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THE GAMIFICATION OF ENTERPRISE ACTIVITIES;

TRENDS AND ADAPTION IN STRATEGIC MARKETING

(Η Παιχνιδοποίηση στις επιχειρησιακές δραστηριότητες •

Τάσεις και εφαρμογές στις στρατηγικές μάρκετινγκ)

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‘In every job that must be done there is an element of fun, You find the fun and snap the job's a game and every task you undertake becomes a piece of cake’

Movie quote

Dedications

This dissertation is dedicated to the person who didn’t manage to see me finishing my under graduate studies but had made all the efforts to start them.

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1 Table of contents

List of tables

List of figures

Abstract

In the present times, the average consumer is coming face to face with a vast amount of information. Enterprises are struggling to develop brand awareness and a multichannel promotion is a necessity while the digital channel rises up. The competition is intense and the customer recognizes little difference between enterprises that have common objective for promoting products or services.

The need for gaining competitive advantage is the differentiated marketing as an option of a marketing strategy. Gamification is presented as an easy way to grow brand awareness and consumer engagement with the product or service, because it is based on a method that places the consumer at the center of its services and converts him from a passive user to an active gear giving value to the product and at the same time drawing benefits..

In the current dissertation, we will examine if a gamified application is needed to be applied through digital channels or if other ways are more powerful. Worldwide, there is a diverse amount of industries that have implemented gamified applications, but in Greece this is more known through companies which are active in entertaining activities, such as coffee shops and restaurants among others. The modern marketers are yellowing to generate experiences for the consumers, in order to create an added value.

For this scope, the frequency of usage of digital devices is examined and companies which are active in entertainment venues will be the initial benchmark. Furthermore, we will examine the following questions:

-Do the gamified applications make more efficient experiences to their users?

-Do the gamified elements make the difference from other digital media?

Literature reviews have introduced the notions of gamification, as well as borrowed data from the field of psychology motivational factors have been analyzed. To examine the accuracy or not of the literature review a research method is needed. A survey (Quantitative method) was applied by sending a digital questionnaire to a total of 318 responders nationwide.

The findings show that digital media, such as search engines and social media, have a tremendous effect on the user, rather than gamified application, due to poor design or lack of motivation which is covered from the above. On the other hand, the user experience by gamified applications has shown better results regarding pragmatic and

hedonic qualities, which can interpret user's further engagement. But it is unclear if this marketing strategy it is more beneficial to promote on the massive consumption of digital media like search engines and social media instead of the ones mentioned above.

1. Introduction

Companies operate in a competitive environment. The modern era of digital technology, with the expected new innovative technologies will give new impetus and comparative advantage those who use it.

Alongside, enterprises are trying to find ways to boost sales in order to become more profitable and evolving operational. In order to find new customers, advertising through digital media is a necessary tool applied into the marketing plan and in order to retain customers and make more purchases, enterprises reward them by adding loyalty programs.

But in a fast paced environment where revolutionary technology is used worldwide and rapidly adopted either by enterprises or the customers, customer needs continuously change determined by lots of factors. Traditional advertising is losing effectiveness as competition for consumer attention grows rapidly.

One of the main factors that help leveraging the use of these mechanics, is the rapid development of new technologies in hardware (devices) and software (internet, social media applications), having people connected and interact instantaneously. The ubiquity of the medium like smart phones and laptops help grow digital marketing and making marketers being more creative overtaking traditional methods of marketing.

Furthermore digital media are the necessary mean not only for big companies but especially for small that can leverage their brand awareness to a critical mass of consumers that couldn't attract before.

Although it has a tremendous recognition as a term, adaption of gamification in marketing concepts have its drivers and barriers depending from the industry and the targeting audience.

1.1 Defining gamification

At recent years a new trend has developed and it is implemented by many enterprises worldwide. It is called "Gamification" and it operates as enhancing a service with the use of game mechanics and game techniques. As an outcome, it makes users more engaged and more involved. Borrowing data from the psychological field and based on motivational dynamics, gamified techniques have been greatly acclaimed by the users, creating a great impact due to the imprint created by the interactive user experience.

1.2 Main Scope

Main scope of the current dissertation is the expatiation and the assessment of user experience of gamified applications in Greece, in excess of other digital media in conjunction with marketing concepts.

Although the acceptance from consumers that subjected to these techniques is positive, there is a critical perspective on the role of how many of them will continuously act as players and how is this translated to benefits for the organizations.

Are the main psychological factors that emanate while playing games enough to drive consumers, and in addition consumer behavior, or is this just a gratification?

Questions to be examined: Is it enough to process a wining marketing strategy with gamified techniques? Does the integration of video game elements in non-gaming systems improve the user experience (UX) and user engagement? Does it promote consumer engagement and provide leverage to brand awareness? How many of the users are engaged with gamified techniques and how do they perceive them as an experience?

Therefore can all the enterprises apply gamified techniques or do some of them have a greater advantage over others? Which are the barriers and how is technology involved?

Due to the fact that the gamified techniques are implemented only through digital channels, users of digital services in Greece will be examined.

1.3 Methodology

This is an empirical study that is developed in five stages. In the initial chapter, as mentioned, the introduction and the main scope are reviewed.

In the second chapter, the review of the bibliography is developed. There is an introduction to gamification and subsequently a definition of games and play.

There is an examination of the role of play in human aspects, why gaming can keep individuals motivated and how does this affect the human behavior. What is the psychological background that drives motivation, the effect of emotions and experiences on consumer behavior. The satisfaction of a user through media has been studied

through the method of gratification theory and probably the gamification is another aspect of this theory. Lastly, dimensions that consist user experience are mentioned.

Regarding enterprises, the structural environment that is needed to develop gamification techniques is being analyzed. It is described how it can be processed within marketing strategy. For that reason, a brief reference has been made.

Modern day applications with frequent usability are the necessary tools to develop better and unique user experience. These applications create strong emotions that are the key factors for a continuous engagement.

In the third chapter, the methodological approach of the research is analyzed. An online questionnaire has been sent to people around Greece and the data of the research are listed.

The fourth chapter deals with data analysis and interpretations of the findings. According to the findings of the research, although there are enterprises that apply gamified techniques in order to retain existing customers and attract new, it is not the most recognizable and usable digital platform. Therefore, there are concerns for gains like growing brand awareness and the acquisition of data enrichment, if they become a valuable management tool for the company and as a result drives sales uplift. But considering user experience, data show better results for users of gamified applications

Suggestions for future recommendations have been made.

2 Literature review

2.1 Introduction to Gamification

The origination of the term gamification cannot be clearly detected. The most reliable source is when it comes from academia. The first approaches through empirical studies were delivered as of 2010, although there is an effort to find innovators who amplified these methods firstly. Within the following years, academic research on this field rose up instantly and rapidly. From 2011 until 2015, it stimulated the academic community from several fields to increase the empirical search from 1 to 1164 within five years (Kasurinen&Knutas, 2018)

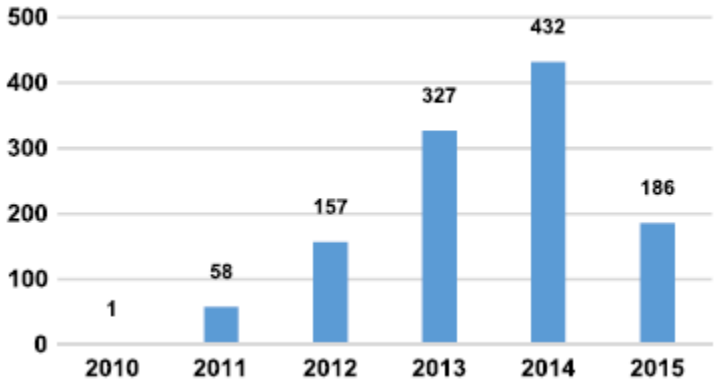

Figure 1.Number of publications per year

2.1.1 Gamification terms

There are several definitions that analyze the term of gamification. It is the application of game-design elements and game principles in non-game contexts (Deterding et al., 2011). A process of enhancing a service with affordances for gameful experiences in order to support user's overall value creation (Huotari and Hamari, (2010), added benefit for business (Werbach and Hunter, (2012) and it is based on motivational dynamics.

