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**Employer Branding:**

Gamification as a Talent Retention Strategy for the Portuguese Digital
Workforce

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Dissertation

presented as partial requirement for obtaining the Master's Degree Program in Data-Driven Marketing

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# EMPLOYER BRANDING: GAMIFICATION AS A TALENT RETENTION STRATEGY FOR THE PORTUGUESE DIGITAL WORKFORCE

By

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Master Thesis presented as partial requirement for obtaining the Master's degree in Data-Driven Marketing, with a specialization in Marketing Intelligence.

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# STATEMENT OF INTEGRITY

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism or any form of undue use of information or falsification of results along the process leading to its elaboration. I further declare that I have fully acknowledged the Rules of Conduct and Code of Honor from the NOVA Information Management School.

*[Lisbon, 29 October of 2022]*

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# ABSTRACT

Worldwide corporations are grappling with the challenge of managing the expectations of the digital workforce, composed of Millennials and Gen Z employees, questioning how to attract, engage, motivate, and retain these talents, using digital strategies that may fulfil their technological demands. A possible strategy that has gained popularity in the last years is the gamification of employer branding experiences where companies can stand out from competitors and market themselves as a great place to work. In Portugal, this is still a subject to be explored, therefore, this paper's primary objective is to clarify employer branding gamification (EBG) as a way of engaging and motivating the Portuguese digital workforce and understand if this may be a suitable approach for their retention. A survey with two evenly distributed and randomized blocks, one with a gamified EB scenario and another with a traditional EB scenario, was administered to 100 individuals. The results show significantly higher engagement, motivation, and retention values in the group that saw the gamified EB experience, as opposed to those who saw the traditional one, indicating that gamifying employer branding experiences has a positive effect on employee motivation, engagement, and retention in the digital workforce in Portugal.

# KEYWORDS

Human Resources; Gamification; Employer Branding; Digital Workforce; Talent Retention

**Sustainable Development Goals (SGD):**

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# LIST OF ABBREVIATIONS AND ACRONYMS

**AET**        Affective Event Theory

**DI**          Digital Immigrant

**DN**         Digital Native

**DV**         Dependent Variable

**EB**         Employer Branding

**EBG**       Employer Branding Gamification

**EVP**       Employer Value Preposition

**GEN**       Generation

**HR**         Human Resources

**IV**          Independent Variable

**SDT**       Self-Determination Theory

# 1. INTRODUCTION

The way people perform their labour-related tasks has been evolving immensely in last decades in order to harbour the progressive, emerging, and continuous technological breakthroughs. Unquestionably, the work environment has also been forced to constantly adapt, even going from being a strictly physical place to being now more digital than ever, which may have been influenced by the Covid-19 pandemic and the rise of the Work from Home phenomena, factors driving digital transformation and growth of the digital workforce and workplace at a faster pace (Savić, 2020).

It is likewise important to note that currently the workforce is composed of people from different generational cohorts that comprehensively have different needs. The Baby Boomers, individuals born after the World War II, are retiring and giving space to new generations of employees to enter the workforce. These new workers are way more technologically dependent and, as identified by Deloitte (2014), expect their workplace to be as digitally practical and flexible as the gadgets and technology they have in their personal lives, challenging companies to question how to attract, engage, motivate and, of course, retain them by meeting their requirements (Küpper, Klein, & Völckner, 2021).

Attracting and retaining the best personnel possible is challenging (Ghielen, De Cooman, & Sels, 2021). Thus, to keep relevant and retain employees with high potential, companies must align their working environment and conditions with the digital workforce needs and desires (Deloitte, 2014; Kashive, Khanna, Kashive, & Barve, 2022), standing out from the competition and marketing themselves as a great place to work. One of the prominent strategies used to overcome this situation is employer branding (EB) (Dabirian, Paschen, & Kietzmann, 2019; Foster, Punjaisri, & Cheng, 2010).

Employer Branding uses the fundamentals of the typical product branding from marketing strategies (Dabirian et al., 2019) and applies its concepts to the Human Resources Management field by describing the Employer Value Proposition (EVP) to both current and forthcoming workers – with a strong EB strategy, organizations can obtain a sustained competitive advantage and secure a better position against their competitors (Bejtkovský & Copca, 2020).

According to the results drawn from a survey Gultekin conducted in 2011, it was discovered that organizations with robust EB strategies can achieve lower costs per hire (-46%) and a decrease in turnover (-28%) (Kashive et al., 2022). Traditional EB strategies often focus on elements such as company culture, values, and compensation packages, but the digital workforce demands innovative approaches that go beyond conventional tactics. In a world where many companies struggle to preserve a strong talent pool, decrease turnover rates, and retain their digital workforce, the addition of gamification elements in EB experiences, this is, the usage of gaming design principles in contexts that weren't by nature game-like (Gartner, 2011) has been seen as a promising approach to enhance and strengthen employment experiences by creating an immersive and rewarding working environment that appeals to the preferences of the digital workforce.

EB remains as an important area of study in HRM as the truth is, even without noticing or being aware of, every company has an employer brand that is already influencing both current and prospect workers, being crucial to dedicate some time to manage and shape it to what the company is trying to convey, otherwise word-of-mouth (WOM) and other resources will keep freely shaping the EB (Backhaus & Tikoo, 2004). The studies found during the research for this dissertation were more focused on the relevance of EB as an attraction tool, rather than a retention one representing an

interesting and relevant gap to be filled. The somehow limited literature on existing employees was also reinforced by Tanwar and Prasad (2016).

The choice of Employer Branding as the theme of this dissertation rose due to professional interest in combining both HRM and Marketing fields and explore the efforts of both departments in this area. Since Employer Branding Gamification can still be considered a relatively recent topic in business, not a single research paper investigating employer branding gamification power as a retention tool for the Portuguese digital workforce was found. To address the current gap, this paper's primary objective is to clarify EB as a way of engaging, motivating, and retaining the Portuguese digital workforce, with the research questions being "Does EBG influence the engagement and motivation of the Portuguese digital workforce?" and "Is gamified EB a suitable approach for the Portuguese digital workforce retention?". The research will have an exploratory approach, supported with quantitative methodology: a survey designed in Qualtrics, which results will be analysed using the IBM SPSS Software.

The dissertation is organized and structured in six sections. Starting with the literature review, which is going to provide a background analysis of the major themes of this study: contextualization of the different generational cohorts, focusing on the digital workforce and how they are shaping the future of the workplace; following with an examination of existing literature related to Employer Branding highlighting its importance; and finishing up with a breakdown of the role of gamification for modern corporations and how it has been integrated in EB strategies.

In the second chapter the research questions, hypotheses and conceptual framework which will guide the investigation are presented. The third chapter addresses the methodology approach selected, while the fourth, empirical study, describes the data collection techniques, the sample characterization and the procedures taken. In the fifth part, the research's results are presented, closing on the sixth chapter, with the conclusions and limitations of this dissertation as well as recommendations for future research.

The present research paper is expected to contribute to theory by extending the studies on the application of gamification into human resources topics, specifically employer branding strategies, by bridging the gap between these areas in the Portuguese context and for being tailored for the workforce of the future, i.e., the digital workforce of Millennials and Gen Z's. Additionally, there are anticipated contributions also for practice with insights for professionals in the HR field, but also for managers, tech leads and any business professionals seeking new strategies to attract and retain digital talent in Portugal.

## 2. LITERATURE REVIEW

### 2.1. DIGITAL WORKFORCE

#### 2.1.1. Generational Cohorts: Digital Natives and Digital Immigrants

Workplaces usually have people from different generational cohorts working together, individuals with different historical backgrounds, values and preferences that should be addressed if companies aim to retain them (Bussin & Rooy, 2014). Despite all of the research on the topic, it is fairly difficult for scholars to agree on how to accurately define the cohorts and which methods to use, (Bussin & Rooy, 2014; Lancaster & Stillman, 2002) with some authors defending that historical events should be what defines a cohort, while others argue that it should be the birth year (Van Rossem, 2018).

According to Bussin and Rooy (2014), the generational cohorts designated by Lancaster and Stillman (2002), are considered to be the most common ones and it encompasses four generations: Veterans, born between 1900 and 1945; Baby Boomers, born between 1946 and 1964; Generation X, born after 1965 until 1980; and Generation Y or Millennials, born between 1981 and 1999. Nonetheless, a lot has changed since 2002 and a new generation, Generation Z, is entering the workforce (Neto, 2022).

The Veterans, also known as the Silent or Traditionalists Generation, are in its majority already retired (Al-Asfour & Lettau, 2014; Martin & Ottemann, 2016). The Baby Boomers, who lived through the "Golden Years" after the II World War, are by now in senior positions or preparing for retirement, which urges companies to recognise the working methods and expectations of the remaining generations in order to leverage their strengths (Bussin & Rooy, 2014). Individuals from Generation X are considered to be very independent, skeptical, flexible, and constantly seek dynamic environments and a better work-life balance (Martin & Ottemann, 2016).

The Millennials, or Generation Y, were the first ones to experience what it was like to grow up during the technological advancements – they are very focused on their life purpose, work-life balance, where inflexible working schedules are no longer acceptable and expect their companies to keep constantly providing tools to enhance their technological expertise (Martin & Ottemann, 2016). Generation Z, considered to be the real digital native cohort, is the most recent group of employees joining the labour market (already representing 24% of the workforce) and the future of the workforce (expected to be 30% by 2030), alongside their precedents (ManpowerGroup, 2022).
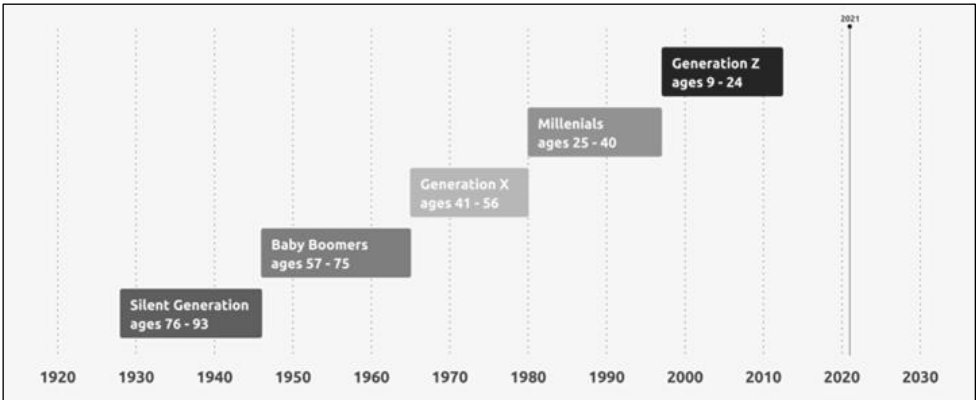


Figure 1 - Generational Cohorts
*Source:* Vizzlo, 2021

Since this dissertation is focused on the Digital Workforce, is interesting to explore the characteristics of said individuals and understand which generations are considered to be part of the real digital workforce. The Digital Native (DN) and Digital Immigrants (DI) concepts were first mentioned in 2001 in a school context when it was perceived that students' technological enthusiasm was not matched by their professors who tended to be less tech-driven (Prensky, 2001) with DN referring to those who are already born in the digital age, while DI are the ones who started having contact with technology later, somewhere around their adult life (Wang, Myers, & Sundaram, 2013).

