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The Epic Game of Creating a Successful Gamified Co-Creation Strategy

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Abstract: This paper aims to explore consumer engagement with online retailers through gamification, the use of game mechanics, and co-creation. A qualitative methodology was used through an exploratory case study approach. The interviews were conducted with 30 Portuguese consumers. It was found that the majority of respondents do not consider online shopping as a substitute for other entertainment activities. Respondents stressed that in online shopping, the important thing is personal satisfaction and their needs. According to the Hexad model, these characteristics fit the free spirit gamer, the Barttle model the explorer and the BrainHex model the seeker. As far as co-creation is concerned, the results indicate that most of the interviewees do not value the tools that exist on the retailers' websites which allow them to create their own product. This study provides recommendations for retailers to implement a successful co-creation gamification strategy. Companies need to include gaming elements to enhance the retail experience and increase sales. In turn, this can increase competitive pressures among retailers by improving the services and products they offer. This paper provides empirical support for the current dearth of qualitative studies on the role of gamification and co-creation in the online retail experience. Many of the findings of this study are not in line with existing literature, allowing the conclusion that gamification alone is no longer enough to engage the online retail consumer with products and brands, requiring co-creation for the effective engagement of this consumer.

Keywords: gamification; online shopping; co-creation; ecommerce; online retail experience

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1. Introduction

In recent years, we have witnessed changes in traditional commerce (physical shops) because consumer demands have been changing. In this context, many companies have had to close down because they could not keep up with the evolution of the market, which tended to be increasingly global and increasingly focused on e-commerce. On the other hand, the number of hours people spend on the internet today, either on websites or social networks, or playing games, has been increasing (Insley and Nunan 2014; Pena and Brito 2021).

Given this conjuncture, online shopping has increased and become routine in people's lives, and it is estimated that to buy a product, a consumer searches 124 product websites. Thus, websites have been a strong ally of companies (Nacke et al. 2014). The COVID-19 pandemic has increased online shopping. However, being connected to the internet does not mean that all users will buy products online because some are still wary of online shopping. Online sellers do not want mere "viewers", they want "buyers" (Wang et al. 2006).

According to INE, in 2020, the e-commerce users in Portugal suffered the most significant increase since 2002, standing at 44.5%. The most sold physical products were clothing, footwear and fashion accessories with 69%, a higher percentage than in 2020, also the amount spent per order increased (INE 2020). Alongside these data, in 2020, 21.3% of Portuguese companies began selling goods and services through the Internet. Sales in e-commerce represent 17% of the total turnover of 2020 (INE 2020).

Websites are an important means of client-company communication, so they must be accessible in search engines and promoted in other communication channels. Websites have to be functional, providing the message in an organised and clear way, appealing content, secure and reliable payments, excellent security features, fast in the search, with clear information and appealing content, quality, essential attributes for the attraction, loyalty and retention of customers and therefore increase trust (Kannan and Govindan 2011). Thus, online purchases are influenced by three characteristics: psychological, personal and technological, and are influenced by benefits received, trust and quality of the site, and trust is the most important (Baganzi et al. 2019). Companies' use of gamification on their websites influence online shopping (Aparicio et al. 2021; Lucassen and Jansen 2014). As a rule, sales resulting from using a gamified co-creation methodology increase sales (Rodrigues et al. 2021b).

Gamification is defined as using gaming techniques in non-gaming environments. Although it is a recent topic, some authors have already addressed it in certain areas, namely: in the workplace as motivational strategies, in teaching, in the fashion industry, in engineering, in health, or marketing (Aparicio et al. 2021; Carlier et al. 2021; Lucassen and Jansen 2014; Reis et al. 2020; Trinidad et al. 2021). Co-creation is a strategy of interaction between the company, customers, suppliers and even competitors, which aims at the participation of these agents in the creation of products/services, that is, in the creation of value (Lucassen and Jansen 2014; Rodrigues et al. 2021b). Research into the connection between gamification and co-creation enables the development and understanding of how co-creation practices can be improved (Patricio et al. 2020).

Flow theory advocates that flow is a mental state in which an individual, when performing an activity, is fully immersed in a feeling of focus, energised and completely involved (Ghani and Deshpande 1994; Silic et al. 2020). In this way, we can infer that this theory can explain the impact of gamification on consumer engagement with online retail purchases, and this flow may be the key to consumer engagement (Arghashi and Yuksel 2022). In this context, the aim of this paper is to explore consumer engagement with online retailers through gamification, the use of game mechanics and co-creation. A qualitative methodology was used, where 30 interviews were conducted with Portuguese consumers. That said, two research questions were formulated:

RQ1. *Do Portuguese consumers achieve entertainment experiences when shopping online?*

RQ2. *How do Portuguese consumers react to the inclusion of game mechanics in their online retail experiences?*

With this paper it was found that most respondents indicate that they do not consider online shopping as a substitute for other entertainment activities. Respondents stressed that in online shopping, the important thing is personal satisfaction and their needs. According to the Hexad model, these characteristics fit the free spirit gamer, the Bartle model the explorer and the BrainHex model the seeker. Respondents suggested that it is not important to do better deals than others, so they do not consider this variable to be an important aspect of gamification. Though, the interviewees affirmed that online shopping is not a competition where one loses or wins.

Some of these results are not in line with the results found by the most recent studies on the influence of gamification on online retail consumer engagement. The new findings led to the advancement of the existing literature since, until recently, studies encouraged production consumers to go online shopping to feel better emotionally, obtain social approval, look for new product trends, and understand the activity of online shopping as a game, this reality is changing. This study demonstrates that online tab purchases are made due to the need for a specific product and that gamification translated by the introduction of game elements in the online shopping process does not increase consumer engagement with online tab stores. As such, there is a breakthrough in the literature demonstrating that gamification must be supported by co-creation to involve the online consumer more (namely in psychological terms) with products and brands. As such, this study provides empirical support for the current economy of qualitative studies on the role of gamification and co-creation in the online retail consumer experience.

2. Literature Review

2.1. Understanding Gamification

Gamification comes from the English term gamifying, a term initially used with the meaning of "turning something non-game into a game". Although gamification is being used in various contexts, the entire scientific community has not yet accepted its definition. However, "the use of game design elements in non-game contexts" is the most unanimous (Gatautis et al. 2016; Lucassen and Jansen 2014). Gamification is not a game; its genesis underlies video games (Bright and Ponis 2021; Sailer et al. 2017).

The game is seen as something fun, a joke, which does not have a defined goal, it is used playfully, while gamification aims to motivate, influence to adopt some behaviour, and increase their involvement (Bright and Ponis 2021; Georgiou 2021). Thus, gamification is using techniques, mechanics, dynamics, and game elements associated with any context to encourage and motivate individuals to perform a particular task, such as learning, buying something, or getting better performance in their daily tasks. In short, these game techniques and strategies have as the main objective, first to encourage the use, then to involve and finally to influence and retain a behaviour (Al-Zyoud 2021; Gatautis et al. 2016; Lucassen and Jansen 2014).