As mentioned above, two main definitions of gamification are distinguished, structural gamification and content gamification. The first one relies on game design elements used for reward and challenges that affect human behavior and the second one focuses on experience design that drive user engagement.

Gamification has gained popularity in recent years after the realization that traditional incentive structures to motivate customers are ineffective (Werbach& Hunter, 2012). With gamified techniques, businesses can successfully drive engagement, interaction, collaboration, awareness and learning. This could be beneficial for enterprises by changing their market mix and detach from extrinsic motivators, (like monetary rewards), towards intrinsic motivators (Zichermann & Cunningham, 2011).

“As business becomes increasingly social, our professional and consumer lives are being built using digital interactions. This momentum can be tapped to augment performance by embedding gaming mechanics into traditional processes. Technology in the workplace can be rewarding, and even fun.” (Deloitte, 2013, p. 52)

2.1.2 Criticisms of gamification

While gamification has its advantages, it also has several disadvantages. They attribute the failure primarily to poor design (Fleming, 2012) and combine game elements like points, levels and badges. Others believe that business executives see gamification as an easy solution to fix problems. They take away what makes games powerful, such as its interactions and behavioral complexities, and reduce them to meaningless (Bogost, 2011).

Bogost’s point, that gamification designers take the easy way out, is reflected in Gartner’s conclusion that many gamified systems fail due to poor design. Game design is hard, and if it is not understood what makes video games engaging, then it will be difficult to create a successful gamified application.

Even video game publishers, who spend hundreds of millions of dollars developing games, often get aspects of game design wrong. This drives many applications to focus on what can be called ‘pointification’: adding points, levels and badges to an application without understanding the meaning behind them, or why anyone would care about gaining points. When adding a points-based system to an application, it is important to understand one thing: the reason for the points. At the same time, it is important to consider that some of the most successful gamified applications do not have a point-based system at all (Werbach& Hunter, 2012).

So we finally summarize to the following 2 main factors that the interaction of gamification applies:

- For the consumers, the creation of incentives that drive them to use the gamified solutions that enterprises apply, affecting their behavior and the engagement with the product or service

- For the enterprises, the counterpoint of technology that customers can use as a medium , enhancing gamified solutions to their services enlarging the brand awareness

Technology is the necessary background for gamification to be applied.

This interaction between consumers and enterprises can be visualized in the Figure2. (This figure was made by the author of the dissertation)

Figure 2.Interaction between consumers and enterprises through gamification

2.1.3 Serious games

Gamification should not be confused with the serious games. So the definition and the main differences will be developed below.

Serious games or applied games or digital simulations**:** are games that do not have entertainment, enjoyment or fun as their primary purpose, (Michael & Chen 2005). They use traditional game techniques around serious business concepts in purpose to

understand a particular concept. Lists of industries it can be implemented among others are education, health care, engineering and politics.

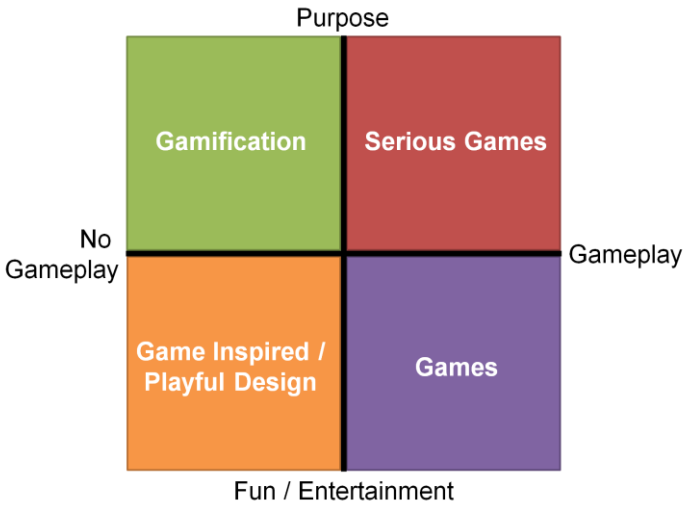

Figure 3 Gamification vs Serious Games , Marczewski, A. (2015).

To classify Serious Games, the Gameplay / Purpose / Scope (G/P/S) model (Damien D. et al 2011) can be suggested as a guideline. This classifies games according to both their "serious-related" and "game-related" characteristics. It relies on three aspects:

Gameplay, which refers to the type of game play used, Purpose, which refers to the designed purpose and finally Scope, which refers to the targeted application(s) of the title.

2.2 Defining games and play

2.2.1 What Is a Game

A game activity engaged in for diversion or amusement (play), a physical or mental competition conducted according to rules (tactic) and a procedure or strategy for gaining an end.

There are various definitions in a list of game qualities and key components of games are goals, rules, challenge, and interaction. Furthermore they engage players and create their own internal value. Games generally involve mental or physical stimulation, and

often both. Many games help develop practical skills, serve as a form of exercise, or otherwise perform an educational, simulation or psychological role.

Furthermore, to define a game as an activity must have the following characteristics (Cailois R.1957):

- *fun*: the activity is chosen for its light-hearted character
- *separate*: it is circumscribed in time and place
- *uncertain*: the outcome of the activity is unforeseeable
- *non-productive*: participation does not accomplish anything useful
- *governed by rules*: the activity has rules that are different from everyday life
- *fictitious*: it is accompanied by the awareness of a different reality

2.2.2 Gameplay

Games can be characterized by "what the player does." This is often referred to as game play. Major Key elements identified in this context are tools and rules that define the overall context of game.

Caillois (1962) discriminate the two forms of “play”, as introduced by a play form framed by a defined set of rules, called ludus , and a more freeform kind of play called paidia. In fact, these two forms are related to the definition of the words “game” (ludus) and “play” (paidia), and apply to any kind of play/game structure (board game, card game, toys, etc.).

2.2.3 Elements of Play

The role of play can be unfolded in formal learning experiences. There are six elements of play as a linear process: anticipation, surprise, pleasure, understanding, strength, and poise (Scott, E. 2014).During the play process these elements unfolds. Alongside as the intensity grows, each element subdivides in eight expressions. Play it’s not element itself, but it triggers the fun factor.