Being so familiar with technology and used to having information at the tip of their fingers, DN individuals are not fit for slower working environments, craving dynamism, and multitasking, and are usually more eager to learn by seeing videos or pictures, rather than just reading documents – this type of employees usually enjoy the possibility of having a mix between work and playful moments, being stimulated and desiring game-like elements such as instant feedback, objectives achievements, and professional challenges (Prensky, 2001; Thompson, 2015). The competencies and digital fluency of employees from Generation Y and Z are reshaping the workplace of the future, being mentioned as the "Digital Workforce" (Colbert, Yee, & George, 2016).

Table 1 - Digital Immigrants and Digital Natives Characteristics

| Digital Immigrants | Digital Natives |
| --- | --- |
| Grew up before the Digital Age | Born during the Digital Age |
| Generation X and *Boomers* | Generation Y and Z |
| Adopted technology | Born with technology |
| Logic learners | Intuitive Learners |
| In-person socialization | Online communication |
| Traditional sources of information | Multi-sources of information |
| One task at a time | Multitasking |

*Source: Author's Content*

### 2.1.2. Digital Workplace and Digital Workforce Retention

As previously stated, the workforce is changing and as Baby Boomers retire, the new workforce generation brings to the work environment new demands and requirements, especially in regard to technology; it is now imperative for these digital personnel to have a straightforward and unlimited access to tech-tools, just like they have in their private life (Deloitte, 2014). Similarly, since top talents are seeking further innovative and flexible environments, Deloitte (2014) claims that modern companies should start focusing more on the employment experience provided if they want to win the talent war, announcing the "Digital Workplace" as an imperious requirement.

The "Digital Workplace" concept was first introduced in 1993 by Charles Grantham and Larry Nicholsin, who defined it as the assembly of the different digital equipment employees usually need to perform their work, such as software programs, intranet, communication and interaction portals, systems, amid others (Perks, 2015). The workplace has overcome the physical barriers imposed before and is no longer strictly a physical space but is instead considered to be a connected environment where the workforce can be working from anywhere in the globe, since instant messaging, online networking, and emails are widely spread and accepted as corporate communication tools (Attaran et al., 2019).

A recent booster of this kind of workplace environment and digital transformation was the Covid-19 Pandemic and the WFH phenomena, described as having employees working outside of the organization's physical offices' premises (Savić, 2020). Since digital employees are becoming somehow displeased with the range of technological solutions offered by their companies, claiming that their workplace is not smart enough, organizations are starting to explore the opportunities raised by smart offices (Attaran et al., 2019). A study conducted by Berland, in 2016, composed of 3801 online worldwide interviews with individuals from nine different industries, drew conclusions concerning the opinions of the workforce in regard of their workplace (Attaran et al., 2019; Berland, 2016):

- 44% of employees report working in a workplace that is not smart enough
- More than 50% of the participants expressed the desire to be working in a smart workplace in the next 5 years
- ½ of the personnel work remotely at least some days of the week
- More than 30% of the individuals interviewed stated wasting a lot of their work time with tech-related issues, for instance, with slow or glitched software and devices
- Interviewees also pointed out that the technology they have in their personal lives is way more advanced and revolutionary than the one provided at the workplace

This situation and testimonials are relatively concerning for organizations since Millennials, composing now the largest share of the workforce, and Gen Z are more likely than ever to resign from companies failing to provide the cutting-edge technology they seek (Attaran et al., 2019; Berland, 2016). Today's workplace, and the one for the nearby future, should incorporate digital workplace solutions that incite competitiveness, collaboration, flexibility, and engagement, where the workforce can achieve personal and business goals while improving efficiency and efficacy (Attaran et al., 2019) – two ways of achieving the desired level of employee motivation and engagement in the Digital Era, that have gained recognition in the past few years, is employer branding and the usage of mechanisms and elements that replicate game-like experiences (Colbert et al., 2016; Gartner, 2011).

## 2.2. EMPLOYER BRANDING & GAMIFICATION

### 2.2.1. The Talent Shortage Issue

Talent shortages are not a new paradigm in the corporate environment and have been an issue for decades now (Moroko & Uncles, 2008). However, heavily influenced by the Covid-19 pandemic, economic regression, and inflation, 2022 marked the highest register of talent shortage in 16 years, with 3 in 4 (75%) worldwide employers reporting difficulties in filling up their open vacancies with skilled individuals (ManpowerGroup, 2022; Ghielen et al., 2021; Savić, 2020).



Figure 2 - Talent Shortage Evolution
*Source:* ManpowerGroup (2022)

Even though this is a global scale challenge, the latest survey by the ManpowerGroup "2022 GLOBAL TALENT SHORTAGE", which included more than 40 000 employers across 40 countries, pointed out Portugal as the 2nd country in the world with the greatest talent shortage, being 10% above the global average of 75%. According to this survey, 67% of Portuguese employers stated having some difficulty in attracting the desired talent, while 18% revealed it was extremely hard to accomplish this task.
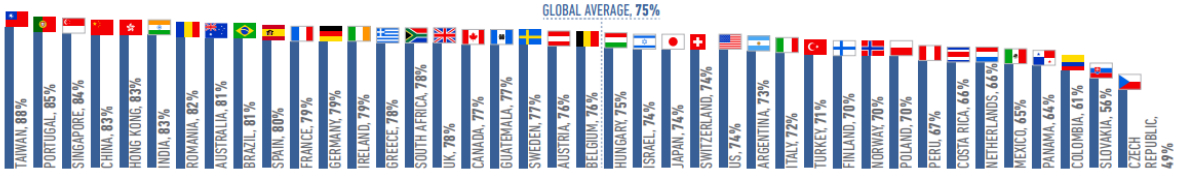


Figure 3 - Talent Shortages Around the World
*Source:* ManpowerGroup (2022)

Retention is a common issue in the enterprise world since the beginning of the 20th Century, describing the idea that employees decide to stay with a certain employer when their needs are satisfied (Tanwar & Prasad, 2013). Even though this is not new knowledge, talent retention still represents a vast challenge (Chhabra & Sharma, 2014) for companies of the 21st century, being fundamental to identify why some individuals leave, why are they dissatisfied, demotivated, or not engaged (Tanwar & Prasad, 2013) so companies can not only improve and set themselves as good employers, but also have a more comfortable position on the competition for skilled employees and talents (Wilden et al., 2010).

The workforce is considered to be one of the most, if not the most, valuable asset any company can have since they have unique features, skills, and characteristics that are hard to copy. When an individual leaves their company, it represents a major loss to the employer with the loss of knowledge, demoralization of other workers, and productivity decreases, making the human capital a competitive advantage (Tanwar & Prasad, 2013). To detach themselves from the competition and improve retention rates, companies are turning to the combination of employer branding and gamification.

### 2.2.2. Employer Branding: When Marketing and HR Unite

Branding is a concept that has been around for decades but very much so associated to a marketing narrative. However, some of its fundamentals are being adapted to fit Human Resources Management (HRM) purposes (Backhaus & Tikoo, 2004; Edwards, 2009), originating the employer branding concept. Branding helps people organising the information and knowledge they have about a certain company, which in return aids in the decision-making process (Ghielen et al., 2021; Wilden et al., 2010).

In 1996, Ambler and Barrow purposed a shift in terminology, where the term "employee" could start to be addressed and regarded as "customers", in this case, internal ones – the act of attracting and retaining talents in HR can be considered similar to the attraction and retention of clients from the more traditional marketing view, a perception that is aligned with Tanwar and Prasad (2013) arguments, indicating that while product brands aim to increase consumer's loyalty and overall profitability, EB intents to enhance employee's loyalty and productivity.

Table 2 - Sum up of the 3 Organizational Brands

| Corporate, Consumer, & Employer Brands | |
|---|---|
| Corporate Brand | Overall company reputation supported by the corporate values, vision, and mission |
| Consumer Brand | Products/Services awareness and brand associations customers have |
| Employer Brand | Internal and external reputation as an employer |

*Source:* Mosley and Schmidt (2017), p.12

For Moroko and Uncles (2008), corporate, consumer and employer brands share common characteristics, those being the need to be noticeable, relevant, and unique. It is also important to mention that Employer Branding is not confined to just one research area. In fact, it is crucial to align all the brands of the organization to ensure the integrity of the messages and promises sent (Mosley & Schmidt, 2017). According to Mosley and Schmidt (2017), employer branding should have a broader approach, combining efforts and interactions between Human Resources and Marketing:

- The EB should reflect the corporate brand messages
- The EB should incorporate and be aligned with the overall business goals and strategy
- Human Resources should provide insights regarding the investments they are planning to do in the workforce development and growth for it to be included in the EVP
- Marketing should act as a mediator between the 3 brands (corporate, consumer, employer), reducing possible conflicts or contradictions
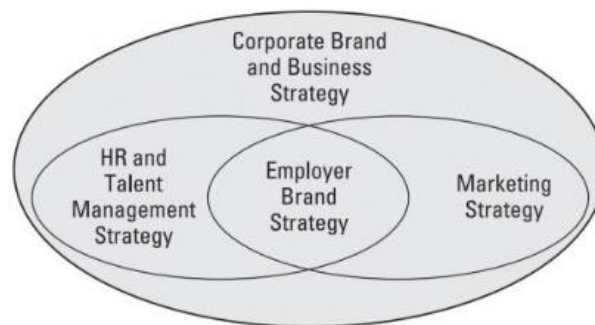


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Figure 4 - Employer Branding Interactions
*Source:* Mosley & Schmidt (2017), p.24

### 2.2.3. Employer Branding Concept

The sixties are thought to be the decade where the usage of technology to connect people was first announced, being further improved during the next decades, until the eighties when the proliferation of desktops increased, and web browsers appeared to enhance individuals' connectivity (Huitt, 2007). Starting with a scarce million users in 1990, the worldwide number of internet users surpassed, in April 2022, the 5 billion mark, representing roughly 63 per cent of the world's population (Statista, 2022b).

With its pillars, namely knowledge, computerization, and information (Attaran, Attaran, & Kirkland, 2019), the Digital Age gave individuals the possibility to achieve a whole new pool of information regarding organizations, making them way more aware and conscient of which companies were interesting and which to avoid, while also allowing a freely transmission of that knowledge between existing and potential workers. This setting may be one of the reasons why the concept of EB emerged during the nineties since it became imperative for corporations to take action and start managing their brand as an employer to pass to the labour market relevant and desired information.