2.2. Models of Player Types

The description of a good feeling or experience as a motivating factor for day-to-day activities was introduced by Csikszentmihalyi (1997) and is transmitted by the "flow state". This state results from a self-induced, intrinsic motivation of rewards or incentives without necessarily being induced by external rewards. Csikszentmihalyi (2000) deduced from this state of the Flow Theory, which considers nine dimensions necessary for an activity to induce a state of flow: (1) balance between skills and challenges, (2) union of consciousness and action, (3) clearly defined objectives, (4) specific feedback, (5) maximum concentration on the task, (6) sense of control, (7) absence of self-awareness, (8) time transformation and (9) autotelic experience.

It is important to know the "players" when gamification is approached since they are its users. There are different player models: Bartle, BrainHex and Hexad. Each player profile is motivated by different factors and certain game elements and reacts differently (Carlier et al. 2021).

In the 90s, Richard Bartle analysed the gaming environment in an online environment called MUD—Multiuser Dungeons. He concluded that the players' personalities could be represented in a Cartesian plane in which the vertical axis goes from interaction to action, and the horizontal axis goes from the players to the world (Iacono et al. 2020). Thus, defined four types of players, which are (1) entrepreneur; (2) explorer; (3) socialiser; (4) and killer (Nacke et al. 2014). Entrepreneurs are motivated by accumulating points and how they play to earn points or other distinctions looking for recognition or prestige (Iacono et al. 2020). Explorers like to explore the game, and they crave to know the mechanics of the game. Socialisers are motivated by socialising, i.e., interacting with other players and maintaining relationships. On the other hand, killers are the ones who want to be better, and they are extremely competitive, and they do not look at the means to achieve their goals which are victory (Nacke et al. 2014). In this way, Bartle's model suggests that effective gamification creates game environments that satisfy all types of players.

Having recognised some limitations in the application of Bartle's model (Bateman et al. 2011; Hamari and Tuunanen 2014; Nacke et al. 2014) proposed the first model focused on gamification studies, called the BrainHex model. This model was based on the neurological and psychological study of game players and specified seven types of player profiles according to neurobiological research: (1) the entrepreneur; (2) the conqueror; (3) the daredevil; (4) the mentor; (5) the seeker; (6) the socialiser; (7) and the survivor (Carlier et al. 2021). These types of players are classified into classes and subclasses interrelated with each other, being a more refined classification.

The Hexad model appears, proposed by Marczewski (2015) and later validated by Tondello et al. (2019), which is the first model specified exclusively for gamification. The Hexad model defines six types of players based on intrinsic and extrinsic motivations: (1) entrepreneur (motivated by Competence—they want to learn new things and improve themselves—they like challenges); (2) free spirit (motivated by Autonomy and self-expression—they want to create and explore); (3) philanthropist (motivated by purpose and meaningful things); (4) disruptor (motivated by positive or negative change—they want to disrupt the functioning of the system); (5) gamer (motivated by rewards); (6) and socialiser (motivated by connections—they create social connections) (Carlier et al. 2021; Nacke et al. 2014). This model is based on the fact that people have specific characteristics (no people are the same) and that intrinsic and extrinsic motivations influence them. Therefore, gamification should be personalised, proposing various game designs focused on the target audience (Bittner and Shipper 2014; Carlier et al. 2021).

Main Elements of Gamification

The main elements of gamification motivate and encourage to perform certain behaviours and achieve certain goals, and examples are: gifts, scoreboards, points, combat, badges, achievements, fights teams and virtual goods (Wang et al. 2020). These elements aim to involve, influence and encourage to perform a certain behaviour. Each element has three types of characteristics which are: (1) progression; (2) reward; (3) and recognition (Aparicio et al. 2021; Forte-Celaya et al. 2021; Gatautis et al. 2016; Rodrigues et al. 2021b).

According to Gatautis et al. (2016), the pyramid of gamification elements classifying them as: game components, game mechanics and game dynamics. Dynamics is when satisfaction is high and aims to achieve maximum emotions in the individual. The most important dynamics are: restrictions (limitations or exchanges), emotions (curiosity, competitiveness, frustration), narrative (is a story with nexus), progressions (growth and development of the player) and relationships (relationships between players, status) (Gatautis et al. 2016). Underlying the mechanics is the increase in content, i.e., giving rewards for tasks (points, levels, badges, rewards, feedback, leaderboards and assets) (Aparicio et al. 2021; Luo et al. 2021; Paknejad et al. 2021).

2.3. Gamification and the Retail Customer Experience

With the increase in online shopping, companies must try to understand consumers' behaviours to redirect them according to their desires to stimulate sales (Gatautis et al. 2016; Insley and Nunan 2014). The online environment not only brings benefits but also has shortcomings such as: lack of physical contact, transactions are less reliable, uncertainty in product quality, absence of experiences provided in physical shops (such as physical contact with the seller, the sounds and smells of traditional shops as well as touching products) (Baganzi et al. 2019). Many consumers replace entertainment activities with online shopping. The online experience offers emotions and pleasure. Consumers feel great anxiety and joy when items arrive via mail, greater comfort than in physical shops, sales and services available 24 h anywhere, and save time, money and effort. Online shopping brings greater convenience, allows selection and reduction of clusters, and has a greater quantity of products/services (Insley and Nunan 2014; Wang et al. 2006).

In this way, consumers can search and compare more information, including product prices, on various websites, arousing the feeling of reward and positive emotions (Baganzi et al. 2019). On the other hand, some consumers also used unethical behaviours, as they ordered several items only to deceive the companies of having free shipping on delivery.

However, they would later return what they did not want and only ordered so that the shipping would be free (Insley and Nunan 2014).

2.4. Relationship between Gamification and the SOR Model

Gatautis et al. (2016) developed a model of consumer behaviour in a virtual environment called SOR, where S is the stimulus, O is impact/emotion, and R is the response which is the behaviour. Thus, the consumer in a virtual environment suffers stimuli, and these stimuli will cause emotions. Whether these positive or negative emotions will trigger a particular behaviour (aspiration or avoidance). Thus, companies must create designs capable of influencing consumers to buy.

On the other hand, the pyramid model of gamification developed by Werbach and Hunter (2012) is composed of: game components, game mechanics and game dynamics. This model is strongly related to the three components of the SOR model (stimulus, impact and response) (Gatautis et al. 2016; Shao et al. 2019; Zhu et al. 2019) model, which in turn can be related to gamification.

