and mental health are important, and the phenomena of serious games and gamification seems to consider them by promoting the need to motivate the workers, making them feel better with their jobs, while controlling work, and increasing performance for company gains. The control element is very present in serious games and gamification, and not so much in other leisure activities, e.g., films. This may attract organizations to adopt these elements more easily aiming to increase productivity. However, the concern about affording fun situations or enhancing good feelings in workers (otherwise the experience may not even succeed) is necessary, changing the corporate mentality of management driven only by results. Thus, bringing serious games and gamification into corporate settings represents, beyond a mediator between mental health/quality of life and organizational control, a broader phenomenon that seems to evidence a change in the work structure, wherein a concern about the worker is highlighted and prioritized even if the organization aims to increase their results.
Limitations and Future Research

It is important to highlight that this study was led in the city of São Paulo, Brazil, where the first author was based, and the clients accepted the invitation voluntarily, representing a convenience sampling. We used two criteria for sampling: the conditions of entry into the market and the types of projects offered, and only a few companies agreed to participate in the interview, so further research using other criteria, such as the size of the interviewed companies or their clients’ profile, could be insightful. The results reveal a market discourse of this region and are sustained by the speeches from the companies that agreed to share information for this research through the interviews. As these are social, cultural, and economic aspects of companies, the discourse might be different, and the results can change significantly, according to the investigated region. Having said that, we propose a qualitative research based on online video interviews, or a quantitative research based on anonymous online surveys, as it is possible to reach different companies all over the world.

Also, it is important to note that there are other important variables to investigate inside the corporate setting that affect the workers and the company, i.e., worker culture, organizational culture, management styles, personal needs, work conditions, and others. The organizational study is a broad field of investigation and we have focused on studying serious games and gamification, but future studies could focus on the influence of other variables together with serious games and gamification to analyze potential different results.

We verified that there are serious games or gamification systematic reviews and meta-analyses about areas related to well-being, health, and education (Johnson et al., 2016; Sailer & Homner, 2019; Sardi et al., 2017), but we did not find investigations of this nature in the corporative context. Thus, we decided to study the discourse that is behind the companies that produce serious games or gamification for the context of the work. In the future, it would be important to design an empirical verification of what was exposed in this investigation.

Acknowledgements This work was financially supported by National Funds through FCT—Fundação para a Ciência e a Tecnologia, I.P., under the project UIDB/04279/2020. We would like to acknowledge the kind participation of all the corporate volunteers. Finally, we would like to thank Mônica de Carvalho, for her paramount suggestions and contributions during the first phases of this research.

Data Availability Data available on request from the authors.

Declarations

Conflicts of Interests/Competing Interests The authors have no relevant financial or non-financial interests to disclose.

Ethics Approval As the University where this study was developed, did not, at the time, have an Ethics Committee officially constituted, our procedures followed the guidelines of the Declaration of Helsinki.

Consent to Participate Informed consent was obtained from all individual participants included in the study.

References

Atan, A., Ozgit, H., & Silman, F. (2021). Happiness at work and motivation for a sustainable workforce: Evidence from female hotel employees. Sustainability (Switzerland), 13(14), 1–17. https://doi.org/10.3390/su13147778

Bagheri Hosseinabadi, M., Etemadinezhad, S., Khanjani, N., Ahmadi, O., Gholinia, H., Galeshi, M., & Samaei, S. E. (2018). Evaluating the relationship between job stress and job satisfaction among female hospital nurses in Babol: An application of structural equation modeling. Health Promotion Perspectives, 8(2), 102. https://doi.org/10.15171/hpp.2018.13

Bataineh, K. A. (2019). Impact of work-life balance, gapiness at work, on employee performance. International Business Research, 12(2), 99. https://doi.org/10.5539/ibr.v12n2p99

Bozkurt, A., & Durak, G. (2018). A systematic review of gamification research: In pursuit of Homo Ludens. International Journal of Game-Based Learning, 8(3), 15–33. https://doi.org/10.4018/IJGBL.2018070102

Carillo, K., Cachat-Rosset, G., Marsan, J., Saba, T., & Klarsfeld, A. (2021). Adjusting to epidemic-induced telework: Empirical insights from teleworkers in France. European Journal of Information Systems, 30(1), 69–88. https://doi.org/10.1080/0960085X.2020.1829512

Chen, X., Ran, L., Zhang, Y., Yang, J., Yao, H., Zhu, S., & Tan, X. (2019). Moderating role of job satisfaction on turnover intention and burnout among workers in primary care institutions: A cross-sectional study. BMC Public Health 19, 1526. https://doi.org/10.1186/s12889-019-7894-7

Creswell, J., & Cheryl, P. (2013). Qualitative inquiry & research design: choosing among five approaches (3rd ed.). Sage Publications, Inc.