Table 3 - Employer Branding Definitions by Author

| Author | Definition |
|--------|-----------|
| Ambler and Barrow (1996) | Package of benefits, functional, economic, and psychological, that should be provided by the employer as a way of promoting the employment experience |
| Conference Board (2001, cited in Backhaus & Tikoo, 2004) | Aims to promote the firm as a desirable and distinctive employer, covering the company's values, goals, culture, policies, and behaviours to both internal and external stakeholders |
| Lloyd (2002) | Communication efforts companies undertake when transmitting they are a desirable workplace to current and potential employees |
| Sullivan (2004) | Long-term approach to manage the perception of all the stakeholders about a certain company |
| Backhaus and Tikoo (2004) | "Process of building an identifiable and unique employer identity, and the employer brand as a concept of the firm that differentiates it from its competitors." (p.502) |
| Edwards (2009) | "Science of branding applied to HR activities in relation to current and potential employees" (p.6) |

*Source: Author's Content*

The EB concept is not static and is in constant update, going from being just a sum up of attributes a company has (Ambler & Barrow, 1996) to actually having to consider what distinguish that firm from its rivals marketing it as a desirable place to work (Edwards, 2009; Backhaus & Tikoo, 2004). From these definitions, it is possible to conclude that EB addresses two populations: External Employer Branding, focused on prospective employees and Internal Employer Branding, directed to current workers (Lievens & Slaughter, 2016).

Firstly, corporations need to create and invest on the development of the desired brand image, and only after initiate the communication to all the stakeholders, which includes leadership, business partners, and employees, both actual and potential. Afterall, EB acts as a promise between the employer and all these stakeholders, meaning that it needs to be aligned with the corporate values and goals before being spread. It is also to take into consideration that EB communication should be transparent and reliable (Figurska & Matuska, 2013), and effectively transmitted, especially internally, to assure everyone is onboard and committed to delivering on what is being promoted. As Foster et al. (2010) noted, "nurturing" the existing employees is vital to EB and corporate branding, and their values should also be attended since these agents have the possibility to share their thoughts quite

easily through social media, being able to reinforce, or destroy, the employer message companies are sending to the labour market  (Berthon, Ewing, & Hah, 2015; Arachchige & Robertson, 2012).

A few decades ago, managers and individuals in leadership positions referred that building a strong EB to an external audience was already challenging enough, without having in the equation existing employees. However, it is now known that the human intellect is at the very base of competitive advantage, being more important than ever to put the current personnel in the center of EB by: 1) transmitting clearly and effectively the brand position; 2) assure and convince them of EB relevance; 3) and align every stakeholders to deliver what was promised, the "brand essence" (Biswas & Suar, 2016; Berthon et al., 2015).

While external branding tends to attract talents, internal branding helps to motivate and retain present employees, creating such a strong and unique workforce that rivals cannot copy (Rosethorn, 2009; Sartain, 2005). With the right type of communication and commitment, these workers can even act as employer brand advocates sharing and spreading positive WOM (Tanwar & Prasad, 2013, Keller, 1993).

EB brings a wide range of benefits to corporations, namely the increase of workforce loyalty, which results in bringing employees closer to the company, by moving from the simple employment contract to a psychological contract (Chhabra & Sharma, 2014). By doing so, the workforce tends to stay loyal to the employer even during challenging and turbulent times.

Table 4 - Benefits of Internal Employer Branding

| Benefits of Internal Employer Branding |
| --- |
| Increase in employee engagement |
| Higher level of trust and loyalty |
| Lower rate of absence |
| Increase in talent retention |
| Decrease in employee fluctuation |

*Source:* (Figurska & Matuska, 2013)

Regarding EB's process, there has been a consensus between authors (Backhaus & Tikoo, 2004; Lievens, 2007; Lievens & Highhouse, 2003), indicating it consists of three phases:

1. Develop the unique Employer Value Proposition
2. Define the external marketing communication
3. Define the internal marketing communication

The EVP is what distinguish an employer from its competitors, it reveals its uniqueness, what the company has to offer (Edwards, 2009; Backhaus & Tikoo, 2004) and it must be aligned with the culture, values, and overall corporate positioning. For Rosethorn (2009), the EVP is what the employees perceive as a value when working for a certain employer, admitting that is of course common for individuals to have different perceptions of what is valuable for them or not. The actual delivery and fulfilment of what the EVP represents is considered to be the employee experience (Rosethorn, 2009).

Another important question regarding EVP is that it must be clearly communicated, otherwise the effort, time, and money invested in EB may not bring the expected results (Chhabra & Sharma, 2014).

### 2.2.4. Uncovering the Gamification Buzzword

While previous generations, like Gen X and Boomers, perceived gaming as a wasteful activity sometimes even associating it with laziness, it has gained popularity in the past decades in the business world (Hussain, Qazi, Ahmed, Vveinhardt, & Streimikiene 2018).

The concept of gamification can be considered relatively new, dating back to 2008, when Currier first tried to explore it, but there was not a vast reception for this theme, and it was not seen as relevant enough for the corporate environment back then (Hussain et al., 2018). With the evolution of the workforce, the Gen Y and Gen Z workers, who are more game-friendly (Seaborn & Fels, 2015), have a completely different approach seeing gamification as a viable solution for companies' attraction, retention, and competitiveness challenges (Manocha, Pujary, Kumar, & Sowdamini, 2021). Nevertheless, the usage of gamification stills faces some barriers nowadays from those who associate it with some stereotypes (Petter, Barber, Berkley, & Barber, 2018). To overcome these issues, it is critically vital to pitch to leaders and decision-makers how gamifying non-game environments can be an opportunity to enhance employee motivation, knowledge retention and even the company's reputation as a desirable and exciting place to work for (Lawande, Mohile, & Datta, 2018).

Some still have a biased idea of what a gamer's profile should be like: lazy, immature, isolated and young individuals, predominantly from the male gender (Paaßen, Morgenroth, & Stratemeyer, 2017; Petter et al., 2018). Those stereotypes could not be more outdated; the average gamer is 34 years old, wherein women represent almost 40% of the gamer population (Entertainment Software Association, 2018). Besides, it has been proved that people can development a vast set of competencies and behaviours desired by companies like trial and error, autonomy, and cooperation through games (Petter et al., 2018; Beck & Wade, 2006) – for example, active learning (such as completing challenges and working towards goals) can lead up to a 75% increasement in knowledge retention rates, while the traditional passive learning only conquers a 10% of retention rate (Beck & Wade, 2006).

So much has been said about gamification, but what does it mean? There is not a consensus regarding the "right" definition of gamification (Ērgle & Ludviga, 2018), being identified in literature as the application of game elements to non-game environments, which can be somehow subjective since there is not a universal database of game elements for individuals to confer (Deterding, Dixon, Khaled, & Nacke, 2011); trying to overcome this question, gamification was redefined and became a process of transforming activities so they would be more game-like (Werbach, 2014). Still to this day, there is not a widespread definition of this concept, but the definition introduced by Deterding et al. (2011) has been the most accepted by researchers. In addition, it is important to distinguish gamification from "Serious Games"; while the first refers to the application of game elements and mechanics to non-game environments (Robson, Plangger, Kietzmann, McCarthy, & Pitt, 2015) with the purpose of improving employment experience and user engagement (Neeli, 2012), the latter is designed for more than just entertainment purposes and is usually associated with learning (Simpson & Jenkins, 2015).

Summing up, gamification uses the same principles and designs used in games, such as playfulness and competition, and applies it to organizational environments that weren't by nature game-like (Lawande et al., 2018). A gamified experience in the workplace should have clearly defined objectives, challenges

or missions that become progressively harder as the employee conquers the previous goal, leaderboards, ranks to celebrate achievements, locked content that can be unlocked as the gaming journey progresses, and reward systems (Larson, 2019; Lawande et al., 2018).

### 2.2.5. Employer Branding Gamification (EBG)

As stated, gaming has become a popular activity in recent decades. Due to its motivational and engaging power, it has been used in countless other areas that were not game-like contexts by nature, like recruitment (Küpper et al., 2021). Cardador, Northcraft, and Whicker (2017) claim that the usage of gamification in recruitment and other areas is an emerging trend in the modern economy, where companies make use of individuals' interest in playing games to produce interest in a certain employer.

In this digital era, corporations are seeking ways to innovate, improve and strength their EB, turning to gamified employment experiences (Cardador et al., 2017) with the aim of attracting and retaining talents. Unilever and Deloitte are examples of companies that are already offering gamified solutions, namely for recruitment purposes, while Shell uses serious games to share information about their company's culture, business, and vision (Küpper et al., 2021; Kashive et al., 2022).

Having this in mind, Küpper et al. (2021) purposes that EBG, through the application of serious games, is an approach to take in consideration since it uses the resources and technology that the digital age provides in order to answer the needs and desires of the digital workforce. Küpper et al. (2021) and Kashive et al. (2022) contributed to the field by providing quantitative and qualitative frameworks to explain the connection between these concepts, the first through Affective Event Theory (AET) and the second using Self Determination Theory (SDT) and text and sentimental analysis methodology to analyse reviews of individuals who experienced a gamified recruitment process.

Serious games were initiated by Clark Abt, in 1970, explicitly for educational purposes beyond plain entertainment, even though it presents entertainment features which are important for EB since it helps keeping potential applicants engaged and motivated during the recruitment phase. EB and serious games have the same goal: stimulate a learning process with the desired outcome of knowledge creation, that in the case of EB is in regard of a certain company.

Küpper et al. (2021) turned to the AET, developed by the psychologists Howard Weiss and Russell Cropanzano in 1996, to try and clarify how gamification can be useful in EB practices. The AET was developed to explain how emotions can shape employee's satisfaction at work, proposing that specific work events influence employee's affective reactions, resulting in different attitudes and behaviours (Weiss & Cropanzano, 1996) that may be: 1) affect-driven behaviours, i.e., work decisions strictly driven by emotion as having fun or loving the tasks performed; 2) judgement-driven behaviours, i.e., work related decisions driven mainly by cognition like seeking a higher salary.

Employer branding gamification, through serious games, is an affective experience due to its gaming elements and nature, but it also has the capacity to trigger cognitive stimulus since the core of serious games is the learning process (Küpper et al., 2021). With this study, the authors confirmed that EBG is a suitable approach for the digital workforce and that it can be put to action through the usage of serious games since the learning process and knowledge creation is the core of both EB practices and serious games (Küpper et al., 2021). Since serious games force participants to be more engaged during the learning process, because individuals are not just reading a paper or scrolling through documents,

it also produces a better and richer learning result, which is the desired outcome of any EB approach (Kashive et al., 2022).