The use of gamification by companies aims to cause different stimuli in consumers, if possibly positive, to subsequently influence them to respond or behave according to their intentions. The stimuli are the components of the games, such as points, virtual goods, achievements, gifts, levels and rewards. These stimuli cause an impact that is the dynamics of the game, which is nothing more than the cognitive and emotional state that the consumer is in and, depending on whether it is pleasant or unpleasant, will generate a behaviour (action or avoidance) or not (Gatautis et al. 2016; Ma et al. 2021). Thus, the stimuli will affect the cognitions and emotions of consumers and influence behaviour, promoting a response. Individuals with more experience in online shopping have more quantity, content and organisation of cognitions (knowledge acquired by previous experiences), and these past positive experiences will increase customer engagement with the brand (Canio et al. 2021). This engagement is divided into two types: cognitive and affective. The cognitive is related to rational thinking, knowing how to use the techniques, and greater knowledge through frequent use. The affective is the emotions perceived in the use of the site. The more experienced, the greater cognitive involvement, the greater affective involvement, and the more pleasure one derives from the experience (Ma et al. 2021).

2.5. Gamified Co-Creation

The term co-creation is still a current theme. It is related to the possibility of creating bonds of trust between companies and customers and the possibility of them being part of the creation process, that is, companies being sustainable. To survive, they must adapt or mould themselves to customers' wishes. In turn, co-creation is directly linked to marketing since it is increasingly important to know what the target audience wants, so they must be part of the creation process because, in the end, it is they who will buy (Lounis et al. 2013). However, the other stakeholders are important because it is only through sharing synergies that they achieve innovation efficiency and meet the wishes of the markets (Lucassen and Jansen 2014; Rodrigues et al. 2021b).

Co-creation is closely linked to Marketing since it is also through suggestions, consumer surveys and research that product customisation is achieved and therefore reaches the target audience (Lucassen and Jansen 2014; Rodrigues et al. 2021b). The main purpose of the gamified co-creation strategy is to create a relationship of trust and proximity between suppliers, customers and other stakeholders (Ribeiro et al. 2019). Trust is created through experience, which creates additional value for the product (Baganzi et al. 2019). Nowadays, consumers and producers are co-creators, as both interact and, therefore, can be producers, consumers, and both simultaneously (Hsieh et al. 2021; Kannan and Govindan 2011; Ma et al. 2021; Ribeiro et al. 2019).

3. Methodology and Sample

The present study uses a qualitative methodology through an exploratory case study approach. This methodology is the most suitable for this study since it provides the modification of ideas and concepts and the clarification and development of literature (Lopes et al. 2021) in the context of gamification and co-creation. The qualitative methodology allows for a comprehensive view of a certain less-known phenomenon. Moreover, it allows the research to be carried out in the respondents' natural environment, enabling an inductive data analysis (Mohajan 2018). Thus, the exploratory case study is indicated to broaden the scope of research, enabling the emergence of particular patterns in a specific context (Lopes et al. 2022).

Concerning the data collection method, it contemplated the combination of interviews with a semi-structured questionnaire (which allowed for deepening the themes under study), with data collection with direct face-to-face observation of consumers who shop online. The semi-structured questionnaire was composed of open questions adapted from Insley and Nunan (2014). The questionnaire was divided into two general themes: (1) Online shopping experience; (2) Role of game elements in the shopping experience. Regarding the former, the questionnaire had two subthemes: Subtheme 1: online shopping as recreation (8 questions); Subtheme 2: affective aspects of online shopping (6 questions). Regarding the second, the questionnaire had three subthemes: Subtheme 1: competing against other shoppers (5 questions); Subtheme 2: competing against other retailers policies (8 questions), Theme 3: pricing games (5 questions). Before conducting the interviews, a pre-test was carried out.

We conducted 30 interviews (Table 1) with consumers in Portugal who bought clothes online in the last 6 months. The selection of respondents was non-probabilistic, and the snowball sampling technique was used. Firstly, the authors' contact network contacted consumers who made online purchases in the last 6 months. These participants then contacted other consumers to participate in the study. As it is a non-probabilistic sample, and due to the small number of participants, the sample is not representative of the universe of Portuguese consumers who made online purchases less than 6 months ago. As such, the results of this study are exploratory and cannot be generalised. The interviews took place between 26 October and 22 November 2021, with an average duration of about 1 h and 30 min. All interviews were transcribed and reviewed by the authors.

Table 1. Characterisation of the sample.

Age	Professional Status	District	Shops You Usually Buy from Online	Place Where You Usually Do Your Online Shopping	Day of Interview	Duration	The Equipment They Use Most for Online Shopping	Frequent Payment Method	Interviewee
52	Social Educator	Coimbra	Tiffosi, Zara, Wook, El corte ingles	House	26/10/2021	1:35	Mobile phone	ATM	A
20	Student	Lisbon	Zara	House	28/10/2021	1:28	Computer	Credit card	B
32	Designer	Lisbon	Worten, H&M, Continente, HomeStory	House	28/10/2021	1:41	Computer	Mb Way	C
20	Student	Coimbra	Zara, Pull&Bear, Bauy	House	28/10/2021	1:25	Computer	Virtual Card	D
32	Museologist	Coimbra	Quebramar, Spartoo, Mango, H&M, Cavalinho	House	28/10/2021	1:28	Computer	ATM	E
31	Nurse	Lisbon	El corte ingles, Zara, H&M, Ikea	House	29/10/2021	1:31	Mobile phone	Credit card	F
28	Electronics Engineer	Lisbon	Amazon, eBay	House	29/10/2021	1:22	Mobile phone	Virtual Card	G
33	HR Technician	Coimbra	Zara, Benetton, Sportzone, WePet, Primor	House	01/11/2021	1:19	Mobile phone	Mb Way	H
56	Sales inspector	Coimbra	Adidas, Amazon	Home, workplace	01/11/2021	1:22	Tablet	Credit card	I