Darejeh, A., & Salim, S. S. (2016). Gamification solutions to enhance software user engagement—A systematic review. International Journal of Human-Computer Interaction, 32(8), 613–642. https://doi.org/10.1080/10447318.2016.1183330

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011a). From game design elements to gamefulness: Defining “gamification.” Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments, MindTrek 2011, 9–15. https://doi.org/10.1145/2181037.2181040

Deterding, S., Khaled, R., Nacke, L. E., & Dixon, D. (2011b). Gamification: Toward a definition. CHI 2011 Gamification Workshop Proceedings (12–15).

Dontre, A. J. (2021). The influence of technology on academic distraction: A review. Human Behavior and Emerging Technologies, 3(3), 379–390. https://doi.org/10.1007/s40392-021-00229

Duggan, E. (2016). Squaring the (magic) circle: A brief definition and history of pervasive games. Nijholt, A. (eds) Playable Cities. Gaming Media and Social Effects, 111–135. https://doi.org/10.1007/978-981-10-1962-3_6

Elias, N., & Dunning. (1986). Quest for excitement: sport and leisure in the civilizing process. Basil Blackwell, Inc.

Fabricio, A., Kaczam, F., Obregon, S. L., de Almeida, D. M., Lopes, L. F. D., da Veiga, C. P., & da Silva, W. V. (2020). Quality
of life: Flourishing in the work context. Current Psychology. https://doi.org/10.1007/s12144-020-01203-3

Ferreira, A. T., Araújo, A. M., Fernandes, S., & Miguel, I. C. (2017). Gamification in the workplace: A systematic literature review. In A. Rocha, A. M. Correia, H. Adeli, L. P. Reis, & S. Costanzo (Eds.), Recent Advances in Information Systems and Technologies (pp. 283–292). Springer International Publishing. https://doi.org/10.1007/978-3-319-56541-5_29

Flores, H. (2019). Serious Game, gamified applications, educational software: A comparative study. 2019 International Conference on Information Systems and Software Technologies (ICIST), 25–62. https://doi.org/10.1109/ICIST.2019.00015

Gerdentisch, C., Sellitsch, D., Besser, M., Burger, S., Stegmann, C., Tschelig, M., & Kriglstein, S. (2020). Work gamification: Effects on enjoyment, productivity and the role of leadership. Electronic Commerce Research and Applications, 43(10094). https://doi.org/10.1016/j.elerap.2020.100994

Giorgi, G., Lecca, L. I., Alessio, F., Finstad, G. L., Bondanini, G., Lulli, L. G., Arcangeli, G., & Mucci, N. (2020). COVID-19-related mental health effects in the workplace: A narrative review. International Journal of Environmental Research and Public Health, 17(21). https://doi.org/10.3390/ijerph17217857

Glas, R., Lammes, S., de Lange, M., Raessens, J., & de Vries, I. (2019). The Playful Citizen (Vol. 1). Amsterdam University Press.

Gu, Y., Liu, D., Zheng, G., Yang, C., Dong, Z., & Tee, E. Y. J. (2020). The effects of chinese seafarers’ job demands on turnover intention: The role of fun at work. International Journal of Environmental Research and Public Health, 17(14). https://doi.org/10.3390/ijerph17145247

Guest, D. E. (2017). Human resource management and employee well-being: Towards a new analytic framework. Human Resource Management Journal, 27(1), 22–38. https://doi.org/10.1111/hrm.12139

Haddon, J. (2018). The impact of employees’ well-being on performance in the workplace. Strategic HR Review, 17(2), 72–75. https://doi.org/10.1007/SXHR-01-2018-0009

Hammedi, W., Leclercq, T., Poncin, I., & Alkire (Née Nasr), L. (2021). Uncovering the dark side of gamification at work: Impacts on engagement and well-being. Journal of Business Research, 122, 256–269. https://doi.org/10.1016/j.jbusres.2020.08.032

Hookham, G., & Nesbitt, K. (2019). A systematic review of the definition and measurement of engagement in serious games. Proceedings of the Australasian Computer Science Week Multiconference. https://doi.org/10.1145/3290068.3290747

Huizenga, J. (1980). Homo Ludens: A study of the play-element in culture. Routledge & Kegan Paul Ltd.