*H1 – The gamification of EB has a positive effect on the Portuguese digital workforce engagement.*

Küpper et al. (2021) were not the only authors exploring EBG, Buil, Catalã̃n, and Ortega (2019), based their research on the self-determination theory (SDT) to explain the motivational power of gamification and how it can create positive outcomes regarding employee's satisfaction, engagement, and retention and organizational attractiveness as well (Berger, Schlager, Sprott, & Herrmann, 2018). Kashive et al. (2022) also contributed to this research area by developing a qualitative approach that has not been done before, however focusing more on the application of gamification in the recruitment process, explaining the sentiments of applicants when experiencing gamified recruitments – the use of gamification in selection tests produce a higher level of satisfaction and enjoyment for applicants while also making it less frightening; another conclusion was that some game elements such as scores and leadership boards were helpful to motivate candidates and incite their competitiveness.

### 2.2.6. A Motivational, Engagement, & Retention Source

Besides improving knowledge retention, autonomy, competitiveness, and collaboration, gamification is also a powerful motivational tool, giving the workforce the opportunity to improve their labour and develop their performance through an exciting and engaging approach that is directly linked to the organizational goals and objectives (Lawande et al., 2018). According to Lowman (2016), the primary focus of gamification in the workplace has been the enhancement of employee engagement and motivation, arguing that it can even be an effective tool to win the war of talent and retention.

*H2 – The gamification of EB has a positive effect on the motivation of the Portuguese digital workforce.*

What are the driver factors of the motivation power of gamified solutions? Firstly, the employees of this newer and younger workforce are very used to gaming in their personal lives, some of them being even addicted to it from a young age (Lawande et al., 2018), which facilitates its acceptance in the labour context. In November 2022, the number of gamers worldwide stood at 3,03 billion (Statista, 2022a), an amount that is expected to increase in the next years as videogames keep being one of the most desired and popular forms of entertainment (Buil et al., 2019), and its industry stays prospering.

By providing real-time feedback, clear goals, challenges, achievements rewarding and progress tracking (McGonigal, 2011), gamification is aligned with motivation theories fundamentals (Colbert et al., 2016), especially with the Self Determination Theory (SDT) which explains that when the basic human needs of autonomy (need to have independence), relatedness (need to have a sense of belonging), and competence (need to be effective) are satisfied, individuals become more motivated towards their own growth and development (Legault, 2017; Ryan & Deci, 2000). This theory focuses heavily on the power of internal motivation, declaring that when an individual is intrinsically self-determining the outcomes of the behaviour or activity will be more successful, since that person is doing it just for the sake of self-satisfaction and accomplishment (Lepper, Greene, & Nisbett, 1973). The same does not happen when the behaviour is not self-determined, meaning it is an extrinsic motivation, where individuals have behaviours with the only purpose of achieving rewards, not bringing them any real fulfilment (Hagger & Chatzisarantis, 2008).

Through gamification, employees become more engaged (Simpson & Jenkins, 2015), can achieve both intrinsic and extrinsic motivation and also fulfil these basic needs providing them the autonomy to choose and customize their profiles and avatars; celebrate their competence through points, awards, leader boards and challenges; and also connect individuals through chats, forums and groups (Aparicio, Vela, Sánchez, & Montes, 2012). Since Human Capital is one of the most vital assets of any company, firms are doing more research than ever to find new solutions to engage and provide the best working experience (Ērgle & Ludviga, 2018), turning to gamification that, in addition to its motivational and engaging influence, can aid in the identification and retention of talent (Lowman, 2016), and also on the amplification of employer branding (Manocha et al., 2021; Kashive et al., 2022).

Companies already investing in this area are, e.g., Electronic Arts which provides game-based learning to their employees, giving them the opportunity to learn more about the company and develop technical and soft skills through engaging and dynamic initiatives, which once again appeals to intrinsic motivation (Lowman, 2016); LiveOps Inc. implemented a digital gamification platform where employees can get awards, points, and badges for achieving organizational goals and can also compare their achievements with peers, which brought the company an improvement of 23% in performance, a 9% increase in employee satisfaction, and also less time consumed in training related tasks that went from 4 weeks to complete to just 14h (Larson, 2019); L'Oréal integrated serious games into their recruitment processes to expose applicants to the L'Oréal world and business (Larson, 2019); Deloitte implemented into its Leadership Academy game elements to train their executives through a more engaging and competitive environment, which yield an increase in the program completion and also on the number of users returning to the academy (Larson, 2019).

As Vecchi (2001) identified, when job satisfaction is high the turnover intention is low and when the EB strategy is well thought out and executed, it has the ability to retain the best talents of a company (Ahmad & Daud, 2016), by providing them with a joyful and interesting employment experience, an objective in which Employer Branding Gamification excels since it can increase satisfaction, motivation and engagement of the workforce (Gilani & Cunningham, 2017; Kashive et al., 2022).

*H3 – The gamification of EB has a positive effect on the Portuguese digital workforce retention.*

# 3. METHODOLOGY

## 3.1. CONCEPTUAL MODEL

The previous three hypotheses, based on the literature review findings, were defined with the purpose of allowing the creation of a conceptual model to guide the investigation and simultaneously answer the research questions of this paper. Both questions are unique and formulated with the aim of exploring a trend that has not yet been explored in Portugal:

*RQ1 – Does EBG influences the engagement and motivation of the Portuguese digital workforce?*

*RQ2 – Is gamified EB a suitable approach for the retention of the Portuguese digital workforce?*
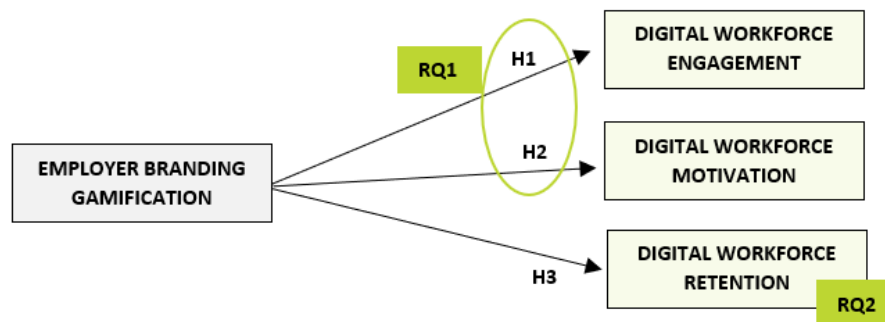


Figure 5 - Research 's Conceptual Framework
*Source: Author's Content*

This conceptual model, which will be used to guide the research from now onwards, proposes that Employer Branding Gamification has a positive effect on the Portuguese digital workforce, which in this case, and accordingly to what was described on the literature review, encompasses individuals belonging to the Millennials (Gen Y) and Gen Z generational cohorts. Hence, the hypotheses identified provide a framework for testing the relationships between Employer Branding Gamification, Engagement, Motivation and Retention among the Portuguese digital workforce.

## 3.2. DATA COLLECTION TECHNIQUE

Since gamification of EB processes is quite a recent trend in the business world (Hussain et al., 2018; Manocha et al., 2021; Seaborn & Fels, 2015), especially when considering the Portuguese context, for which was quite hard to have meaningful literature findings, the data collection for this research aims to gather further insights and information on the topic. It is expected that the outcomes of this dissertation will contribute to having a broader idea of how gamified EB experiences are perceived by the digital workforce in Portugal.

The application of a survey was the main instrument chosen for this quantitative research, but a randomised block was added in order to create an experiment with two hypothetical scenarios where some participants saw one scenario related to EB and other saw the scenario focused on EBG – this block represents the independent variable of the study. It was considered relevant to include this experiment in the survey in an effort to have richer data and results and also because it will allow for a comparison between EB and EBG retention power among the Portuguese's digital workforce.

The survey was designed in Qualtrics and, in total, was composed of 9 blocks: starting with a brief contextualization of the dissertation purpose and consent declaration; target definition to ensure that only people belonging to the Portuguese Digital Workforce criteria, i.e., Millennials and Gen Z's currently working in Portugal or that worked in the country for the past 6 months can answer the full questionnaire; followed by the evenly randomizer block with 2 hypothetical scenarios and brief explanation of what EB and EBG is; the 5 next blocks contained questions related to the variables of the conceptual model, and the last one was a demographics block for sample characterization.

To design the survey there was a primary search for scales that were previously validated. However, for EBG was not possible to find a scale to measure this variable, instead, two different scales were used, one related to EB and another for Gamification. In addition, it is relevant to explain that some scales were adapted to be 7-point Likert scales, in order to maintain the overall consistency of the survey, but the labels stayed the same: for EB, Gamification, and Retention the labels range from "1 – Strongly Disagree" to "7 – Strongly Agree"; for Engagement it ranged from "1 – Never" to "7 – Always"; and for Motivation it started on "1 – Not at all True" and ended in "7 – Very True". Lastly, the scales were reduced and just some of the items were used as to not create an excessively long survey.

Table 5 - Survey Scales

| Author | Variable | Adaptation |
|---|---|---|
| Tanwar and Prasad (2017) | Employer Branding | 5 items used<br>Changed from 5 to 7-point Likert scale |
| Högberg, Hamari, and Wästlund (2019) | Gamification | 13 items used |
| Schaufeli, Bakker, and Salanova (2006) | Engagement | 6 items used<br>Changed from 0-6 to 1-7 Likert scale |
| Ostrow and Heffernan (2018) | Motivation | 7 items used |
| Kyndt, Dochy, Michielsen, and Moeyaert (2009) | Retention | 6 items used |

*Source: Author's Content*

In total, the survey had 46 questions and it took approximately 7 minutes to complete. A pre-test was conducted to validate the survey and make final adjustments. Afterwards, it was officially distributed between April 13th and 6th of May. Since the intent was to reach as many people as possible, the survey was shared online through NOVA IMS institutional forums, social networks as WhatsApp, Instagram, Facebook, and LinkedIn, and the participants were also asked to share it with their network.

## 4. EMPIRICAL STUDY

### 4.1. SAMPLE CHARACTERIZATION

The survey had a total of 155 participants; however, it was necessary to delete incomplete answers, and exclude the participants that did not meet the desired criteria for the study. Hence, after the data cleaning process, the number of valid answers was 100 ($N_{Total}$), with 50 participants randomly assigned to the traditional Employer Branding ($N_{EB}$) scenario, and 50 to the Employer Branding Gamification ($N_{EBG}$) scenario.