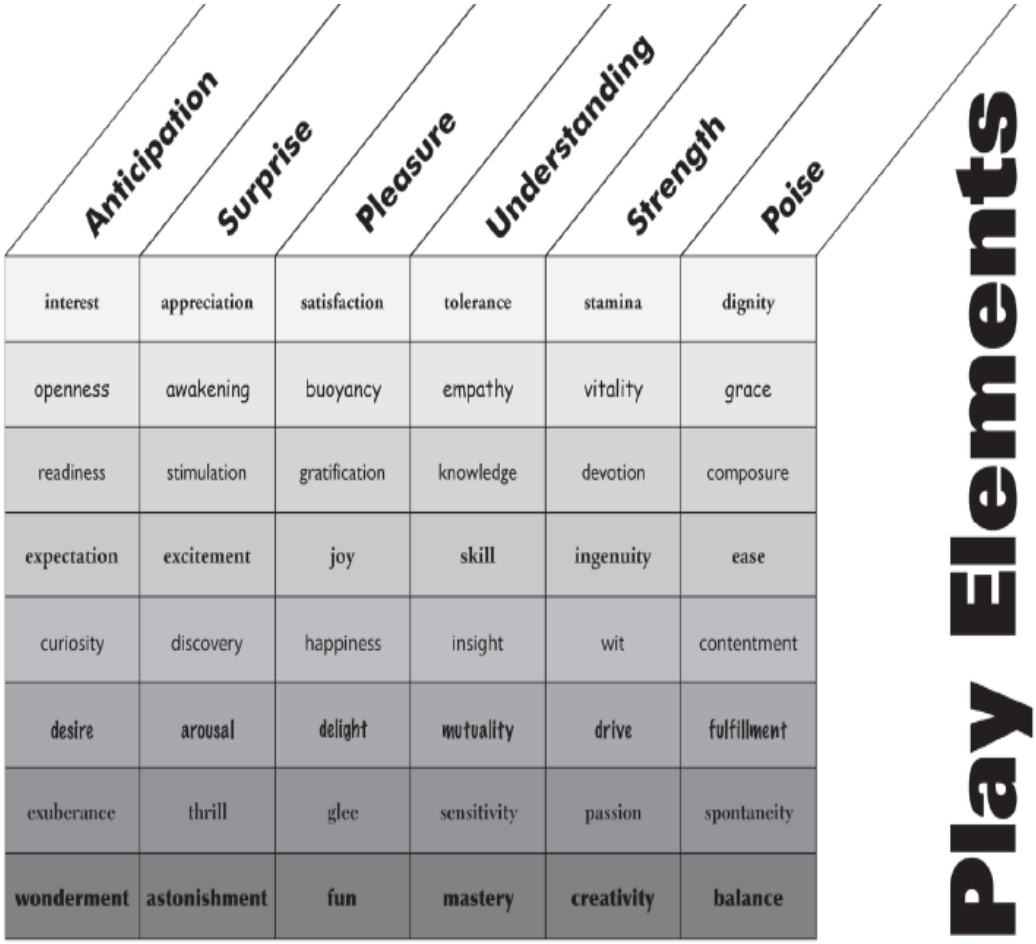

Figure 4 Play Elements presented as a linear sequence.(Scott E.2014)

The columns represent the six basic elements of play. Downward is how the elements grow during the play. Each element of play is a reward.

2.2.4 Nature and significance of play as a cultural phenomenon

Play theory has become an important object of study and discipline such as Biology, Psychology and Ecology. As a biological function there are numerous definitions. One of them described as an innate urge to exercise a certain faculty or in the desire to compete or dominate. In addition, the satisfaction of imitative instinct or a need for relaxation. By another, it serves as an exercise in restraint needful to the individual. All of them have one thing in common: they all start from the assumption that play must serve something which is not play, that it must have some kind of biological purpose. They all enquire into the why and the wherefore of play. Johan Huizinga (homo ludens a study of the play-element in culture, 1944) discusses the importance of the play element of culture and society. Huizinga suggests that play is primary to and a necessary (though not sufficient) condition of the generation of culture.

One of the most significant (human and cultural) aspects of play is that it is fun.

Huizinga identifies 5 characteristics that play must have:

- Play is free, is in fact freedom.
- Play is not "ordinary" or "real" life.
- Play is distinct from "ordinary" life both as to locality and duration.
- Play creates order, is order. Play demands order absolute and supreme.
- Play is connected with no material interest, and no profit can be gained from it.

In summary, we could say that playing enhances our adaptive variability. In this sense, playing is an utmost serious matter more urgent in our present time which is characterized by rapid changes, increasing complexity, and reflective uncertainty. Through the technology boost and the intimate usage of internet and especially of smart phones, the affordances for serious play can be provided more easily through digital media. This can be attributive to their Multimedia, Interactive, Virtual, and Connective character. Play-as value can be attained either by following rules or by challenging them. (Holbrook,1999)

2.2.5 Types of Players

Richard Bartle, a professor and behaviorist, researched and identified four types of game players (Bartle, R.1990). Considering the psychographic features that dominate the game players, a better understanding of their actions will be done. The main reason is that the users of a gamified system are at the center of the game so they are treated as “players”.

1. **“Achievers”** – These players like to acquire points and earn status. They enjoy the process of playing and want to play well. They like working with others and sharing the joys and defeats of the game.

2. **“Socializers”** – These players enjoy the social component of playing games, such as interacting, forming alliances and collaborating.

3. **“Explorers”** – These players take pleasure in game playing activities and elements, such as accumulating points or badges, uncovering shortcuts or figuring out puzzles.

4. **“Killers”** – These players thrive on competition and have a win-at-all-costs mentality.

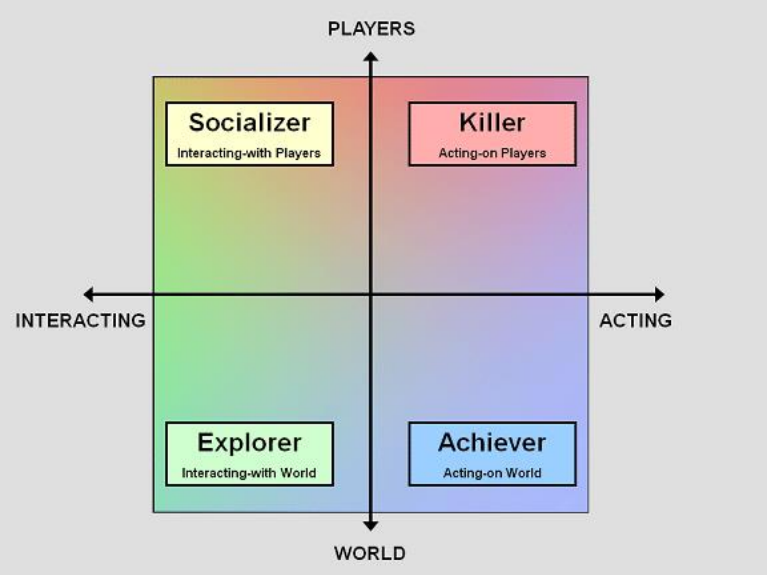

Figure 5 Type of players (Bartle, R.1990)

In addition to Bartle's four player types, the gaming field also includes the "naïve" players, players who participate unintentionally. They earn frequent flyers points but don't use them, or accumulate bank rewards that they never redeem. Such players slow game play down unless marketers can capture their attention and convert them into active participants.

2.3 Psychological drivers

Enterprises have to focus on customer behavior and experience. There are plenty of studies analyzing the field of consumer behavior in marketing. One basic approach is to understand the factors that drive consumers at the moment of purchase. Many experts have structured different frameworks. Main factors that emanate while playing games are motivations that act on human behavior, so there is an enumeration of the needs that drive players from a psychology perspective. A conceptual framework of drivers and needs to motivation is enlisted.

2.3.1 Motivation

The term motivation refers to factors that activate, direct, and sustain goal-directed behavior. Motives are the "whys" of behavior - the needs or wants that drive behavior and explain what we do. We don't actually observe a motive; rather, we infer that one exists based on the behavior we observe."