Table 1. *Cont.*

Age	Professional Status	District	Shops You Usually Buy from Online	Place Where You Usually Do Your Online Shopping	Day of Interview	Duration	The Equipment They Use Most for Online Shopping	Frequent Payment Method	Interviewee
21	Servant	Coimbra	Zara, Lefties, Bershka, LuisaViaRoma, Farfetch, Massimo Dutti	House	01/11/2021	1:27	Mobile phone	Paypal	J
52	Tourism technician	Coimbra	Sportzone	House	02/11/2021	1:27	Mobile phone	Mb Way	K
46	Special Forces	Lisbon	Zara	House	02/11/2021	1:19	Computer	ATM	L
35	Nurse	Coimbra	Adidas, La Redoute, H&M	House	03/11/2021	1:24	Mobile phone	Credit card	M
23	Environmental engineering	Lisbon	C&A, H&M, Mango, Worten, OLX, Continente	House	12/11/2021	1:34	Computer	Paypal	N
27	Geologist	Beja	Zara, Showroom, Clubefashion, Sephora	Home, workplace	12/11/2021	1:40	Mobile phone	Mb Way	O
28	Student	Coimbra	Zara, Mango, Shein, Zaful	House	15/11/2021	1:26	Mobile phone	Paypal	P
24	Counter assistant	Coimbra	Shein, Bershka, Zara, Stradivarius	House	15/11/2021	1:31	Mobile phone	Paypal	Q
18	Student	Coimbra	Pull&Bear, Zara, Fnac, JD	House	16/11/2021	1:26	Computer	Mb Way	R
18	Student	Coimbra	Shein, Bershka, Zara, Stradivarius	House	16/11/2021	1:20	Mobile phone	ATM	S
28	Manager	Coimbra	Nike, Worten, Lion of Porsche	House	16/11/2021	1:23	Mobile phone	Mb Way	T
21	Military	Coimbra	Zara, About You	House	16/11/2021	1:28	Mobile phone	Mb Way	U
20	Student	Coimbra	Pull&Bear, Zara, Stradivarius, Wook	House	16/11/2021	1:21	Mobile phone	ATM	V
41	Higher Technician in Public Procurement	Lisbon	Shein	Esplanade, house	16/11/2021	1:30	Computer	Mb Way	W
35	Psychologist	Coimbra	Skin, Moviflor, Zara, Fnac	House	16/11/2021	1:42	Tablet	Credit card	X
20	Student	Lisbon	Shein, Lefties, Bershka	House	17/11/2021	1:28	Mobile phone	Paypal	Y
30	HR Generalist	Loures	Zara, Shein	House	17/11/2021	1:26	Computer	Credit card	Z
27	Call Centre Operator	Coimbra	Adidas, Nike, Puma	House	17/11/2021	1:39	Tablet	Paypal	AA
18	Kitchen helper	Setúbal	Shein, Lefties	Home, public transport	17/11/2021	1:19	Mobile phone	ATM	BB
26	Consultant	Lisbon	Fnac, Worten, Amazon	House	21/11/2021	1:23	Mobile phone	Credit card	CC
25	Veterinary Doctor	Lisbon	Zara, H&M, Mango, Pull&Bear, Stradivarius	House	22/11/2021	1:30	Mobile phone	Credit card	DD

4. Results

4.1. Online Shopping Experience

4.1.1. Subtheme 1: Online Shopping as Recreation

Regarding this first theme, the interviewees explained the reasons that led them to make online purchases. Most of the interviewees mentioned convenience, ease of navigation on the site, quality and time saved. The fact that there is no need to go to the physical shop is very convenient, so it's a faster process. Therefore, it can be said that this finding fits into the "transformation of time" dimension of flow theory. Some interviewees also mentioned that the reason that leads them to shop online is the price, the need and the variety of products, since many times in the shops a certain item is not available in stock, but online it is possible to find it and even for a better price.

With regard to the willingness to shop online during breaks throughout the day, it was found that 76.67% of respondents indicated that they do not shop during these breaks. They take advantage of these breaks for other types of activities. They prefer to save the moment of purchase for a time when they can reflect if it is really that product they want (which requires some time). Reflection is done through strategies such as comparing prices between different websites. This shows that in flow theory, consumers value maximum concentration on the task and a sense of control. However, 23.33% of the interviewees refer that whenever there is a need and free time during the day, they take the opportunity to shop online (Insley and Nunan 2014).

Regarding the time when the interviewee most likes to do their online shopping, about one third of the interviewees indicated that the preferred time is at night. The reason given is that they have greater availability. The remaining respondents refer that the end of the day is the most flexible time, and only one respondent indicates that during the day, there is more availability. It was verified that most of the male individuals shop less frequently than the female ones.

Regarding the variable time it took to decide to buy, we found that respondents aged between 18 and 30 years have an average time ranging between 30 min and 3 h, with the exception of respondent F, who indicates that it takes about 3 days. Respondents aged 31 to 56, on the other hand, have a longer average time which varies between 30 min and 1 week.

The factors that respondents most values in the shops where they shop most often are: speed of delivery, the quality and provision of service and variety of products, the accessibility of the website and the discounts/promotions that the shops offer.

Regarding the SOR model, the consumer in a virtual environment develops positive or negative emotions that influence their behaviour. In this model, the emotional dimension and entertainment caused by gamification aim to analyse whether respondents agree with the online shopping experience (Gatautis et al. 2016; Zhu et al. 2019). Thus, about 70% of respondents state that they feel emotions and even relaxation when shopping online.

The last part of this theme is about the respondents' opinion regarding the question of whether online shopping replaces other entertainment activities. What was found was that more than half of those interviewed indicated that they do not consider online shopping to be a substitute for other entertainment activities. Therefore, concerning flow theory, this finding may indicate that when shopping online, consumers do not expect any immediate or future benefit (autotelic experience dimension). On the other hand, around 23.33% of the individuals consider that there is entertainment and a certain need for attention when buying online, which makes it impossible to carry out activities such as watching television.

4.1.2. Subtheme 2: Affective Aspects of Online Shopping

Regarding the feelings that the interviewees convey, they are many and diverse. We highlight the most common such as: satisfaction, peace, freedom, joy, happiness, enthusiasm, anxiety. We conclude that practically all respondents have some kind of feelings and that most of them are positive feelings and of great satisfaction for those who buy online. Gatautis et al. (2016) and Carlier et al. (2021) affirm that consumers feel positive emotions and sensations associated with games when they are shopping. The flow theory indicates that a good feeling or experience is a motivating factor for daily activities.

On the other hand, 23 of the respondents say that their psychological state, for example, in stressful situations or when they are sad, does not interfere at all with their online shopping. The majority of respondents say they buy because they need the product and when they can afford it, and not to feel good emotionally. This finding may show that consumers have clearly defined objectives when they go shopping, with a clear union of awareness and action, which are two of the dimensions of the flow theory. Thus, our results are not in line with those indicated by Insley and Nunan (2014) and Al-Zyoud (2021). On the contrary, 7 interviewees answered that their psychological state influences their online purchases. The 7 respondents justify this situation as a form of distraction and relaxation, which helps to improve their state of mind.

Despite the above indicated, 17 respondents report that somehow shopping online improves their mood. Knowing that they are going to buy a new product has a very positive effect on their mood, leaving them happier and in a better mood, as well as with a great sense of personal achievement (Al-Zyoud 2021; Insley and Nunan 2014). Typically, consumers' motivations for buying products for themselves are to satisfy a need such as escapism or self-esteem (Sherry et al. 1995). The remaining 13 respondents stated that the purchases they make online do not change their mood or state of mind, they buy because they need the product and do not feel any kind of stimulation.

Therefore, we wanted to know if when respondents purchase products, they can imagine that they are wearing them. Almost unanimously, 28 of the interviewees answered that yes, in situations such as travelling, where they imagine themselves in the place where they want to go when buying clothes/shoes where their imagination leads them to see how they look with those pieces, there are even those who imagine the pieces for the home on the shelf of a piece of furniture at home. This result reinforces what was indicated by Insley and Nunan (2014).