### 4.1.1 Descriptive Statistics for N=100

For $N_{Total}$, 74% of participants reported being currently working in Portugal. Their average age is set on approximately 26 years old, ranging from 18 to 42, with 57% being Millennials while 43% belong to the Gen Z cohort. In terms of gender, the sample is composed of 35 males and 65 females, with 46% of individuals having a bachelor's degree, and 37% mentioned having a master's degree. In terms of occupation, 38% of the sample is a full-time employee, while 22% are full time students and 21% are working students, with the average number of people per household set on 3 members (29%), followed by 2 member (21%) and a tie between 1 and 4 members, both with 9%.
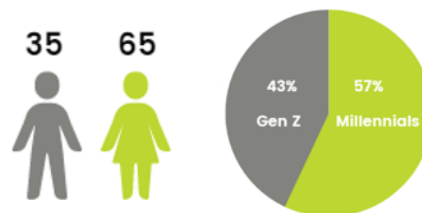


Figure 6 - Sample Demographics
*Source: Author's Content*

In complement to the frequency and descriptive statistics analysis, a correlation between the demographic variables and all the items of the dependent variables was performed, however no significant correlation was found, except for gender that positively correlates with the Employer Branding variable ($r$ = 0,197 e $p$=0,05).

### 4.1.2 Descriptive Statistics for Employer Branding ($N_{EB}$ = 50) scenario

Considering just the population that saw the EB scenario, the age average is also 26 years old, with 54% of participants allocated to the Millennials cohort and 46% to Gen Z, which makes this group the more evenly distributed in this category. Regarding the gender, this sample is composed of 17 males and 33 females; more than 80% of the individuals have a bachelor or higher degree; are mainly full-time employees (32%), but there is also a strong presence of students, either full time studying (20%) or working and studying at the same time (28%). Regarding the household, 2 is the most frequent number of members (24%), but with 3 (22%), 1 and 4 (20% each) being mentioned as well.

Figure 7 - Traditional EB Demographics
*Source: Author's Content*

**4.1.3 Descriptive Statistics for Employer Branding Gamification (N$_{EBG}$ = 50) scenario**

The last group of participants is the one that saw the gamified EB experience, and it has an average age of 25 years old, the variable range settled between 18 years and 41 years old, with 60% of participants being Millennials and 40% Gen Z. Women represent 64% of the sample and man 36% (*M*=18; *F*=32), being reported that 92% of the individuals have a college degree. For the remaining demographic variables, it was possible to conclude that 44% is a full-time employee, and once again 3 is the most common number of people per household (36%).
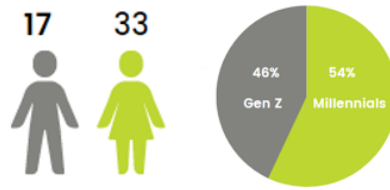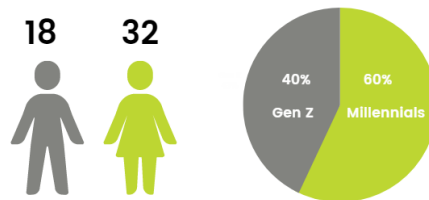


Figure 8 - Gamified EB Demographics
*Source: Author's Content*

**4.2. DATA ANALYSIS**

**4.2.1.  Dimension Reduction for N$_{TOTAL}$ = 100**

After the primary data cleaning process and the demographic analysis were performed, the next step was further analysing the variables with the purpose of understanding if it was possible to combine correlated variables loading on the same factor, facilitating the hypothesis testing later on.

Consequently, a dimension reduction was performed for the different variables of the study. The first step in this dimension reduction technique was applying the Kayser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and the Bartlett's Test of Sphericity to comprehend if the factorial analysis should be performed. Afterwards, the internal consistency of the scales was also analysed, using the Cronbach's Alpha (α) which enabled the exclusion of statistically insignificant items, increasing the value of the Cronbach's Alpha that should be, in the bare minimum, above 0,7. By applying the first factor analysis, it was possible to create 8 new variables.

For the Employer Branding variable, which had 5 questions, the KMO=0,662 and the Bartlett's test had *p*<0,001, meeting the desired condition of *p*<0,05, indicating that is possible to proceed with the factor analysis. According to the Component Matrix, the 5 items were loading in 2 different factors for which the Cronbach's Alpha was calculated and led to the exclusion of 2 items that were negatively affecting

the internal consistency of the scale. After excluding the items and performing once again the factor analysis, the other 3 items were loading in the same factor so using the Transform tool on SPSS the three items were grouped creating the "EMPLOYER_BRANDING" variable.

The same process was applied to the other items of the study, confirming the possibility of performing the exploratory factor analysis for all of them, this decision being justified by the KMO values, that ranged from 0,662 to 0,809, and the Bartlett's test $p<0,001$, which is below the desired value. Regarding Gamification, the Rotated Component Matrix from factor analysis shows that the items were loading in 3 different components that are explaining 65% of the variance, meaning that are 3 main factors. In addition, the Cronbach's Alpha revealed a strong internal consistency for all the three new scales ($\alpha=0,861$; $\alpha=0,799$; $\alpha=0,790$), so the 13 items remained, and none was excluded.

For the Engagement variable, it was possible to understand that the items were loading in 2 different factors. Similar to what was happening with the Employer Branding Variable, the internal consistency of the second factor was below the desired $\alpha=0,7$. By analysing the Total Item Statistics table and the trade-off between lost information and data consistency, two items were excluded, bringing the items to be loading in just one factor and the Cronbach's Alpha to $\alpha=0,756$.

Regarding the Motivation scale, the dimension reduction technique showed the items were loading in two different factors explaining 81% of the variance, which made sense since the first factor was linked to positive feelings, while the second displayed negative feelings associated with EBG. The internal consistency for the new variables was significant with $\alpha=0,881$ and $\alpha=0,946$, respectively. Lastly, the original Retention scale was also loading in 2 different factors but the second one faced serious challenges in the internal consistency performance, so the items were excluded, increasing the Cronbach's Alpha to $\alpha=0,768$.

Afterwards, another factor analysis was performed this time to comprehend if it would be possible to create the EBG variable by combining the EMPLOYER_BRANDING and the 3 GAMING variables. The KMO=0,685 and Bartlett's test $p<0,001$ proved the adequacy of the factor analysis with only one component extracted. The Cronbach's Alpha $\alpha=0,735$ was over 0,7 and therefore considered suitable allowing the creation of the "EMPLOYER_BRANDING_GAMIFICATION" variable.

Table 6 - Factor Analysis

| VARIABLES | KMO | BARTLETT'S TEST | $\alpha$ |
|---|---|---|---|
| EMPLOYER_BRANDING | 0,662 | | 0,736 |
| GAMING_RECOGNITION | | | 0,861 |
| GAMING_SOCIAL | 0,809 | | 0,799 |
| GAMING_COMPETITION | | | 0,790 |
| ENGAGEMENT | 0,738 | <0,001 | 0,756 |
| MOTIVATION_POSITIVE | 0,801 | | 0,881 |
| MOTIVATION_NEGATIVE | | | 0,946 |
| RETENTION | 0,682 | | 0,768 |
| EMPLOYER_BRANDING_GAMIFICATION | 0,685 | | 0,735 |

Since there were two groups of participants, the variable "SCENARIO_RANDOM" was also created in which 1 = "Traditional EB", and 2 = "Gamified EB": this new variable will allow the comparison between the two scenario's answers and is also the independent variable used to test the hypothesis.

### 4.2.2. Correlation Analysis for $N_{TOTAL}$ = 100

With the new variables created, more correlation analysis were performed and it was verified that EMPLOYER_BRANDING positively correlates with all the other variables, except with MOTIVATION_POSITIVE. When the confidence interval is set on 95%, the following positive and significant correlations are achieved: weak with GAMING_RECOGNITION ($r$=0,439; $p$<0,01), strong with GAMING_SOCIAL ($r$=0,713; *$p$<0,01*), moderate with ENGAGEMENT ($r$=0,554; $p$<0,01), very weak with MOTIVATION_NEGATIVE ($r$=0,259; $p$=0,09) and week with RETENTION ($r$=0,283; $p$=0,04).

Except for MOTIVATOIN_NEGATIVE where no significant correlation was found at all, GAMING_RECOGNITION has a positive correlation with all the other variables, with prominence to MOTIVATION_POSITIVE where the correlation is not only significant but strong ($r$=0,742; $p$<0,01). GAMING_SOCIAL also shows a significant correlation with all the other variables, especially with ENGAGEMENT ($r$=0,717; $p$<0,01). The last scale related to gamification, GAMING_COMPETITION is not correlated to RETENTION ($r$=0,136; $p$=0,176) or MOTIVATION_POSITIVE ($r$=0,054; $p$=0,595) and is weak or moderately correlated to the other variables.

MOTIVATION_POSITIVE has a weak and negative correlation with MOTIVATION_NEGATIVE ($r$=0,054; $p$=0,595) which makes sense – when the positive motivational factors are higher, the negative factors tend to decrease. On another hand, RETENTION does not correlate at all with GAMING_COMPETITION, ENGAGEMENT, or MOTIVATION_NEGATIVE, but, even though statistically significant ($p$<0,05), it correlates weakly to all the other variables.

EMPLOYER_BRANDING_GAMIFICATION is the only variable that correlates with all the other variables with a positive, strong, and significant correlation with EMPLOYER_BRANDING, the 3 GAMING variables, and engagement, and equally presents a significant but weaker relation with the others.

Table 7 - Correlations

| | | EMPLOYER_BRANDING | GAMING_RECOGNITION | GAMING_SOCIAL | GAMING_COMPETITION | ENGAGEMENT | MOTIVATION_POSITIVE | MOTIVATION_NEGATIVE | RETENTION | EMPLOYER_BRANDING_GAMIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|
| EMPLOYER_BRANDING | Pearson Correlation | -- | | | | | | | | |
| | N | 100 | | | | | | | | |
| GAMING_RECOGNITION | Pearson Correlation | ,439** | -- | | | | | | | |
| | Sig. (2-tailed) | <,001 | | | | | | | | |
| | N | 100 | 100 | | | | | | | |
| GAMING_SOCIAL | Pearson Correlation | ,713** | ,509** | -- | | | | | | |
| | Sig. (2-tailed) | <,001 | <,001 | | | | | | | |
| | N | 100 | 100 | 100 | | | | | | |
| GAMING_COMPETITION | Pearson Correlation | ,246* | ,346** | ,412** | -- | | | | | |
| | Sig. (2-tailed) | ,014 | <,001 | <,001 | | | | | | |
| | N | 100 | 100 | 100 | 100 | | | | | |
| ENGAGEMENT | Pearson Correlation | ,554** | ,268** | ,717** | ,443** | -- | | | | |
| | Sig. (2-tailed) | <,001 | ,007 | <,001 | <,001 | | | | | |
| | N | 100 | 100 | 100 | 100 | 100 | | | | |
| MOTIVATION_POSITIVE | Pearson Correlation | ,182 | ,742** | ,206* | ,054 | ,072 | -- | | | |
| | Sig. (2-tailed) | ,071 | <,001 | ,040 | ,595 | ,474 | | | | |
| | N | 100 | 100 | 100 | 100 | 100 | 100 | | | |
| MOTIVATION_NEGATIVE | Pearson Correlation | ,259** | -,057 | ,313** | ,471** | ,424** | -,254* | -- | | |
| | Sig. (2-tailed) | ,009 | ,573 | ,002 | <,001 | <,001 | ,011 | | | |
| | N | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | |
| RETENTION | Pearson Correlation | ,283** | ,532** | ,263** | ,136 | ,045 | ,541** | -,190 | -- | |
| | Sig. (2-tailed) | ,004 | <,001 | ,008 | ,176 | ,654 | <,001 | ,058 | | |
| | N | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| EMPLOYER_BRANDING_GAMIFICATION | Pearson Correlation | ,742** | ,728** | ,841** | ,728** | ,649** | ,359** | ,355** | ,379** | -- |
| | Sig. (2-tailed) | <,001 | <,001 | <,001 | <,001 | <,001 | <,001 | <,001 | <,001 | |
| | N | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