(Nevid,2013). There are three major components to motivation: activation, persistence, and intensity. (Manichander et al. 2016).

2.3.2 Extrinsic and Intrinsic Motivators

Factors in the social environment that fulfill the needs for autonomy, competence, and relatedness will facilitate intrinsic motivation and the internalization of extrinsic motivation, whereas neglecting or thwarting of these needs will adversely affect self-determined motivation (Vallerand, 1997, 2001).

2.3.3 Extrinsic Motivation

Extrinsic motivation occurs when we are motivated to perform a behavior or engage in an activity to earn a reward or avoid punishment. The behavior is motivated by a desire to gain a reward or avoid an adverse outcome.

External rewards could be money, position, recognition. The problem is that extrinsic rewards motivates only for a short time.

2.3.4 Intrinsic Motivation

Intrinsic motivation involves engaging in a behavior because it is personally rewarding, performing an activity for its own sake rather than the desire for some external reward. The person's behavior is motivated by an internal desire to participate in an activity for its own sake (Onyeka, 2011). One of the basic pillars of gamification is that enhances intrinsic motivation. So the user of a gamified application does not need external rewards to engage. While playing items like triumph, mastery and competence exist and mostly emanates intrinsic motivation.

2.3.5 The psychology of intrinsic motivation

One of the dominant frameworks for understanding intrinsic motivation in humans is self-determination theory. According to self-determination theory, principles of motivation boil down to three domains in which humans experience universal psychological needs:

- autonomy (the urge to be the cause of one’s own behavior or choices)
- relatedness (the urge to connect with others and identify with a group)
- competence (the desire to control or influence the outcomes of one’s behavior).

2.3.6 Consumer motivation

The needs, wants, drives, and desires of an individual that lead him or her toward the purchase of products or ideas. The motivations may be physiologically, psychologically, or environmentally driven. (American Marketing Association). As with gamification there is activation on the intrinsic motivation due to the external stimuli, there are areas to the consumer motivation and its effects to the following follow Objects of Involvement:

- Involvement with Decisions and Behaviors (“response involvement”)
- Involvement with Brands
- Involvement with Product Categories

2.4 The role of emotions

Emotions can play a necessary functional role in decision-making; Individuals’ choices depend on their memories and cognition but also on their current emotional state. (Vera J. Chen et al.2011).

Neurobiological evidence that seeking rewards guides the behavior and decision-making. There is a neural correlation for reward functions in learning, goal-directed approach behavior, and decision making under uncertainty (Schultz 2006). It is suggested that “rational” or advantageous decision making depends on prior emotional processing related to the specific decision parameters (Bechara et al. 1997).

Hilke Plassmann et al. propose some important insights for management at their work , Why Companies Should Make Their Customers Happy .They suggest for a company, that it is not sufficient to concentrate on ‘bounding’ customers for instance with technical requirements or general price promotions, but encourage customers in creating affective bonds to the company or its brands. This could be achieved by for example personalizing the communication with the customer and provide the basis for emotional events the customers links to the company or brand.

Customers want experiences “that dazzle their senses, touch their hearts and stimulate their minds” (Schmitt, 1999).

2.4.1 Mediate of Emotions in brand loyalty

Adding hedonic emotions is a powerful affective mediator on the relationship between brand experience and brand loyalty. Moreover, it is the experiential view of consumption rather than the appraisal theory of emotion that plays a dominant role in accounting for the influence of brand experience on brand loyalty. (Cherng G. Ding , Timmy H. Tseng,

2015). For a better understanding an examination of a quality that a product has should be mentioned.

2.4.2 Boost loyalty through emotional involvement - Customer loyalty.

Two aims of customer loyalty programs stand out. One is to increase sales revenues by raising purchase/usage levels, and/or increasing the range of products bought from the supplier. A second aim is more defensive – by building a closer bond between the brand and current customers it is hoped to maintain the current customer base. Uncles M, (2003).

A loyalty program where the entire product, service, or experience is gamified can affect retention of loyal customers or attract new customers to purchase. These techniques drive adoption of the product and the expansion of the company.

2.4.3 The role of experience

Holbrook (1999) defined value as 'an interactive relativistic preference experience, characterizing a subject's experience of interacting with a product or a service'. So the more interactive the customers become, the outcome for enterprises is to add more value to their brand. Customers not only search for value in products and services but are currently searching for value in experiences (Varshneya & Das, 2017) Thus, empirical research has found a positive relationship between experiential value and consumers' trust on specific firms (see Rose et al., 2012).

Experiential value characterizes the motives behind consumers' choices of action in the marketplace. According to the self-determination theory, these motives can be intrinsic or extrinsic because it links the dimensions of controlled motivation (extrinsic goals) to the development of autonomous motivation (intrinsic goals) through the satisfaction of basic psychological needs for: (a) competence; (b) autonomy; and (c) relatedness (Deci & Ryan, 2000).

2.5 Dimensions of interactive products

People perceive and evaluate interactive products along two different dimensions: pragmatic and hedonic quality (e.g., Hassenzahl, 2003).

Pragmatic qualities relate to manipulation and how functionality is accessed through usability. As an aftermath of pragmatic quality is satisfaction.

Hedonic qualities refer to the psychological needs and emotional experience of the user. Stimulation, identification and evocation are sub categories.

2.6 Uses and gratification theory

By studying the data on a broaden field, we can see that the theories for covering needs of use and the satisfaction that is perceived are not new. Because there is boundary layer to define the needs that influence psychological choices in the current dissertation we will cite these theories probing the needs with a new perspective. Main scope is to unravel whether the gamification theories are something new or a repeat and a copy of existing theories.

Gratifications are typically defined as some aspect of satisfaction reported by users, related to the active use of the medium in question (Herzog, 1944).

Most of the theories on media explained about the effects media had on people. It is the theory which explains of how people use media for their need and gratification. Instead of considering the audience as passively exposed to strong media messages, it considered an active audience that consciously selected and used media content to satisfy various needs. This theory can be said to have a user/audience-centered approach. It postulates that media is a highly available product and the audiences are the consumers of the same product. (Blumler 1974).

There are several needs and gratification for people they are categorized into five categories (Katz et al 1973).

- **Cognitive needs**: People use media for acquiring knowledge, information
- **Affective needs**: It includes all kinds of emotions, pleasure and other moods of the people.
- **Personal Integrative needs**: This is the self-esteem need. People use media to reassure their status, gain credibility and stabilize
- **Social Integrative needs**: It encompasses the need to socialize with family, friends and relations in the society.
- **Tension free needs**: People sometimes use the media as a means of escapism and to relieve from tension

At recent times along with individual factors there is a connection between the needs, goals, benefits, and consequences of media consumption. There is an explanation why the media is used and the achieved gratification (Richard and Turner 2010).The needs are specific in nature to the individual and how the media satisfies the need is subjective

2.7 External Environment

Examining the external environment, we can determine those enterprises that apply gamification solutions, and why some have precedence over others.

2.7.1 Technological boost

It is an era that changes constantly. Consumers are now more exposed to a lot of information. Regarding a century ago, consumers firstly were exposed only to the product. After the introduction of media like radio and after the TV, mass media communication came to consumers' life. More Marketing concepts arise. At the 80's the internet begin the interactivity between the user and the medium. Now the customer was not only a passive receiver of the messages but an active user. But these entire medium have the lack to satisfy some basic needs like socializing in which social media later cover. Now the consumer was faced upon one new problem: the quantitative of information and the time he spends. For the reason to distract and cause the attention of consumers, attractive applications developed. Based mostly on experiences and using the latest technology some went viral on a very short period.