We also analysed whether it was usual for respondents to carry out research or read articles about new trends or new products on a wide variety of retailers' websites. It was found that 20 of the respondents do not do so, justifying that they do not follow trends, as they only research what they intend to buy. The remaining 10 interviewees do it regularly, they want to be updated and fashionable, always looking for news. This result does not match the study of Insley and Nunan (2014).

With 20 negative responses, the results show that most respondents do not value the tools that exist on a variety of retailers' websites that allow them to create their own product. This result reinforces the findings of Rodrigues et al. (2021b). On the other hand, 10 of the interviewees answered that these types of tools are important. They justify their answer with the ease of customising certain articles to their liking, considering that size and colour filters are important to have a complete view of the products, facilitating the purchase. On the other hand, the design of the website, as well as the content, the ease of searching, boost the purchase, and influence customer satisfaction (Baganzi et al. 2019).

4.2. Role of Game Elements in the Shopping Experience

4.2.1. Subtheme 1: Competing against Other Shoppers

Initially, we tried to find out how important it was for buyers to make better deals/ purchases than others. 28 of the interviewees answered that it is not important for them to do better business than others therefore, they do not consider this variable a vital aspect of gamification. They indicate that what matters is their satisfaction and needs. According to the Hexad model, these characteristics fit the free spirit gamer, the Bartle model the explorer and the BrainHex model the seeker. These types of players like to explore and have moments of fun, fantasy and creativity (Carlier et al. 2021; Nacke et al. 2014).

Analysing whether the process of researching products and businesses online would be a form of leisure or entertainment and whether this represents a form of motivation to buy more, we obtained a significant group of affirmative responses (20 responses).

On the other hand, 26 respondents stated that shopping online is not a competition where one loses or wins. They justify that it is only about a need to acquire a certain product. This finding is the opposite of that indicated by Insley and Nunan (2014). However, the remaining 4 answered yes. They justify this by saying that certain products sell out quickly and that only the first can afford them. Thus, they confirm that there is a very fierce competitive climate.

We next wanted to know whether respondents, when faced with limitations of units available for purchase and when speed is not enough to acquire the product, whether this is comparable to a game when you win or lose. 16 of the interviewees say no, buying is by the necessity of the product and if it is not possible on one website, it will certainly be on another. However, interviewees14 say yes. Here, are already the dynamics of gamification working as the constraints that will influence individuals. Thus, promotions, available quantities, and discount time lead consumers to increase impulse purchases. There is then a relationship between certain game dynamics with impulse buying and the stimuli to which they are subjected, and the emotions they feel (anxiety) (Chen 2017; Henriques and Barreto 2019; Luo et al. 2021). Taking into account the "absence of self-awareness" dimension of flow theory, we can infer from the results obtained that the absence of self-awareness increases consumers' anxiety and safety. According to the SOR Theory (limited time and quantity), impulse buying is a stimulus, and the perceived urgency will put pressure to buy, encouraging competition between customers (Carlier et al. 2021; Luo et al. 2021).

4.2.2. Subtheme 2: Competing against Other Retailer's Policies

Initially, we asked who consults online, even if they do not intend to purchase any type of item. Most of the interviewees (18) admitted that they do so and indicated that they do so for leisure or to relax. Inspiration is also one of the reasons given and the search for any opportunity that may arise, whether it be for low prices or something they remembered they needed. The remaining 12 interviewees referred that they only use the navigator when they really need to buy something. They believe that it is a waste of time to consult products without needing to buy them. According to Insley and Nunan (2014), consumers search retailers' websites for hard-to-find or unusual items and are not central to purchasing inexpensive items.

Regarding the strategies that each interviewee used to shop online, 11 of the interviewees did not use any type of strategy. The remaining 19 use the most varied forms of strategy to make the best online purchase, highlighting the use of filters, especially the upper price limit. Do previous research looking for discounts, compare identical products on different websites, select the category and filter by the cheapest. They also state that they use multiple searches and price comparators and activate notifications. Concerning flow theory, the results point to consumers varying the "balance between skills and challenges" dimension, as they have strategies for online shopping. Online shopping can be a challenge, and consumers must have adequate skills to apply these strategies.

We then sought to find out what retailers' offers encourage online shopping. 22 of the respondents' state that price is the main offer to encourage purchase. They specified that they look for promotions, discounts or buy 1 get 2 campaigns. Quality is the second factor chosen by 6 respondents. Free shipping and intuitive and user-friendly App's are also frequently mentioned. These findings reinforce what was indicated by Luo et al. (2021) and Henriques and Barreto (2019).

We also wanted to know if any of the interviewees made a return claiming product defect when the product was not defective at all. The answer was unanimous: none of the interviewees did so. Some even consider that doing so is dishonest and that it is better to return the product saying that they were not satisfied with it. Consumers deliberately return items for reasons other than actual defects in purchased items (Schmidt et al. 1999). On the other hand, in e-commerce, unethical behaviour is accentuated because there is an absence of direct confrontation, that is, there is no threat of embarrassment in public. Consumers also buy items with the pre-meditated intention of returning them to get free shipping or enjoy some discount (Insley and Nunan 2014; King and Dennis 2006).

When asked if social approval was important when shopping, 28 of the respondents answered no, none of them shopped online for any kind of social approval. According to Rodrigues et al. (2021a), the influence of social circles has relevance on consumers' intention to interact with the brand. However, 2 of the respondents answered affirmatively, justifying that it is a way of being accepted by the society that makes them decide to buy a product.

Regarding the issue of whether existing game elements influence online shopping, 26 of the respondents answered that in no way do game elements influence their shopping experience. Our results are not in line with those indicated by Haziri et al. (2021). According to the authors, game elements significantly and positively influence consumers. However, 4 respondents admitted that game elements influenced the way they shop. The main justification was that a good experience as in games leads them to buy more. The stimulus to buy also increases if they get, for example, the points (Nah et al. 2015). This leads consumers to increase the frequency of their online shopping at those shops. As advocated by the SOR theory, if the experience is positive, it will influence the purchase (Gatautis et al. 2016).

4.2.3. Subtheme 3: Pricing Games

We began by asking whether they considered themselves more pressured to shop in physical shops or in online shops. We found that 7 respondents feel more pressured to buy in physical shops, and the main reason indicated is the presence and intimidation that is sometimes done by shopkeepers. The remaining 23 interviewees do not feel pressured in any of the situations.