### 4.2.3. EBG vs EB Scenario Descriptive Results

In respects to the 1st scale, EB, the participants who saw the EBG scenario display overall higher results, but there is not a huge discrepancy between the means of the two groups. In the gamified EB experience, individuals feel that the company gives them autonomy in the decision-making process, and 78% also agreed on it being an opportunity to be recognized for their work while having the option to work in teams. Comparing the answers from the EB scenario, the individuals expressed that their experience was not as stress-free as the gamified one ($M_{EB}$=3,98 versus $M_{EBG}$=4,30), and even though they likewise consider having autonomy and work as part of a team, the mean (M) is slightly lower than the reported by the other group.

Table 8 - Gamified Scenario EB Scale

| | Q11_1_EB_Aut onomy | Q11_2_EB_Gr oup_Atmosphe re | Q11_3_EB_Re cognition | Q11_4_EB_Str ess_Free | Q11_5_EB_Te amWork |
|---|---|---|---|---|---|
| Mean | 5,16 | 5,04 | 5,58 | 4,30 | 4,94 |
| Std. Deviation | ,912 | 1,228 | 1,230 | 1,266 | 1,219 |
| Minimum | 3 | 3 | 3 | 2 | 2 |
| Maximum | 7 | 7 | 7 | 7 | 7 |

*Source: Author's Content*

Table 9 - Traditional Scenario EB Scale

| | Q11_1_EB_Aut onomy | Q11_2_EB_Gr oup_Atmosphe re | Q11_3_EB_Re cognition | Q11_4_EB_Str ess_Free | Q11_5_EB_Te amWork |
|---|---|---|---|---|---|
| Mean | 4,64 | 4,32 | 4,92 | 3,98 | 4,52 |
| Std. Deviation | 1,156 | 1,269 | 1,209 | 1,301 | 1,092 |
| Minimum | 2 | 2 | 3 | 1 | 2 |
| Maximum | 7 | 7 | 7 | 7 | 7 |

*Source: Author's Content*

For the items composing the Gamification scale it was expected to have a bigger difference between the means of the two groups, but it was not verified. Although the EBG scenario presents higher average values in their answers, it is not that different from the EB group responses. Nevertheless, people who saw the gamified scenario consider it to be a source of motivation to progress and get better at their job ($M_{EBG}$=5,58 versus $M_{EB}$=4,50) since it makes them feel guided ($M_{EBG}$=4,94 versus $M_{EB}$=4,24) by having clear goals ($M_{EBG}$=5,60 versus $M_{EB}$=4,48), useful feedback ($M_{EBG}$=5,02 versus $M_{EB}$=4,50) and for being recognized for their achievements ($M_{EBG}$=5,92 versus $M_{EB}$=4,80). In the other spectrum, the gamified version is also considered to be a little more competitive with the sample from this scenario stating that it makes them feel like success comes mainly through achievements ($M_{EBG}$=5,58 versus $M_{EB}$=3,96), that it almost feels like being part of a competition ($M_{EBG}$=5,52 versus $M_{EB}$=3,64), but that it is an overall playful experience that gets them emotionally involved and sparks their creative side.

## Table 10 - Gamified Scenario Gaming Scale

| | Q14_1_EBG_Success_Accomp | Q14_2_EBG_Get_Better | Q14_3_EBG_Goals | Q14_4_EBG_Highly_Demanding | Q14_5_EBG_Feels_Competition | Q14_6_EBG_Need_Win | Q14_7_EBG_Guided | Q14_8_EBG_Feedback | Q14_9_EBG_Emotion_Involved | Q14_10_EBG_Playful_Exp | Q14_11_EBG_Creative | Q14_12_Connected_Others | Q14_13_Recognized |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 5,58 | 5,56 | 5,60 | 4,48 | 5,52 | 4,98 | 4,94 | 5,02 | 4,46 | 5,38 | 5,06 | 5,04 | 5,92 |
| Std. Deviation | 1,162 | 1,053 | 1,125 | 1,249 | 1,092 | 1,286 | 1,268 | 1,270 | 1,528 | 1,105 | 1,219 | 1,212 | 1,047 |
| Minimum | 2 | 4 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 2 | 4 |
| Maximum | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

*Source: Author's Content*

## Table 11 - Traditional Scenario Gaming Scale

| | Q14_1_EBG_Success_Accomp | Q14_2_EBG_Get_Better | Q14_3_EBG_Goals | Q14_4_EBG_Highly_Demanding | Q14_5_EBG_Feels_Competition | Q14_6_EBG_Need_Win | Q14_7_EBG_Guided | Q14_8_EBG_Feedback | Q14_9_EBG_Emotion_Involved | Q14_10_EBG_Playful_Exp | Q14_11_EBG_Creative | Q14_12_Connected_Others | Q14_13_Recognized |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 4,50 | 4,76 | 4,48 | 4,08 | 3,64 | 3,96 | 4,24 | 4,50 | 3,62 | 4,48 | 4,52 | 4,40 | 4,80 |
| Std. Deviation | 1,147 | 1,001 | 1,165 | 1,412 | 1,411 | 1,324 | 1,117 | 1,249 | 1,550 | 1,015 | ,995 | 1,178 | 1,195 |
| Minimum | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 2 |
| Maximum | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 |

*Source: Author's Content*

Regarding Engagement, 76% of EBG participants consider the experience to be meaningful with an average of 5,30. While the population declare that the gamified experience makes them feel enthusiastic about their jobs ($M_{EBG}$=5,08; $M_{EB}$=4,48), sometimes even getting carried away by being immersed in their work, this does not make it harder for them to detach themselves from their job at the end of the day ($M_{EBG}$=3,56; $M_{EB}$=2,96), The opinions from the EB group are quite similar but with lower values showing that the gamified experience has more engaging power than a non-gamified one.

## Table 12 - Gamified Scenario Engagement Scale

| | Q16_1_ENGAG_FullOF_Purpose | Q16_2_ENGAG_Time_Flies | Q16_3_ENGAG_Feel_Enthusiastic_Job | Q16_4_ENGAG_Imersed_Job | Q16_5_ENGAG_Carried_Away | Q16_6_ENGAG_Hard_Disconnect |
|---|---|---|---|---|---|---|
| Mean | 5,30 | 4,50 | 5,08 | 4,58 | 4,52 | 3,56 |
| Std. Deviation | 1,249 | 1,418 | 1,104 | 1,372 | 1,297 | 1,618 |
| Minimum | 2 | 1 | 2 | 2 | 1 | 1 |
| Maximum | 7 | 7 | 7 | 7 | 7 | 7 |

*Source: Author's Content*

## Table 13 - Traditional Scenario Engagement Scale

| | Q16_1_ENGAG_FullOF_Purpose | Q16_2_ENGAG_Time_Flies | Q16_3_ENGAG_Feel_Enthusiastic_Job | Q16_4_ENGAG_Imersed_Job | Q16_5_ENGAG_Carried_Away | Q16_6_ENGAG_Hard_Disconnect |
|---|---|---|---|---|---|---|
| Mean | 4,80 | 3,82 | 4,48 | 4,20 | 3,74 | 2,96 |
| Std. Deviation | ,990 | 1,273 | 1,035 | 1,069 | 1,482 | 1,690 |
| Minimum | 3 | 1 | 2 | 2 | 1 | 1 |
| Maximum | 7 | 7 | 6 | 7 | 7 | 6 |

*Source: Author's Content*

In terms of Motivation, 88% of the sample that saw the EBG setting considered it to be quite enjoyable and very interesting, while from the non-gamified scenario only 62% said the same in regard to the experience presented, but both groups are willing to participate in other EB programs because it is important for them. Lastly, individuals from the gamified experience seem to be more likely to feel tense, anxious, and pressured, than the other group.

### Table 14 - Gamified Scenario Motivation Scale

|  | Q18_1_MOTIV _Enjoyable | Q18_2_MOTIV _Interesting | Q18_3_MOTIV _Tense | Q18_4_MOTIV _Anxious | Q18_5_MOTIV _Pressured | Q18_6_MOTIV _Value4ME | Q18_7_MOTIV _Important4ME |
|---|---|---|---|---|---|---|---|
| Mean | 5,50 | 5,54 | 3,56 | 3,48 | 3,80 | 5,48 | 5,78 |
| Std. Deviation | 1,111 | 1,073 | 1,864 | 1,854 | 1,874 | 1,249 | 1,130 |
| Minimum | 2 | 3 | 1 | 1 | 1 | 2 | 3 |
| Maximum | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

*Source: Author's Content*

### Table 15 - Traditional Scenario Engagement Scale

|  | Q18_1_MOTIV _Enjoyable | Q18_2_MOTIV _Interesting | Q18_3_MOTIV _Tense | Q18_4_MOTIV _Anxious | Q18_5_MOTIV _Pressured | Q18_6_MOTIV _Value4ME | Q18_7_MOTIV _Important4ME |
|---|---|---|---|---|---|---|---|
| Mean | 4,86 | 4,82 | 2,90 | 2,94 | 2,98 | 5,10 | 5,30 |
| Std. Deviation | 1,125 | 1,155 | 1,389 | 1,476 | 1,571 | 1,266 | 1,344 |
| Minimum | 3 | 3 | 1 | 1 | 1 | 2 | 2 |
| Maximum | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

*Source: Author's Content*

Analysing now the DV, Retention, it is possible to understand that those who had the EBG scenario appear to be more loyal to the MDC company, considering looking first for internal job opportunities when the time to change roles appear ($M_{EBG}$=5,26; $M_{EB}$=4,92), and admitting that they would like to work for the company in the next 5 years ($M_{EBG}$=5,26; $M_{EB}$=4,60). In addition, when asked if they would choose another company over MDC if an attractive job offer appeared the values registered were lower than the ones from the EB group ($M_{EBG}$=3,34; $M_{EB}$=5,04).