Likewise equal the length it took to whip off the users interest. The gaps of the continuing interest in the aspects of a meaningful scope, are trying to fill gamified applications.

2.7.2 Decision making theories in marketing:

Decision making theories extract from the field of psychology and economics. Marketers have borrowed data from these disciplines and transfer them to the field of consumer behavior to understand which factors contribute to the consumer, to make choices among others. The researcher cited two elements that may influence gamified applications:

- Quality of information

Increasing the quality of information, the amount fixed, leading to increased consumer confidence in their decisions. ***(Keller & Staelin*** (1987). So a user who interacts within a game with the product or the service is increasing the information

- Time for searching information

The available time affects the level of quality and quantity of information. The sources of information and the changing significance because of the time pressure. (***Hauser, Urban & Weinberg*** (1993)

The desire to consider a wide variety of product options and be able to do so quickly has been labeled the “tyranny of choice” (Schwartz, 2004). So with gamification methods it can degrade the time cost.

2.7.3 Modern applications of uses and gratifications

Since the introduction of the internet as a medium of communication, researchers emphasized that this will compete with established media for consumer satisfaction at the level of gratification through the theory of niche (Dimmick,2000). The theory of niche proposes that a new medium competes with older, more established media to fulfill users’ needs.

2.7.4 Internet usage

Dimensions of consumer Internet use and usage gratifications have three main categories: process gratification (e.g., playing with the technology, resources, search engines, browsing), content gratification (e.g., information, education, knowledge, learning, research and entertainment), and social gratification (chatting, friends, interaction, and people). All three dimensions of gratification are relevant to managing the Internet as a commercial medium (Stafford et al 2004).

2.7.5 Modern-Day Applications

As new technologies arise new software appeared and become necessary in new communication like instant messaging, applications, video gaming and mobile phones. The ease of use has increased the volume of users and the time they spend.

UGT research into mobile phone usage has found that people seek a number of gratifications from their phones, like entertainment, immediate access and mobility, among others followed by intrinsic factors such as affection/sociability (Leung, L.; Wei, R. 2000)

2.7.6 Social Media

As another example of a contemporary technology, when using social media, users can be motivated by five socio-psychological needs: showing affection, venting negative feelings, gaining recognition, getting entertainment, and fulfilling cognitive needs (Leung L, 2013)

2.7.7 Online games

Playing online games is experience-oriented. Uses and Gratifications theory find that achievement, enjoyment and social interaction are the main motivators (Jen-Her Wu,2010) Gratifications and service mechanisms significantly affect a player's continued motivation to play, which is crucial to a player's proactive stickiness to an online game.

2.7.8 Mobile Gaming and Augmented Reality

Various forms of user behavior like hedonic, emotional, social benefits and social norms drive consumer reactions into mobile AR games. However, the importance of these drivers differs depending on the form of user behavior. (Rauschnabel et al 2017). Many applications had arise in the recent years, but the first top downloaded and mass used was Pockemon Go in 2017

2.8 **Strategic marketing – approach for organizations**

Redefining strategic marketing, enterprises when apply gamification techniques need to consider if they influence the vision, the scope and the strategy of the organization. A list of question should arise:

First of all, gamification techniques are aligning to targets set by the board?

Do they set an extra value to their product / service as this is the main core of marketing?

Do they leverage one or more of the parameters of marketing plan?

When applied change position or segmentation?

Segmentation: Is the organizations targeted audience the right to ensure a success?

2.8.1 Cost effective through gamification

Although there an account must also be taken of an amount to be spent on to purchase and maintain the digital content of a gamified platform, on the other hand less money are required to promote the product. Depending to the stage of product life cycle, the cost management is different. In the early stage an intensive advertising budget is needed in order the brand to become established and attain the desired awareness levels. The personal involvement with the interactive players reduces the cost that is needed for intensive advertising when performing marketing plan.

2.8.2 Brand awareness

The consumers are making associative thoughts about the products that are willing to buy. The ability to recognize or recall a brand is central to purchasing decision-making. This ability is referred as Brand awareness and is a key consideration in brand management, advertising management, consumer behavior and strategy development.

2.8.3 Brand Awareness through gamification

Gamification will help brands extend its awareness because it can take reach more digital device users. Furthermore the continuing use will make the brand more recognizable and correlated with the product, as they interacted with each customer on a personal level. Gamification is a qualitative alternative to e-commerce sites: offer a differentiating and attractive promotional experience for customers and increase consumer engagement rate.

3 Methodology

A quantitative survey method has been implemented. The study was based on research by composing, sending out and electronically filling in questionnaires via the Google forms platform.

The study was based on the use of a questionnaire. The questionnaire was created using a similar bibliography associated with the gamification from the field of psychology and consumer behavior. The questionnaires were created, sent and completed online through the Google forms platform. The time period was from 4 to 7 June. A total number of 318 responses were collected.

For this scope it has been used:

• Social media (Facebook-Viber-Instagram, personal invitation and volunteer

Group notification from friends).

• E-mail invitation from 3 group accounts: personal, business and student.

The mission was to be promoted on a nationwide basis, covering a wide geographical area and a broad range of ages.

In quantitative studies, researchers advance the relationship among variables and pose this in terms of questions or hypotheses. Research aims to develop relevant true statements, ones that can serve to explain the situation that is of concern or that describes the causal relationships of interest. (Creswell J, 2003)

3.1 Sample Descriptor

The questions were developed in eight sections containing information on:

1) Demographics

2) Level of involvement via electronic device

3) Engaging with applications

4) Motivation

5) Interactivity

6) Expression of a user

7) User’s experience aspect

8) Reasons for limited use

3.2 Pillars for examination

The eight sections can be summarized and encoded into the three main pillars:

A. Level of involvement with digital media (experience of use)
B. Level of involvement with gamification applications (experience of use)
C. Motivational factors that are triggered from psychological needs

There were a total of 23 questions. For better understanding and convenience of the participants, the language of the questionnaire was Greek. Therefore, subsequent translation was needed.

A variety of methods were applied. In most questions, the methods uses were the following: a Likert (1-5) scale, open – closed questions, a multiple choice grid and for user experience a 7 scale that Rescales the data to the range from -3 to 3

The link for this questionnaire can bye foundat:https://docs.google.com/forms/d/17NaQqM97ENZLrcDsBtA-M8Rkf30Ec9oOx1QBNFqJ2ao

3.3 Dispatch method for selected target group

Since the survey is addressed to users of electronic devices (homogeneous sample regarding the digital user), only digital dissemination was used for two reasons. Firstly, to focus the sampling to the specific target group and secondly, to have a wide dispersion nationwide (in order to gain a heterogeneous sample). Because the researcher believes that there are no significant differences in the use of electronic devices per region of Greece, the sample it has been divided into urban, semi-urban centers and rural areas.

Furthermore, to examine the use of gamified applications, as a mean of use, a target for entertainment venues was set upon to the users (as an object of an end use) to examine if they have changed their options through tangible choices to intangible, such as they appealed to their screens of electronic devices .

3.4 Sample Configuration

Collection of Responses Process: The answers to the questionnaire were automatically registered in the special form of Google forms both in graphs per question and by answer.

At the same time, it was possible to extract the answers to an.xls file, for a rapid process of its processing statistics.

Tables and charts are listed for a better understanding of the data gathering procedure.