Relative to whether they make more impulse purchases in physical shops or online. It was found that 10 respondents answered they buy more on impulse in physical shops. They justified with the fact that: (1) being able to try on the spot; (2) taking the product on the spot; (3) checking details, which sometimes make them apprehensive during online shopping. The interviewees stated that they buy more on impulse in physical shops because, in online shops, there is: (1) lack of personal contact; (2uncertainty in quality; (3) and touch of the products. On the other hand, 20 of the respondents answered that they have a greater impulse in online shopping. This impulse results from: (1) greater diversity of products; (2) the ease with which they are acquired; (3) the comfort of the purchase that is mostly made at home; (4) the prices practised, as it is possible to use price comparators and find attractive prices; and (5) promotions exclusive to online. These findings reinforce what was indicated by Baganzi et al. (2019); Henriques and Barreto (2019); Insley and Nunan (2014); and Wang et al. (2006).

Regarding the relationship between increased time to evaluate purchases, read blogs or comments, and their resistance to impulse purchases, 12 of the respondents indicate that the more time they have to evaluate purchases, the fewer impulse purchases they make. About flow theory, the results indicate that the "specific feedback" dimension is relevant for consumers, reducing impulse purchases. On the other hand, the remaining respondents (18) answered that under no circumstances do they buy on impulse. Therefore, the time available to evaluate the purchase is not relevant to stop any type of impulse. According to Luo et al. (2021), Henriques and Barreto (2019), e Insley and Nunan (2014), the evaluation time protects impulse buying, allows more control over behaviour, and through reading information about the products, reduces the feeling of regret of impulse buying.

With regard to the valuation of the "shopping cart", all interviewees consider it important. They give several reasons: (1) notion of the items purchased: (2) greater control of the purchase because they have the possibility of eliminating some product before making the purchase; (3) possibility of saving the purchase and start again on another day; and (4) possibility of comparing products and their prices. According to Insley and Nunan (2014), the shopping basket is essential because it allows prioritising purchases and controlling purchases (quantity).

Finally, it was checked whether the respondents bought from auction websites. Only two respondents stated that they had already bought from auction websites. Their main motivation was the diversity of products and the low prices. The remaining 28 interviewees do not frequent auction websites, nor did they show any curiosity or interest. One of the interviewees stated that he is not predisposed to enter into competition with other buyers in order to purchase any product and that he distrusts the reliability of these types of websites.

5. Conclusions

5.1. Main Conclusions

The present study aimed to explore consumer engagement with online retailers through gamification, the use of game mechanics, and co-creation. Two research questions were formulated: RQ1. Do Portuguese consumers achieve entertainment experiences when shopping online? RQ2. How do Portuguese consumers react to the inclusion of game mechanics in their online retail experiences?

As main results, it was found that most respondents indicate that they do not consider online shopping as a substitute for other entertainment activities. Respondents stressed that in online shopping, the important thing is personal satisfaction and their needs. According to the Hexad model, these characteristics fit the free spirit gamer, the Bartle model the explorer and the BrainHex model the seeker.

Respondents indicated that it is not important to do better deals than others, so they do not consider this variable to be an important aspect of gamification. However, the interviewees affirmed that online shopping is not a competition where one loses or wins. The interviewees use some strategies to get the best online purchase: (1) the use of filters, mainly the upper price limit; (2) doing previous research to look for discounts; (3) comparing identical products on different websites; (4) selecting the category and filtering by the cheapest; (5) using price comparison tools; and (6) activating notifications. Online shopping is positively influenced by brand trust, built on ease of use, quality service and products, low prices, integrity and consistency. On the other hand, brand reputation should be made on transparent privacy policies as well as secure and honest transactions and policies. Respondents, when shopping online, feel various emotions such as satisfaction, peace, freedom, joy, happiness, enthusiasm, anxiety. These feelings can be associated with games. Thus, we can state that intrinsic motives are essential in formulating a gamified strategy (García-Jurado et al. 2021).

Thus, in this study we were found that many of the findings of this study do not meet the existing literature. First, the interviewed consumers buy the product because they need to and only do so when they can afford it. In this way, they do not shop to feel better emotionally; online shopping does not cause changes in their mood or state of mind. Second, Portuguese online retail consumers do not research or read articles about new products because they do not follow trends, limiting their searches to the products they want to buy. Third, online shopping is not seen as a win-lose game but as a need to acquire a certain product. Fourth, retail purchases made online do not require social approval; consequently, social circles are not determinants of online consumers' purchase intention. Fifth, according to respondents, game elements do not influence online purchases.

Although co-creation is identified in the literature as an important ally for companies, the results show that Portuguese companies do not use it much because consumers cannot identify it clearly or understand its advantages. The results indicate that most of the interviewees do not value the tools that exist on retailers' websites and that allow them to create their own product. The results suggest that companies should develop more gamified co-creation strategies. However, the Portuguese consumers interviewed are influenced by price promotions, quantity, and time, or when they give their opinions on websites (elements linked to gamification and co-creation).

5.2. Theoretical Contributions and Implications

This paper contributes to the clarification, deepening and development of the literature on gamification, game mechanics and co-creation. Many results are disturbing as they do not agree with the existing literature described above. In this way, it is demonstrated that the flows of emotions intended to be elicited from online shopping are not being achieved, and consumers continue to buy because they need the product, as they do in traditional physical stores, without obtaining psychological benefits. Furthermore, these purchases do not require social approval. Consequently, they search for information only about the products they need and not about new trends or new products, which can be an obstacle to online consumer engagement. Furthermore, online shopping is not understood as a game, and, as such, game elements introduced in online shopping do not influence online retail consumption, contrary to what some studies have shown. In addition, it demonstrates that the results reveal the new impact of the use of gamification on the engagement of retail consumers.

Regarding the practical implications, consumers, considering what respondents value in e-commerce, should consider online auctions. Regarding companies in e-commerce, they should bet on product promotions (low and competitive prices), more sensory experiences, a more interactive website with virtual assistants. In the case of the clothing industry, in particular, websites could create possible combinations with the piece the consumer is searching for. Rewards should also be given to more regular customers, from do to loyal ones. Gamification can be used as a strategy for building customer loyalty, promoting positive word-of-mouth, as well as increasing engagement with the item offered (Kim et al. 2020) and consequent brand valuation. Companies have to use gamification associated with co-creation because consumers have different personalities, so they have to customise their offers and promotions, they have to let customers get involved in the creation of products (Högberg et al. 2019). Companies should also take customers' opinions and feedback into consideration because, in the end, they are the ones who decide whether or not to purchase the product or service (Paknejad et al. 2021).

This paper is original because it provides empirical support for the current scarcity of qualitative studies on gamification and co-creation's role in online retailing consumer experience.

5.3. Limitations and Future Research Directions

The results of this article cannot be generalised since the sample is non-probabilistic and small, not representative of Portuguese consumers who made online purchases in the last 6 months. The present study only contemplates consumers' perspectives, recommending that future studies include the perspective of companies, company employees, company partners, and company networks. Thus, it is a qualitative research of exploratory nature. However, it points to several gaps, which may be explored through future quantitative studies. Future studies should involve a representative sample of Portuguese online consumers. In addition, they must evaluate the added value that game elements can provide to online retailers. The impacts that auction websites have on retailers should still be analysed, as, in the present study, consumers do not consider it relevant. Regarding co-creation, this topic needs to be further explored in the Portuguese context since it seems to be a relatively recent theme, and the interviewed consumers do not value it.