### Table 16 - Gamified Scenario Retention Scale

|  | Q20_1_RET_N ewRoles_Insid e_Company | Q20_2_RET_C OMP_NO_Matt er | Q20_3_RET_5 Y_ThisComp | Q20_4_RET_O ther_Comp | Q20_5_RET_A ttract_Job | Q20_6_Love_ MDC |
|---|---|---|---|---|---|---|
| Mean | 5,26 | 4,50 | 4,72 | 3,34 | 4,92 | 5,26 |
| Std. Deviation | 1,482 | 1,657 | 1,310 | 1,255 | 1,066 | 1,026 |
| Minimum | 1 | 1 | 1 | 1 | 3 | 2 |
| Maximum | 7 | 7 | 7 | 6 | 7 | 7 |

*Source: Author's Content*

### Table 17 - Traditional Scenario Retention Scale

|  | Q20_1_RET_N ewRoles_Insid e_Company | Q20_2_RET_C OMP_NO_Matt er | Q20_3_RET_5 Y_ThisComp | Q20_4_RET_O ther_Comp | Q20_5_RET_A ttract_Job | Q20_6_Love_ MDC |
|---|---|---|---|---|---|---|
| Mean | 4,92 | 4,54 | 4,46 | 3,66 | 5,04 | 4,60 |
| Std. Deviation | 1,122 | 1,717 | 1,054 | 1,118 | 1,087 | ,904 |
| Minimum | 1 | 1 | 1 | 1 | 3 | 3 |
| Maximum | 7 | 7 | 7 | 7 | 7 | 7 |

*Source: Author's Content*

### 4.2.4. EBG vs EB Scenario Independent Sample T-Test Results

Considering that the survey developed for this research had two distinct groups (Tradition EB, coded as Group 1, and Gamified EB, coded as Group 2), it is necessary to compare both results to comprehend the differences in their answers and, that way, understand if gamification has indeed and effect on engagement, motivation, and retention among the digital workforce of Portugal. For this, the suitable and chosen test was the independent sample t-test seeing it allows to determine if there is a statistically significant difference between the means of the two groups.

It was possible to conclude that the Gamified EB scenario has always higher mean values that the traditional group, the p-value is below the desired number of 0,05 and the t-test value was always negative which once again proves the mean score of the traditional EB group was significantly lower than the mean score of the Gamified EB group. For the independent variable, the mean of Group 1 = 4,230 which is statistically significantly lower ($p<0,001$) that the mean of Group 2 = 5,104. Regarding ENGAGEMENT, the gamified EB mean M=4,290 is significantly higher that the M=3,680 of Group 1 which implies that gamifying EB experiences does in fact increase the engagement of the Portuguese digital workforce ($t=-2,883$, $p=0,005$).

The negative t-value ($t=-2,750$) suggests that participants in the Traditional EB group exhibited significantly ($p=0,007$) lower levels of positive motivation compared to participants in the Gamified EB group (M=5,020 versus M=5,575). However, it is also true that those who were exposed to the gamified version have higher scores (M=2,940 versus M=3,6133) in terms of negative motivation which is associated with feeling tense, anxious, and tense ($t=-2,109$, $p=0,038$).

The last variable tested was RETENTION to investigate the effect of EBG on employee retention. The Traditional EB group had M=4,660 while the Gamified EB group exhibited a slightly higher mean (M=5,080) and the t-test value obtained was $t=-2.191$ with $p=0,031$ indicating that a gamified EB experience has a significant higher retention rate among the Portuguese digital workforce.

The results achieved plus the significant difference for all the variables in this research between the two groups indicates the potential benefits of incorporating gamification elements in employer branding experiences. This is particularly relevant for companies during periods of talent shortage and retention since it may be helpful to have these insights when trying to design strategies to retain, motivate, and engage employees.

Table 18 - Independent Sample T-Test

| VARIABLES | SCENARIO'S MEAN | | *t* | *p*-value |
|---|---|---|---|---|
| | TRADITIONAL EB | GAMIFIED EB | | |
| EMPLOYER_BRANDING_GAMIFICATION | 4,230 | 5,104 | -6,607 | <0,001 |
| ENGAGEMENT | 3,680 | 4,290 | -2,883 | 0,005 |
| MOTIVATION_POSITIVE | 5,020 | 5,575 | -2,750 | 0,007 |
| MOTIVATION_NEGATIVE | 2,940 | 3,6133 | -2,109 | 0,038 |
| RETENTION | 4,660 | 5,080 | -2,191 | 0,031 |

*Source: Author's Content*

# 5. RESULTS AND DISCUSSION

As demonstrated in the previous sections, the participants who saw the gamified scenario showed significantly higher values of engagement, motivation, and retention. Nonetheless, to further test the hypothesis formulated for this dissertation, a One-Way ANOVA analysis was conducted with the independent variable "SCENARIO_RANDOM", and the dependent variables, ENGAGEMENT, MOTIVATION_NEGATIVE, MOTIVATION_POSITIVE, and RETENTION.

**H1: EBG vs Engagement**

The One-Way ANOVA performed to support the first hypothesis supported the results from the T-Test indicating that the participants of the EBG scenario score significantly higher values of engagement than the EB group. The overall significance of the model was proven by the values obtained $F(1,98)=8,312$, $p$=0.005, providing evidence of a strong relationship between EBG and engagement. Therefore, the hypothesis "The gamification of EB has a positive effect on the Portuguese digital workforce engagement" has been corroborated.

**H2: EBG vs Motivation**

Since the motivation variable loaded in two different factors, one positive and another negative, two ANOVA analysis were performed to comprehend the relationship between the independent variable and both motivation variables. Regarding MOTIVATION_POSITIVE, it is possible to state that there is a meaningful association between the variables, which is confirmed by the results obtained with the ANOVA analysis $F(1,98)=7,565$, p=0,007.

Concerning MOTIVATION_NEGATIVE, the model disclosed a significant main effect of SCENARIO_RANDOM on MOTIVATION_NEGATIVE with the results of the ANOVA being $F(1, 98)=4,447$, $p$=0,038. Combining both scenario's means from the T-Test and the results of both ANOVA analysis, it is only possible to partially validate the second hypothesis formulated for this dissertation "The gamification of EB has a positive effect on the Portuguese digital workforce motivation".

**H3: EBG vs Retention**

The third and last hypothesis aims to investigate a possible relation between EBG and retention of the Portuguese digital workforce. The ANOVA model has a statistically significant result $F(1,98)=4,801$ and $p$=0.031, providing strong evidence of a significant association. Adding the information, from the T-Test, that the gamified scenario showed higher mean retention results, the third hypothesis – "The gamification of EB has a positive effect on the Portuguese digital workforce retention" – is also sustained.

It is also relevant to disclose that besides the simple univariate ANOVA between the independent and dependent variables, the demographic variables were also tested for control purposes, but none was statistically significant. Within the groups, an analysis was performed to understand if there were significant differences between Millennials and Gen Z's, but it was not verified which led to conclude that there are no relevant differences between the two cohorts.

Table 19 - One-Way ANOVA Analysis

| DEPENDENT VARIABLE | INDEPENDENT VARIABLE | *df* | F | *p*-value |
|---|---|---|---|---|
| ENGAGEMENT | | (1,98) | 8,312 | 0,005 |
| MOTIVATION_POSITIVE | SCENARIO RANDOM | (1,98) | 7,565 | 0,007 |
| MOTIVATION_NEGATIVE | | (1,98) | 4,447 | 0,038 |
| RETENTION | | (1,98) | 4,801 | 0,031 |

*Source: Author's Content*

To enrich the results, the survey distributed had an open question where the participants could share their gamified employer branding experiences, if they were ever part of one. Below is a summary of the most relevant answers to this question, noting that from the sample's response the most common type of gamification reported is associated with internal games and achievement recognition.

Table 20 - Participant's EB Gamified Experiences

| **Participant's EB Gamified Experiences** | |
|---|---|
| 1 | *"My EB experience was thrilling, it really pushed me to do my best. And the fact that it was kind of a game motivated me further."* |
| 2 | *"Usage of game tests in AON platform during the recruitment process of some companies."* |
| 3 | *"My Company's Olympics: team-buildings with games and prizes for the winners. Internal games and competitions to promote, among others, well-being exercises."* |
| 4 | *"The name of the 3 top employees achieving the best numbers in terms of global management were displayed in a leader board at the company wall and recognised as employee of the month."* |
| 5 | *"In terms of performance, those who have more time on LinkedIn Learning receive a prize at the end of the year (Odisseias Pack)."* |
| 6 | *"Referral program where we earn points every time we refer someone for an open position and we can collect those points at the end of the year. The top 3 referrers win a prize."* |
| 7 | *"Training roadmaps (Pluralsight platform) where we can see our team members progress as well as view time (how much time they spent in the platform doing courses)."* |

*Source: Author's Content*

## 6. CONCLUSIONS AND FUTURE WORKS

Talent retention has been a constant source of challenges for companies, especially so in this modern world where the workplace is cohabited by different generational cohorts that reasonably have different needs and expectations. The workforce of the future, composed of Millennials and Gen Z's, is the most advanced and dependent workforce in respect to technology, seeking companies that are aligned with their digital values and technological needs, being very much likely to just leave a company for another that can better fulfil their desires. This reality is without a doubt a challenge for corporations trying to understand how detach themselves from the competition by tailoring the employee experience provided to attract, engage, motivate and, of course, retain these talents.

From the literature review was possible to understand that the digital workforce looks for engaging and meaningful experiences in the workplace. Having this information, a recent trend of research in the business world has been the integration of gamification elements, such as rewards, goals, missions, challenges, and leaderboards into employer branding experiences. These gamification techniques enable companies to improve their EB experiences and prospect themselves as a desirable place to work for individuals of the digital workforce seeing as it fosters a sense of accomplishment, autonomy, and fun, creating a positive and fulfilling employee experience.

Since the academic findings were not focused on the Portuguese context, the question that raised was if for the Portuguese digital workforce this would still apply. Hence, this dissertation had two research questions: "Does EBG influence the engagement and motivation of the Portuguese digital workforce?" and "Is gamified EB a suitable approach for Portuguese digital workforce retention?" for which was created a survey with two scenarios, one with a traditional EB experience, and another with a gamified EB experience so the results of both groups could be compared to achieve meaningful findings.

The survey targeted only individuals of the Portuguese digital workforce which means they had to be either a Millennial or a Gen Z, work in Portugal or consider working in the country in the next year. With a total of 100 valid answers, 50 randomly assigned to each one of the scenarios, the average age of the sample was 26 years old, with more than half of the participants belonging to the Millennials cohort and was mainly dominated by females (65 versus 35 males). After the data cleaning procedures, a factor analysis was conducted to explore the suitability of performing dimension reduction techniques which after validation led to the creation of 9 new variables.