Descriptive Statistical Analysis was used in some occasions, in order to find errors and weight outliers that would lead to misunderstanding. Calculations have been made to find the mean, the median for the normal distribution. In some cases to analyze the dispersion of data points, formal measures with standard deviation have been calculated.

Regarding the user experience the scale means and the mean and standard deviation per item are calculated to examine differences between users of electronic devices (general) and users of gamified applications. The range of the scales is between -3 (horribly bad) and +3 (extremely good).

To estimate the precision of the mean, the 5% confidence intervals for the scale means and the means of the single items are shown. The validation is done when a conducting repetition to the measures in which 95% of the scale means of these repetitions will be located.

Correlations of the items per scale been made. Items that belong to the same scale should show in general a high correlation. For the consistence of a scale a measure with Alpha-Coefficient (Cronbach, 1951) has been done. The Cronbach-Alpha coefficients are calculated through the following type ($\alpha = n*r/1+(n-1)*r$, where r is the mean correlation of the items in a scale and n is the number of items in a scale) for the two scales of the UEQ.

3.4.1 Demographics characteristics

A total of 318 participants responded. The sample was promiscuous regarding the gender and the age:

- The majority were interviewed were women (59%)

Table 1 Gender separation

Gender	N	%
Male	131	41%
Female	187	59%
Total	318	100%

- Age Distribution: The most were 25-40 (57%)

Table 2. Age

Age	N	%
<25	23	7%
25-40	182	57%
41-60	108	34%
>60	5	2%
Total	318	100%

- Residence Area: 61% live in big cities and total 89% in urban areas

Table 3 Residence Area

City>150.000	**193**	**61%**
Urbancenter 20.000-150,000	88	28%
Rural area/semi-urban center < 20000	37	12%
Total	318	100%

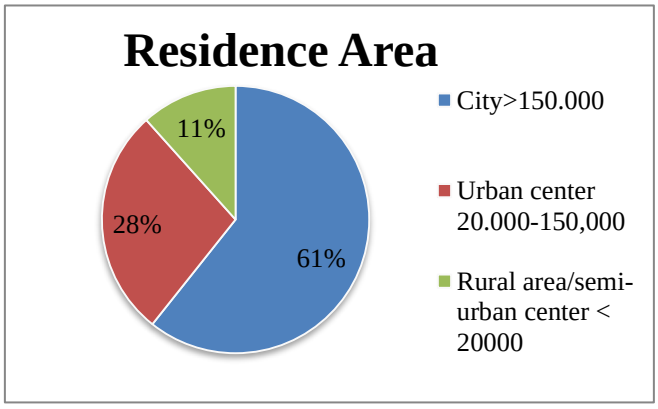

Figure 6. Residence Area

User experience with the objective target (Frequency to entertainment venues like Coffee/dining areas/cinema/parks/ Monuments etc):

- 53% are going at least fortnight.

So there are few light users (15%) It is a good sample and a basis to see what impact will have to their decisions the use of digital services. It is a safe base, because they are not users of low involvement and considering the impact of the mild decisions would take.

Table 4. Frequency to entertainment venues

How often do you go to entertainment venues *?	**N**	**%**
About once a month or less	48	15%
Once a week or a fortnight	167	53%
More than once a week	103	32%
Total	318	100%

4 Findings

4.1 Level of involvement (experience of use) with digital media

4.1.1 Frequency of use of digital platforms

Here we can see that 94 % are using search engines everyday as well as 83% social media.

Table 5. Frequency of use of digital platforms

	Search engines		Social media		Gamified applications		Other applications	
	N	%	N	%	N	%	N	%
Daily	300	94%	268	84%	71	22%	122	38%
Weekly	14	4%	28	9%	137	43%	128	40%
Few times a month	3	1%	8	3%	86	27%	48	15%
Never	1	0%	14	4%	24	8%	20	6%
Total	318	100%	318	100%	318	100%	318	94%

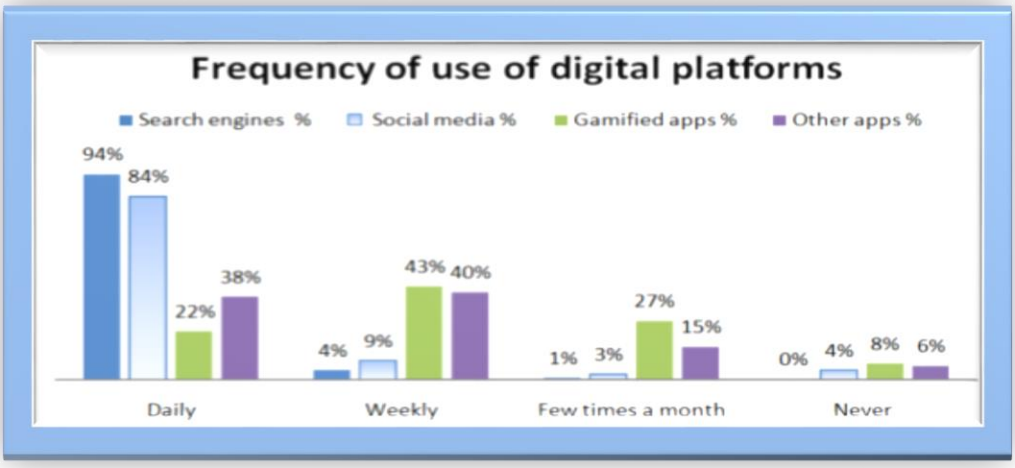

Figure 7, Frequency of use of digital platforms

4.1.2 Rate of use of digital media to search for entertainment venues:

- 79% are using digital media to search both entertainment venues and dining options.

Table 6. Type of entertainment venues searched by digital media

	Coffee / Bar		Dining options		Other entertainment venues	
	N	%	N	%	n	%
Yes	207	65%	250	79%	251	79%
No	111	35%	68	21%	67	21%
Total	318	100%	318	100%	318	100%

4.1.3 Type of digital mean used, searching for entertainment venues:

- The majority (82%) is making the search through engines.

Table 7 Type of digital mean used, searching for Entertainment venues

	Search engines		Social media		Gamified applications		Other applications	
	N	%	N	%	n	%	N	%
Yes	261	82%	215	68%	181	57%	87	27%
No	57	18%	103	32%	137	43%	231	73%
Total	318	100%	318	100%	318	100%	318	100%

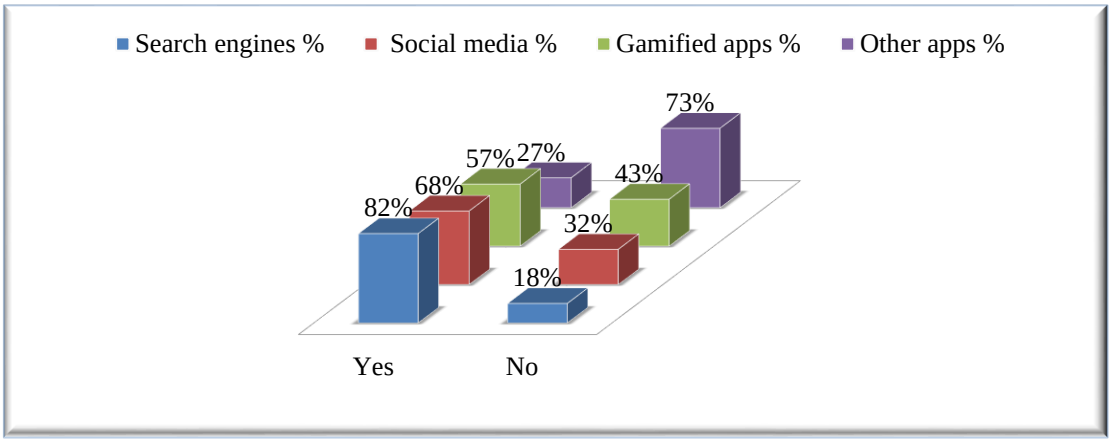

Figure 8, Type of digital mean used, searching for entertainment venues

4.1.4 Frequency of total users, using digital media as a mean, to search for entertainment venues (object):

- There is a neutral use for Gamified applications (51%)