Impact, T., Work, R., Galanti, T., Guidetti, G., Mazzei, E., & Zappala, S. (2021). Work from home during the COVID-19 outbreak. Journal of Occupational and Environmental Medicine, 63(7), 426–432. https://doi.org/10.1097/JOM.0000000000002236

Jebelli, H., Hwang, S., & Lee, S. H. (2018). EEG-based workers’ stress recognition at construction sites. Automation in Construction, 93, 315–324. https://doi.org/10.1016/J.AUTCON.2018.05.027

Johnson, D., Deterding, S., Kuhn, K. A., Stanova, A., Stoyanov, S., & Hides, L. (2016). Gamification for health and wellbeing: A systematic review of the literature. Internet Interventions, 6, 89–106. https://doi.org/10.1016/j.intervent.2016.10.002

Joo, B.-K., & Lee, I. (2017). Workplace happiness: Work engagement, career satisfaction, and subjective well-being. Evidence-Based HRM, 5(2), 206–221. https://doi.org/10.1016/EBHRM-04-2015-0011

Juu, J. (2005). Half-real: Video games between real rules and fictional worlds. MIT Press.

Kabali, H. K., Irigoyen, M. M., Nunez-Davis, R., Budacki, J. G., Mohanty, S. H., Leister, K. P., & Bonner, R. L. (2015). Exposure and use of mobile media devices by young children. Pediatrics, 136(6), 1044–1050. https://doi.org/10.1542/peds.2015-2151

Korn, O., Boffo, S., & Schmidt, A. (2015). The effect of gamification on emotions - The potential of facial recognition in work environments. Kurosu, M. (eds) Human-Computer Interaction: Design and Evaluation. HCI 2015. Lecture Notes in Computer Science, 9169, 489–499. https://doi.org/10.1007/978-3-319-20901-2_46

Lacanietta, A., Duerden, M. D., & Widmer, M. A. (2019). Leisure at work and employee flourishing. Journal of Leisure Research, 49(3–5), 311–332. https://doi.org/10.1080/00222216.2018.1543815

Larson, K. (2019). Serious games and gamification in the corporate training environment: A literature review. TechTrends, 64(2), 319–328. https://doi.org/10.1007/s11528-019-00446-7

Lin, C. Y., & Huang, C. K. (2020). Employee turnover intentions and job performance from a planned change: The effects of an organizational learning culture and job satisfaction. International Journal of Manpower, 42(3), 409–423. https://doi.org/10.1108/IJM-08-2018-0281

Manzano-León, A., Rodríguez-Ferrer, J. M., Aguilar-Parra, J. M., & Herranz-Hernández, R. (2021). Gamification and family leisure to alleviate the psychological impact of confinement due to COVID-19. Children and Society, 00, 1–17. https://doi.org/10.1111/cho.12495

Máyér, F. (2017). Pokémon GO: Entering the Ludic Society. Mobile Media & Communication, 5(1), 47–50. https://doi.org/10.1177/2050157916678270

Mendonça, I., Coelho, E., Ferrajão, P., & Abreu, A. M. (2022). Telework and mental health during COVID-19. International Journal of Environmental Research and Public Health, 19(5), 2602. https://doi.org/10.3390/IJERPH19052602

Michel, J. W., Tews, M. J., & Allen, D. G. (2019). Fun in the workplace: A review and expanded theoretical perspective. Human Resource Management Review, 29(1), 98–110. https://doi.org/10.1016/j.hrmr.2018.03.001

Orhan, M. A., Castellano, S., Khelladi, I., Marinelli, L., & Monge, F. (2021). Technology distraction at work. Impacts on self-regulation and work engagement. Journal of Business Research, 126, 341–349. https://doi.org/10.1016/j.jbusres.2020.12.048

Park, I. J., Kim, P. B., Hai, S., & Dong, L. (2020). Relax from job, don’t feel stress! The detrimental effects of job stress and bufferring effects of coworker trust on burnout and turnover intention. Journal of Hospitality and Tourism Management, 45, 559–568. https://doi.org/10.1016/j.jh tm.2020.10.018

Paudel, S., Jancey, J., Subedi, N., & Leavy, J. (2017). Correlates of mobile screen media use among children aged 0–8: A systematic review. British Medical Journal Open, 7(10), 1–12. https://doi.org/10.1136/bmjopen-2016-014585

Prodanova, J., & Kocarev, L. (2022). Employees’ dedication to working from home in times of COVID-19 crisis. Management Decision, 60(3), 509–530. https://doi.org/10.1108/MD-09-2020-1256

Pura, J. (2022). Linking motivation and employee engagement through gamification in remote working. International Journal of Academic and Industry Research, 3(1), 52–69. https://doi.org/10.53378/352857

Ramalho Luz, C. M. D., Luiz de Paula, S., & de Oliveira, L. M. B. (2018). Organizational commitment, job satisfaction and their possible influences on intent to turnover. Revista De Gestão, 25(1), 84–101. https://doi.org/10.1108/reg-12-2017-008

Sailer, M., & Hommer, L. (2019). The gamification of learning: A meta-analysis. Educational Psychology Review, 32(1), 77–112. https://doi.org/10.1007/s10648-019-09498-w