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References

Al-Zyoud, Mohammad Fahmi. 2021. The impact of gamification on consumer loyalty, electronic word-of mouth sharing and purchase behavior. *Journal of Public Affairs* 21: e2263. [CrossRef]

Aparicio, Manuela, Carlos J. Costa, and Rafael Moises Moises. 2021. Gamification and reputation: Key determinants of e-commerce usage and repurchase intention. *Heliyon* 7: e06383. [CrossRef]

Arghashi, Vahideh, and Cenk Arsun Yuksel. 2022. Interactivity, Inspiration, and Perceived Usefulness! How retailers' AR-apps improve consumer engagement through flow. *Journal of Retailing and Consumer Services* 64: 102756. [CrossRef]

Baganzi, Ronald, Geon-Cheol Shin, and Shali Wu. 2019. Examining Consumers' Attitudes toward Gmarket Online Shopping. *J* 2: 364–83. [CrossRef]

Bateman, Chris, Rebecca Lowenhaupt, and Lennart Nacke. 2011. Player typology in theory and practice. Paper presented at the Proceedings of DiGRA 2011 Conference: Think Design Play, Hilversum, The Netherlands, September 14–17.

Bittner, Jenny, and Jeffrey Shipper. 2014. Motivational effects and age differences of gamification in product advertising. *Journal of Consumer Marketing* 31: 391–400. [CrossRef]

Bright, Athina, and Stavros Ponis. 2021. Introducing Gamification in the AR-Enhanced Order Picking Process: A Proposed Approach. *Logistics* 5: 14. [CrossRef]

Canio, Francesca, Maria Fuentes-Blasco, and Elisa Martinelli. 2021. Engaging shoppers through mobile apps: The role of gamification. *International Journal of Retail & Distribution Management* 49: 919–40. [CrossRef]

Carlier, Stéphanie, Dries Coppens, Femke De Backere, and Filip De Turck. 2021. Investigating the Influence of Personalised Gamification on Mobile Survey User Experience. *Sustainability* 13: 10434. [CrossRef]

Chen, Meiju. 2017. How Design Factors for Advergames Impact Consumers' Attitudes and Behaviors: The Perspective of Engagement Theory. Available online: https://dl.acm.org/doi/abs/10.1145/3092027.3092037 (accessed on 5 December 2022).

Csikszentmihalyi, Mihaly. 1997. *Finding Flow: The Psychology of Engagement with Everyday Life*. New York: BasicBooks.

Csikszentmihalyi, Mihaly. 2000. *Beyond Boredom and Anxiety*. San Francisco: Jossey-Bass.

Forte-Celaya, Jacqueline, Luis Ibarra, and Leonardo David Glasserman-Morales. 2021. Analysis of Creative Thinking Skills Development under Active Learning Strategies. *Education Sciences* 11: 621. [CrossRef]

García-Jurado, Alejandro, José Javier Pérez-Barea, and Francisco Fernández-Navarro. 2021. Towards digital sustainability: Profiles of millennial reviewers, reputation scores and intrinsic motivation matter. *Sustainability* 13: 3297. [CrossRef]

Gatautis, Rimantas, Elena Vitkauskaite, Agne Gadeikiene, and Zaneta Piligrimiene. 2016. Gamification as a Mean of Driving Online Consumer Behaviour: SOR Model Perspective. *Inzinerine Ekonomika-Engineering Economics* 27: 90–97. [CrossRef]

Georgiou, Konstantina. 2021. Can explanations improve applicant reactions towards gamified assessment methods? *International Journal of Selection and Assessment* 29: 253–68. [CrossRef]

Ghani, Jawaid, and Satish Deshpande. 1994. Task Characteristics and the Experience of Optimal Flow in Human—Computer Interaction. *The Journal of Psychology* 128: 381–91. [CrossRef]

Hamari, Juho, and Janne Tuunanen. 2014. Player Types: A Meta-synthesis. *Transactions of the Digital Games Research Association* 1: 29–53. [CrossRef]

Haziri, Fortesa, Lulzim Shabani, and Miloslava Chovancová. 2021. Game experience as a moderator in gamified online purchasing settings. *International Journal of Learning and Change* 13: 399–418. [CrossRef]

Henriques, Inês, and Ana Margarida Barreto. 2019. The Impact of the purchase channel on unplanned purchases. *Media & Jornalismo* 19: 249–68. [CrossRef]

Högberg, Johan, Poja Shams, and Erik Wästlund. 2019. Gamified in-store mobile marketing: The mixed effect of gamified point-of-purchase advertising. *Journal of Retailing and Consumer Services* 50: 298–304. [CrossRef]

Hsieh, Sara, Crystal Lee, and Timmy Tseng. 2021. Branded app atmospherics: Examining the effect of pleasure ? arousal ? dominance in brand relationship building. *Journal of Retailing and Consumer Services* 60: 102482. [CrossRef]

Iacono, Saverio, Mario Vallarino, and Gianni Vercelli. 2020. Gamification in Corporate Training to Enhance Engagement: An Approach. *International Journal of Emerging Technologies in Learning (iJET)* 15: 69–84. [CrossRef]

INE. 2020. Sociedade da Informação e do Conhecimento—Inquérito à Utilização de Tecnologias da Informação e da Comunicação nas Famílias. Available online: https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=415621509&DESTAQUESmodo=2 (accessed on 5 December 2021).

Insley, Victoria, and Daniel Nunan. 2014. Gamification and the online retail experience. *International Journal of Retail and Distribution Management* 42: 340–51. [CrossRef]

Kannan, Rathimala, and Marthandan Govindan. 2011. Hyperlink Analysis of E-commerce Websites for Business Intelligence: Exploring Websites of Top Retail Companies of Asia Pacific and USA. *Journal of Theoretical and Applied Electronic Commerce Research* 6: 97–108. [CrossRef]

Kim, Cheong, Francis Costello, and Kun Lee. 2020. The Unobserved Heterogeneneous Influence of Gamification and Novelty-Seeking Traits on Consumers' Repurchase Intention in the Omnichannel Retailing. *Frontiers in Psychology* 11. [CrossRef]

King, Tamira, and Charles Dennis. 2006. Unethical consumers: Deshopping behaviour using the qualitative analysis of theory of planned behaviour and accompanied (de)shopping. *Qualitative Market Research* 9: 282–96. [CrossRef]

Lopes, João Morais, Márcio Oliveira, Jorge Lopes, and Umer Zaman. 2021. Networks, Innovation and Knowledge Transfer in Tourism Industry: An Empirical Study of SMEs in Portugal. *Social Sciences* 10: 159. [CrossRef]

Lopes, João Morais, Sofia Gomes, José Oliveira, and Márcio Oliveira. 2022. International Open Innovation Strategies of Firms in European Peripheral Regions. *Journal of Open Innovation: Technology, Market, and Complexity* 8: 7. [CrossRef]

Lounis, Stavros, Xanthippi Neratzouli, and Katerina Pramatari. 2013. Can gamification increase consumer engagement? A qualitative approach on a green case. In *IFIP Advances in Information and Communication Technology*. Berlin and Heidelberg: Springer, vol. 399, pp. 200–12.