Table 8, Frequency of digital media use, for Entertainment venues

	Gamified applications		Social media		Search engines		Other applications	
Frequency :	n	%	n	%	n	%	n	%
Not at all	72	23%	58	18%	32	10%	151	47%
Neutral	162	51%	145	46%	135	42%	137	43%
Very often	84	26%	115	36%	151	47%	30	9%
Total	318	100%	318	100%	318	100%	318	100%

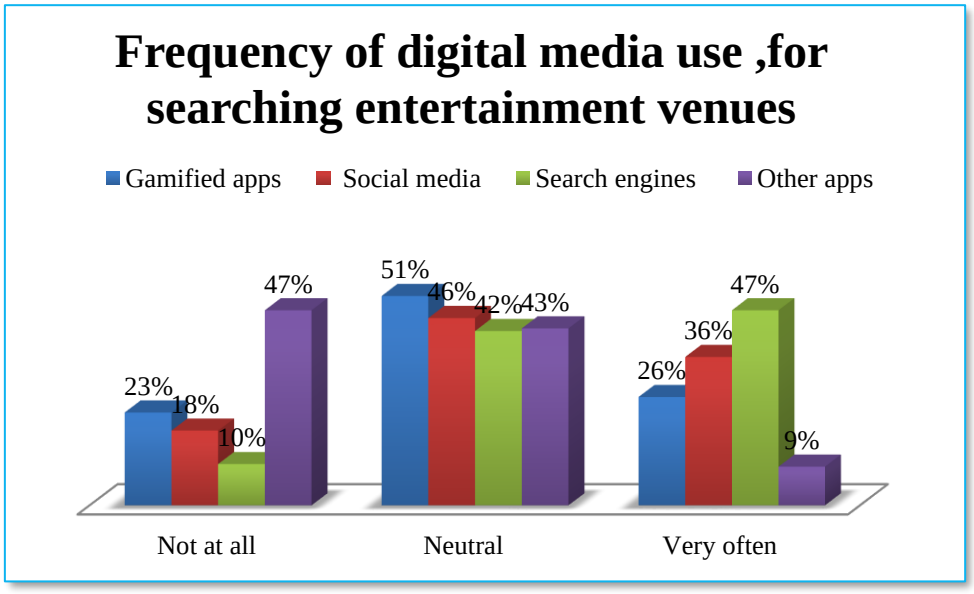

Figure 9, Frequency of digital media use , searching for entertainment venues

4.1.5 Rate of use of the digital media to find entertainment venues

- There is a tremendous increase (76% increase level 4 & 5) to the use of media compared a couple of years

Table 9 Compare the rate of use searching for entertainment venues

Level	n	%	Statistical Analysis	
Decrease 1	8	3%	MEAN	4,12
2	10	3%	MEDIAN	4
3	60	19%	STANDARD DEVIATION	0,97
4	101	32%		
Increase 5	139	44%		

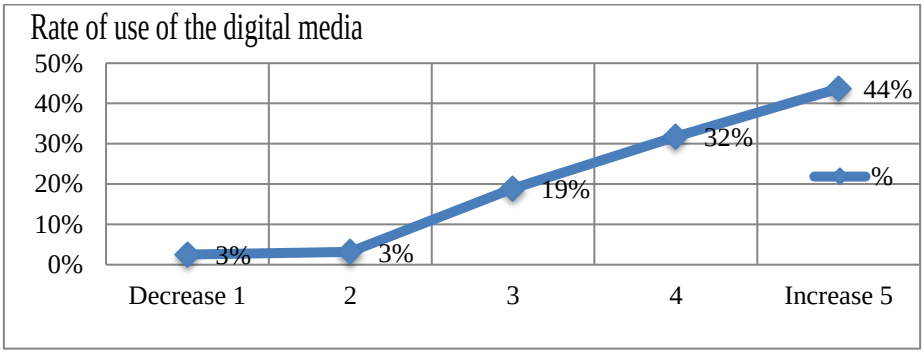

Figure 10, Rate of use of the digital media

4.1.6 Level of trust, using digital device

There is a medium level of trust although there is big usage and furthermore an increase to the specific search of entertainment venues by digital devices. This is a basic key point to show if the engagement of the user is efficient.

Q15: In the place you are living, at what level of trust would be the next selection of entertainment venues (objective target), by a digital search (subject)?

- Most Frequent answer is 3 , unsure

Table 10 , Level of trust using digital applications.

	n	%	Statistical analysis	
Not at all 1	37	12%		
2	59	19%		
3	107	34%		
4	80	25%	MEAN	3,05
Very much5	35	11%	MEDIAN	3
Total	318	100%	STANDARD DEVIATION	1,16

4.2 Level of Involvement with gamified applications

4.2.1 Knowledge and usage of gamified applications:

There is a spread of the opinions. For a better understanding the median and the mean were introduced, Median was found at 3 (sometimes) and the mean at 2,92. High involvement of gamification applications, have the 35 % (Often, Very often) of the users who use digital devices.

Table 11 Rate of use of gamified applications

	n	%
1.Never	70	22%
2.Almost Never	47	15%
3.Sometimes	89	28%
4.Often	63	20%
5.Very often	49	15%
Total	318	100%

Statistical analysis	
mean	2,92
median	3,00
Standard deviation	1,36

We could define a gamification user, as those with responses 4 & 5 (Often & Very often). But we did not for two reasons. Firstly because it could lead to misunderstanding due to the term Knowledge included to the use of gamified applications. Secondly, because we want to observe only the users searching for entertainment venues. We are based upon the following responses:

- The gamified app users, are the 23% of the total digital means with n=72.

Table 12 Decision of digital platform for entertainment venues

Q16: To search for entertainment venues via electronic devices, what is your most common choice?			
		n	%
	Gamified applications	72	23%
	Search engines	123	39%
	Social media	95	30%
	Other applications	18	6%
	Other	10	3%
	Total	318	100%

4.2.2 Verification for gamified application user

To check for outliers and see if someone is determined as a gamified app user, we cross checked the user searching for entertainment venues by gamified app, with the frequency of involvement with gamified applications general. Here only 1% (n=1) answered never.

- 65% of electronic users have an involvement with gamified applications at least weekly.
- 92% have an involvement with gamified applications at least monthly.

Table 13 Involvement with gamified applications

Q5: How frequently do you involved in the following: Applications with reward systems such as google maps, trip advisor, e-table, deliveras etc)				
	All users		gamified applications user	
Never	24	8%	1	1%
Few times a month	86	27%	15	21%
Weekly	137	43%	35	49%
Daily	71	22%	21	29%
	318	100%	72	100%

4.2.3 Game Elements

Examine items that are considered as game element and their contribution to the rate of use :

1) Comments – Review, 67% of gamified app users use comments – review, Often / Very often.