Sala, G., Jopp, D., Gobet, F., Ogawa, M., Ishioka, Y., Masui, Y., Inagaki, H., Nakagawa, T., Yasumoto, S., Ishizaki, T., Arai, Y., Ikebe, K., Kamide, K., & Gondo, Y. (2019). The impact of leisure activities on older adults’ cognitive function, physical function, and
mental health. *PLoS One*, 14(11), e0225006. https://doi.org/10.1371/JOURNAL.PONE.0225006

Samson, A. D., Rohr, C. S., Park, S., Arora, A., Ip, A., Tansey, R., Comessotti, T., Madigan, S., Dewey, D., & Bray, S. (2021). Videogame exposure positively associates with selective attention in a cross-sectional sample of young children. *PLoS One*, 16(9), e0257877. https://doi.org/10.1371/journal.pone.0257877

Sardi, L., Idri, A., & Fernández-Alemán, J. L. (2017). A systematic review of gamification in e-Health. *Journal of Biomedical Informatics*, 71, 31–48. https://doi.org/10.1016/j.jbi.2017.05.011

Schwarzmüller, T., Brosi, P., Duman, D., & Welpe, I. M. (2018). How does the digital transformation affect organizations? Key themes of change in work design and Leadership. *Management Revue*, 29(2), 114–138. https://doi.org/10.2307/26491473

Shahriarirad, R., Erfani, A., Ranjbar, K., Bazrafshan, A., & Mirahmadi, A. (2021). The mental health impact of COVID-19 outbreak: A nationwide survey in Iran. *International Journal of Mental Health Systems*, 15(1), 1–13. https://doi.org/10.1186/s13033-021-00445-3

Shen, X., Macdonald, M., Logan, S. W., Parkinson, C., Gorrell, L., & Hatfield, B. E. (2022). Leisure engagement during COVID-19 and its association with mental health and wellbeing in U.S. *Adults International Journal of Environmental Research and Public Health*, 19(3), 1081. https://doi.org/10.3390/ijerph19031081

Somers, M. J., Birnbaum, D., & Casal, J. (2021). Supervisor support, control over work methods and employee well-being: New insights into nonlinearity from artificial neural networks. *International Journal of Human Resource Management*, 32(7), 1620–1642. https://doi.org/10.1080/09585192.2018.1540442

Stenros, J. (2016). The game definition game: A review. *Games and Culture, 12*(6), 499–520. https://doi.org/10.1177/1555412016655679

Talan, T., Dogan, Y., & Bati, V. (2020). Efficiency of digital and non-digital educational games: A comparative meta-analysis and a meta-thermatic analysis. *Journal of Research on Technology in Education*, 52(4), 474–514. https://doi.org/10.1080/15391523.2020.1743798

Tarafdar, M., Maier, C., Laumer, S., & Weitzel, T. (2020). Explaining the link between technostress and technology addiction for social networking sites: A study of distraction as a coping behavior. *Information Systems Journal*, 30(1), 96–124. https://doi.org/10.1111/isj.12253

Tetteh, S., Dei Mensah, R., Opata, C. N., & Mensah, C. N. (2021). Service employees’ workplace fun and turnover intention: The influence of psychological capital and work engagement. *Management Research Review*, 45(3), 363–380. https://doi.org/10.1108/MRR-12-2020-0768

Tews, M. J., Michel, J. W., & Bartlett, A. (2012). The fundamental role of workplace fun in applicant attraction. *Journal of Leadership and Organizational Studies*, 19(1), 105–114. https://doi.org/10.1177/1548051811431828

Tews, M. J., & Noe, R. A. (2019). Does training have to be fun? A review and conceptual model of the role of fun in workplace training. *Human Resource Management Review*, 29(2), 226–238. https://doi.org/10.1016/j.hrmar.2017.11.003

Tsaur, S. H., Hsu, F. S., & Lin, H. (2019). Workplace fun and work engagement in tourism and hospitality: The role of psychological capital. *International Journal of Hospitality Management*, 81, 131–140. https://doi.org/10.1016/j.ijhm.2019.03.016

Wanick, V., & Bui, H. (2019). Gamification in management: A systematic review and research directions. *International Journal of Serious Games*, 6(2), 57–74. https://doi.org/10.17083/ijjsg.v6i2.282

Wilkinson, P. (2016). A brief history of serious games. *Göbel, S., Kickmeier-Rust, M., Masuch, M., Zweig, K. (eds) Entertainment Computing and Serious Games. Lecture Notes in Computer Science*, 9970, 17–41. https://doi.org/10.1007/978-3-319-46152-6_2

**Publisher’s Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor holds exclusive rights to this article under applicable law. This article is published under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.