Lucassen, Garm, and Slinger Jansen. 2014. Gamification in Consumer Marketing—Future or Fallacy? *Procedia—Social and Behavioral Sciences* 148: 194–202. [CrossRef]

Luo, Hanyang, Sijia Cheng, Wanhua Zhou, Wugang Song, Sumin Yu, and Xudong Lin. 2021. Research on the Impact of Online Promotions on Consumers' Impulsive Online Shopping Intentions. *Journal of Theoretical and Applied Electronic Commerce Research* 16: 2386–404. [CrossRef]

Ma, Liang, Xin Zhang, Xiaoyan Ding, and Gaoshan Wang. 2021. How Social Ties Influence Customers' Involvement and Online Purchase Intentions. *Journal of Theoretical and Applied Electronic Commerce Research* 16: 395–408. [CrossRef]

Marczewski, Andrzej. 2015. *Even Ninja Monkeys Like to Play: Gamification, Game Thinking and Motivational Design*. London: CreateSpace Independent Publishing Platform.

Mohajan, Haradhan Kumar. 2018. Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development, Environment and People* 7: 23. [CrossRef]

Nacke, Lennart, Chris Bateman, and Regan Mandryk. 2014. BrainHex: A neurobiological gamer typology survey. *Entertainment Computing* 5: 55–62. [CrossRef]

Nah, Fiona, Lakshmi Daggubati, Amith Tarigonda, Raghu Nuvvula, and Ofir Turel. 2015. Effects of the use of points, leaderboards and badges on in-game purchases of virtual goods. In *International Conference on HCI in Business*. Cham: Springer, vol. 9191, pp. 525–31.

Paknejad, Farzaneh, Seyed Mosaddad, and Hassan Naeini. 2021. Purchasing and consumption modification among iranians throughout gamification. *International Journal of Industrial Engineering and Production Research* 32: 121–32. [CrossRef]

Patricio, Rui, Antonio Moreira, Francesco Zurlo, and Michele Melazzini. 2020. Co-creation of new solutions through gamification: A collaborative innovation practice. *Creativity and Innovation Management* 29: 146–60. [CrossRef]

Pena, Maria, and Eliane Brito. 2021. Dematerialization Retail: Bookstore Experience in Physical and Virtual Dimensions. *Rae-Revista De Administracao De Empresas* 61. [CrossRef]

Reis, Ana Carla Bittencourt, Everaldo Silva Júnior, Brenda Baumann Gewehr, and Mateus Halbe Torres. 2020. Prospects for using gamification in Industry 4.0. *Production* 30. [CrossRef]

Ribeiro, Áurea Helena Puga, Plínio Rafael Reis Monteiro, and Laura Luttembarck. 2019. The Use of the 'Job to Be Done' methodology to identify value co-creation opportunities in the context of the Service Dominant Logic. *BBR. Brazilian Business Review* 16: 32–45. [CrossRef]

Rodrigues, Ivo, João Morais Lopes, Ana Borges, José Oliveira, and Márcio Oliveira. 2021a. Gamification as a New Trend in the Co-Creation Process. *RAM. Revista de Administração Mackenzie* 22. [CrossRef]

Rodrigues, Ivo, Nuno Soares, João Morais Lopes, José Oliveira, and Jorge Lopes. 2021b. How Can Gamified Applications Drive Engagement and Brand Attitude? The Case of Nike Run Club Application. *Administrative Sciences* 11: 92. [CrossRef]

Sailer, Michael, Jan Ulrich Hense, Sarah Katharina Mayr, and Heinz Mandl. 2017. How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior* 69: 371–80. [CrossRef]

Schmidt, Ruth, Fiona Sturrock, Philippa Ward, and Gaynor Lea-Greenwood. 1999. Deshopping—The art of illicit consumption. *International Journal of Retail & Distribution Management* 27: 290–301. [CrossRef]

Shao, Zhen, Lin Zhang, Rui Zhang, and ZhengYuan Pan. 2019. Impact of gamification on consumers' online impulse purchase: The mediating effect of affect reaction and social interaction. Paper presented at 23rd Pacific Asia Conference on Information Systems: Secure ICT Platform for the 4th Industrial Revolution, PACIS 2019, X'ian, China, July 8–12.

Sherry, John, Mary McGrath, and Sidney Levy. 1995. Egocentric consumption: Anatomy of gifts given to the self. In *Contemporary Marketing and Consumer Behavior: An Anthropological Sourcebook*. Edited by John Sherry. New York: Sage, pp. 399–432.

Silic, Mario, Giacomo Marzi, Andrea Caputo, and Matthijs Bal. 2020. The effects of a gamified human resource management system on job satisfaction and engagement. *Human Resource Management Journal* 30: 260–77. [CrossRef]

Tondello, Gustavo, Alberto Mora, Andrzej Marczewski, and Lennart Nacke. 2019. Empirical validation of the Gamification User Types Hexad scale in English and Spanish. *International Journal of Human-Computer Studies* 127: 95–111. [CrossRef]

Trinidad, Manuel, Elena Orta, and Mercedes Ruiz. 2021. Gamification in IT Service Management: A Systematic Mapping Study. *Applied Sciences-Basel* 11: 3384. [CrossRef]

Wang, Lei, Kunter Gunasti, Ramesh Shankar, Joseph Pancras, and Ram Gopal. 2020. Impact of gamification on perceptions of word-of-mouth contributors and actions of word-of-mouth consumers. *MIS Quarterly: Management Information Systems* 44: 1987–2011. [CrossRef]

Wang, Sophia, Simon Wang, and Ming Wang. 2006. Shopping Online or Not? Cognition and Personality Matters. *Journal of Theoretical and Applied Electronic Commerce Research* 1: 68–80. [CrossRef]

Werbach, Kevin, and Dan Hunter. 2012. *For the Win How Game Thinking Can Revolutionize Your Business*. Philadelphia: Wharton Digital Press.

Zhu, Bing, Suwanna Kowatthanakul, and Punnaluck Satanasavapak. 2019. Generation Y consumer online repurchase intention in Bangkok Based on Stimulus-Organism-Response (SOR) model. *International Journal of Retail & Distribution Management* 48: 53–69. [CrossRef]