The results achieved by the group exposed to the gamified version were overall higher than the results from the other group with the participants expressing they considered the experience an opportunity to be recognized for achievements. In addition, it is mentioned that gamification was a source of motivation to progress and get better because the feedback and clear goals provided made the participants feel guided and supported. However, and even if it is considered a playful experience, the gamified version was also compared to a competition showing higher results in this category as well. The gamified scenario was considered more engaging with 76% of the sample considering the experience to be meaningful and 88% declaring it to be quite enjoyable and very interesting, while from the non-gamified scenario only 62% reported the same.

An Independent Sample T-Test was also performed to further investigate and comprehend if there was indeed a statistically significant differences between the two groups. The results showed that for all the variables in the research there were significant differences between the gamified and the non-

gamified EB scenario with the gamified experience having always higher mean values, the p-value below the desired number of 0,05 and the t-test constantly yield negative results once again proving that the scores of the traditional EB group was significantly lower.

The next step in the data analysis was the testing of the three hypotheses designed for this research. The first one "The gamification of EB has a positive effect on the Portuguese digital workforce engagement" was corroborated by the ANOVA model, providing evidence of a strong relationship between EBG and engagement. The second, "The gamification of EB has a positive effect on the Portuguese digital workforce motivation", was partially validated – here is important to explain that two motivation variables were used for this analysis, MOTIVATION_POSITIVE that achieved a meaningful association with EBG, and MOTIVATION_NEGATIVE for which a significant result was also reached indicating that this sample associated both positive and negative feelings to the gamified experience. Lastly, the third hypothesis "The gamification of EB has a positive effect on the Portuguese digital workforce retention" was also proven since the One-Way Anova indicated a statistically significant result and the mean of the gamified scenario was higher than the non-gamified one.

Besides the previous ANOVA analysis performed only between the independent variable and the dependent variables, a second round of ANOVAs was conducted, this time incorporating the demographic variables as control variables to understand if this action would change anything in the results, however, no statistically significant relation was achieved. In general, the findings of this dissertation are aligned with previous works found during the literature review proving that gamification can indeed affect in a positive manner the motivation, engagement, and retention of employees, in this specific case, employees of the Portuguese digital workforce.

Even though all the research hypotheses were validated and the results between the two groups showed a clear and significant different in regard to the effect and important of gamification in the motivation, engagement, and retention of the Portuguese digital workforce, this paper faces some limitations that should also be addressed so future works may overcome it.

Firstly, the size of the sample for this analysis was quite limited, which affects the generalizability of the results so, in the future, it would be advised to include a larger and more diverse sample. Besides, it may be interesting to replicate this research to test and understand the application of EB gamification in different industries, regions, and even cultural contexts for a more comprehensive understanding and diversification of result since different industries have specific challenges and needs.

Another suggestion and recommendation is perhaps using a different methodology or additional methods, maybe even with qualitative research techniques such as in depth-interviews, focus groups sessions, and even longitudinal studies to really comprehend the long-term effects and effectiveness of employer branding gamification on talent retention. Lastly, the present research paper focused on EBG in more of a macro and general aspect, however, it would be interesting in the future to focus on specific aspects and influences of this concept such as if applying a gamified EB experience may cause friction between employees due to the competition it may bring, or even analyse how different types of personalities, such as introverts and extroverts, react to a gamified environment.

The present dissertation contributed to expand the understanding on how gamification can enhance talent retention, motivation, and engagement within the Portuguese's digital workforce context overcoming the literature gap in which no insights were available for this area of research in Portugal.

Beyond theoretical contributions, this paper provides practical implications and actionable insights that may be relevant for HR professionals, but also team leaders, managers, and all the individuals holding decision-making positions on how to attract and retain talent in Portugal. The empirical data and analysis may encourage companies to develop effective employer branding strategies using gamification elements and techniques to address the talent retention challenges faced in this specific context and meet the expectations of the digital workforce, while ultimately improving their competitive advantage and sustainability.

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## APPENDIX A – SURVEY

*Purpose*

This survey was developed to collect data regarding the influence of Employer Branding on the Portuguese digital workforce retention by gathering your opinions on the topic. By participating, you will not only be helping me finish up my master's, but you are also contributing to a recent area of research in Portugal, combining Human Resources + Marketing.

*Informed Consent*

As part of my Master's dissertation in Marketing Intelligence, at NOVA IMS, the data collected during this research will be treated anonymously and strictly for the purpose stated above, no personal or sensitive data will be asked. By clicking on "I accept to participate", the participant declares he/she is over 18 years old and is informed of the scope of this research, knowing that it is possible to withdraw from the survey at any time without any consequences attached.

**Thank You !**

Are you currently working in Portugal?

| Yes | ○ |
| --- | --- |

| No | ○ |
| --- | --- |

In the past year, were you working in Portugal?

| Yes | ○ |
| --- | --- |

| No | ○ |
| --- | --- |

Do you see yourself working in Portugal in the next year?

| Yes | ○ |
| --- | --- |

| No | ○ |
| --- | --- |

Please select the interval of your birth date

| | |
|---|---|
| [1900-1945] | ○ |

| | |
|---|---|
| [1946-1964] | ○ |

| | |
|---|---|
| [1965-1980] | ○ |

| | |
|---|---|
| [1981-1999] | ○ |

| | |
|---|---|
| [2000-2005] | ○ |

In the next page you will see a description about a company. Please read it carefully as you will have to answer some questions entirely related to that company afterwards.

### *Gamified EB Scenario*

MDC Corporation has noticed a decline in employee engagement and motivation levels. After conducting several focus group sessions, one of the suggestions was to introduce a gamification strategy in different stages of their employer branding strategy.

- **Training & Development** - MDC Corporation is considering incorporating a Learning Match Game where employees can select which learning paths meet their career goals and interests. They can unlock missions and new challenges to progress, being rewarded with badges, prizes, and achievement certificates. After completing the different modules, the employees are encouraged to share their knowledge with peers using the company's social forum.

- **Performance & Recognition** - To motivate employees to do their best, the company plans to introduce the "MDC Olympiad" experience where employees collect badges, points and prizes when completing projects, achieving, or exceeding their goals, and helping other colleagues. People also have the opportunity to see their peers progress, the top achievers, and compete against each other to win more rewards, recognition, bonuses, and promotions, fostering a culture of appreciation and motivation.

Employer Branding Gamification (EBG): Application of game elements (such as goals, badges, awards, leaderboards, challenges, etc.) to EB processes that were not game-like in their nature. In a corporate context, EBG may be applied in different activities such as recruitment, onboarding, training, and performance appraisal, among others.

MDC Corporation has noticed a decline in employee engagement and motivation levels. After conducting several focus group sessions, the company is considering ways to improve its employer branding strategy.

- **Training & Development** - To emphasize its commitment to employee development and innovation, MDC decided to provide them with access to a range of new learning resources, such as online courses, workshops, and in-person training sessions. The goal is to help employees build the skills they need to advance in their careers and contribute to the company's success.

- **Performance & Recognition** - To motivate employees, MDC plans to modernize the performance and recognition program. This new program will include a range of initiatives, such as performance reviews, bonuses, and promotions, to reward employees who achieve their goals and contribute to the company's success. The aim is to create a culture of appreciation and motivation, where employees feel valued and supported in their work.

Employer Branding (EB): "Communication efforts companies undertake when transmitting they are a desirable workplace to current and potential employees" - Lloyd (2002)

Please briefly describe your previous EB experience(s).

*(If you can not recall any previous experience, please write NA)*

Based on the scenario you read, please answer the following questions as if you were an employee of MDC Corporation.

Please select to what extent you agree or disagree with the statements below (1-Strongly Disagree to 7-Strongly Agree).

1. Through Employer Branding, this organisation provides autonomy to its employees to take decisions
2. Through Employer Branding, this organisation offers opportunities to enjoy a group atmosphere
3. This Employer Branding experience allows this organisation to recognise me when I do good work
4. This Employer Branding experience offers a relatively stress-free work environment
5. This Employer Branding experience offers opportunity to work in teams

Please select to what extent you agree or disagree with the statements below (1-Strongly Disagree to 7-Stringly Agree).

1. This EB experience makes me feel that success comes through accomplishments
2. This EB experience motivates me to progress and get better
3. This EB experience makes me feel like I have clear goals
4. This EB experience motivates me to do things that feel highly demanding
5. This EB experience feels like participating in a competition
6. This EB experience makes me feel that I need to win to succeed
7. This EB experience makes me feel guided
8. This EB experience gives me useful feedback so I can adapt
9. This EB experience gets me fully emotionally involved
10. This EB experience gives me an overall playful experience
11. This EB experience makes me feel that I can be creative
12. This EB experience gives me a feeling of being connected to others
13. This EB experience gives me a sense of being noticed for what I have achieved

Please read each statement carefully and decide if you would feel this way while working for MDC. If you don't see yourself having this feeling, choose "1 - Never". If you see yourself having this feeling, indicate how often.

1. I find this EB experience to be full of meaning and purpose
2. Time flies with this EB experience
3. With this EB experience, I feel enthusiastic about my job
4. I am immersed in my work with this EB experience
5. With this EB experience, I get carried away when I am working
6. This EB experience makes it difficult for me to detach myself from my job

For each of the following statements, please indicate how true it is for you (1-Very True to 7-Not True At All)

1. I think this EB experience is quite enjoyable
2. I would describe this EB experience as very interesting
3. I would feel tense doing these EB activities
4. I would feel anxious while working on these EB tasks
5. I would feel pressured while doing these
6. I would be willing to use EB again because it has some value to me

7. I think EB is an important activity

Please select to what extent you agree or disagree with the statements below (1-Strongly Disagree to 7-Strongly Agree).
1. If I wanted to do another job or function, I would look first at the possibilities within this company
2. It doesn't matter if I'm working for this company or another, as long as I have work
3. If it were up to me, I will definitely be working for this company for the next five years
4. If I could start over again, I would choose to work for another company
5. If I received an attractive job offer from another company, I would take the job
6. I would love working for this company

Gender

| | |
|---|---|
| Male | ○ |
| Female | ○ |
| Non-binary / third gender | ○ |
| Prefer not to say | ○ |

Age (Numeric)

| |
|---|
| |

Education

| | |
|---|---|
| Middle School | ○ |
| High School | ○ |
| Bachelor Degree | ○ |
| Master Degree | ○ |
| Doctoral Degree | ○ |
| Post Graduation Degree | ○ |

Occupation

| Full time student | ○ |
| Working student | ○ |
| Self employeed | ○ |
| Unemployed | ○ |
| Employed | ○ |
| Other | ○ |

How may people (including you) live in your household?

| 1 | ○ |
| 2 | ○ |
| 3 | ○ |
| 4 | ○ |
| 5 | ○ |
| >5 | ○ |