Table 14 Rate of use for Comments – Review

	Gamified applications		**Other Applications**		**other**		**Search engines**		**social media**		total	
Comments - Review	**N**	**%**	**n2**	**%3**	**n4**	**%5**	**n6**	**%8**	**n9**	**%10**	**%7**	**%6**
No / Rarely	10	14%	7	39%	4	40%	27	22%	23	24%	71	22%
Often/Very often	48	67%	2	11%	1	10%	55	45%	38	40%	144	45%
Sometimes	14	19%	9	50%	5	50%	41	33%	34	36%	103	32%
Total	72	100%	18	100%	10	100%	123	100%	95	100%	318	100%

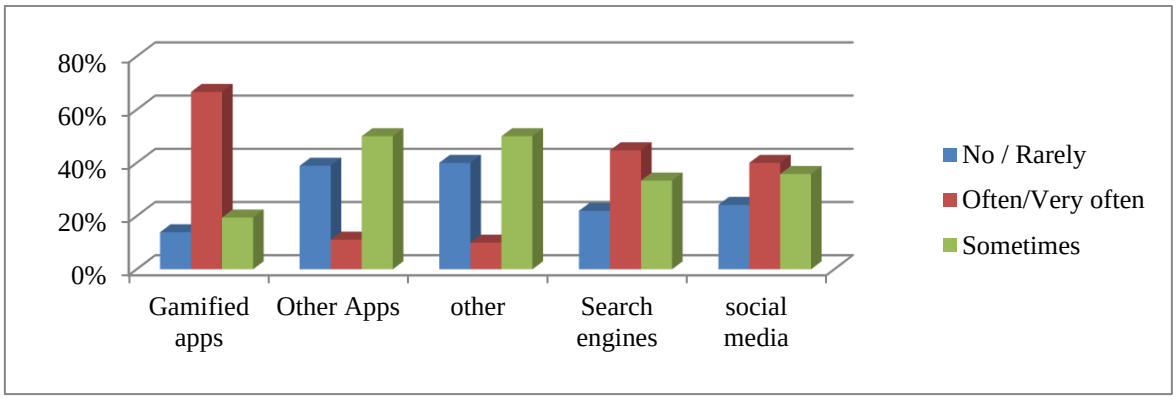

Figure 11 Rate of use for Comments – Review

2) Rating system (stars)

- 67% of gamified app users use Rating system Often / Very often

Table 15 Rate of use of rating system

	Gamified applications		Other Applications		other		Search engines		social media		total	
Rating (stars)	N	%	n	%	N	%	n	%	n	%	n	%
No / Rarely	5	7%	4	22%	3	30%	15	12%	15	16%	42	13%
Often/Very often	48	67%	5	28%	2	20%	56	46%	37	39%	148	47%
Sometimes	19	26%	9	50%	5	50%	52	42%	43	45%	128	40%
Total	72	100%	18	100%	10	100%	123	100%	95	100%	318	100%

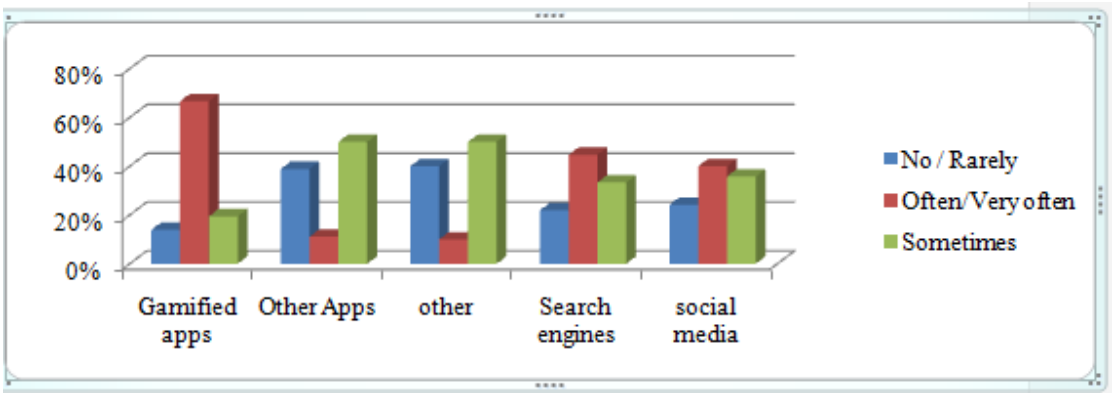

Figure 12. Rate of use of rating system

3) Uploading photos

Table 16 Rate of use for uploading photos

Uploading photos	Gamified applications		Other Applications		other		Search engines		social media		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
No / Rarely	15	21%	6	33%	3	30%	30	24%	16	17%	70	22%
Often/ Very often	36	50%	5	28%	1	10%	57	46%	52	55%	151	47%
Sometimes	21	29%	7	39%	6	60%	36	29%	27	28%	97	31%
Total	72	100%	18	100%	10	100%	123	100%	95	100%	318	100%

- 55% of gamified application are often/ very often users

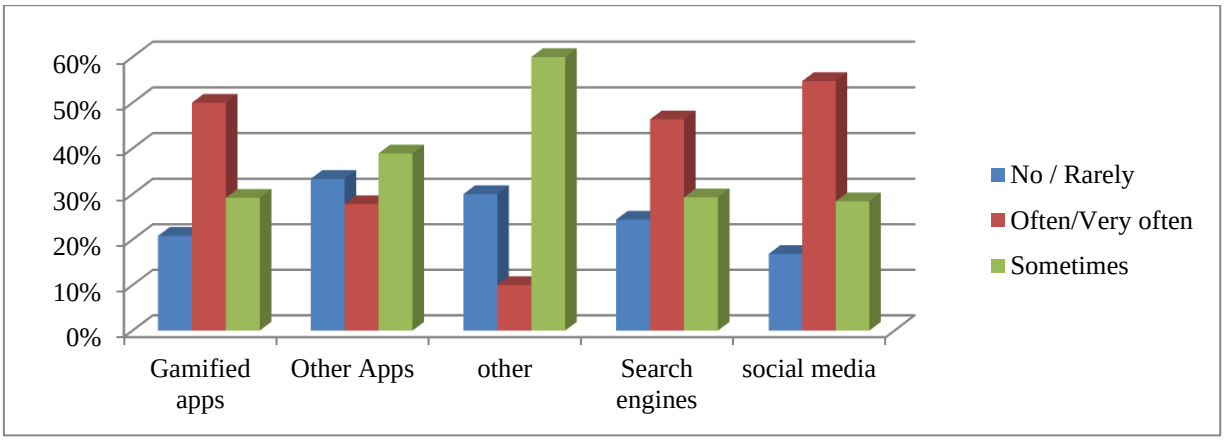

Figure 13 Rate of use uploading photos

4.2.4 Existence of play Elements

In the current section, we define 3 of the 6 elements of play, and we wanted to examine if these elements are developing during the use.

While using mobile device (with all the digital platforms), there is the existence of pleasure 67%

Table 17, play elements for all users

	Surprise		Pleasure		Expectation	
	n	%	n	%	N	%
Yes	147	49%	214	67%	118	37%
No	151	51%	104	33%	200	63%
total	298	100%	318	100%	318	100%

- Regarding gamified application users , the results are adequate similar:

Table 18 play elements for all users

	Surprise		pleasure		Expectation	
	n	%	n	%	N	%
Yes	43	60%	53	74%	35	49%
No	29	40%	19	26%	37	51%
total	72	100%	72	100%	72	100%

- Comparison of play elements gamified applications/all others. Both perceive the pleasure (74%) and (67%).

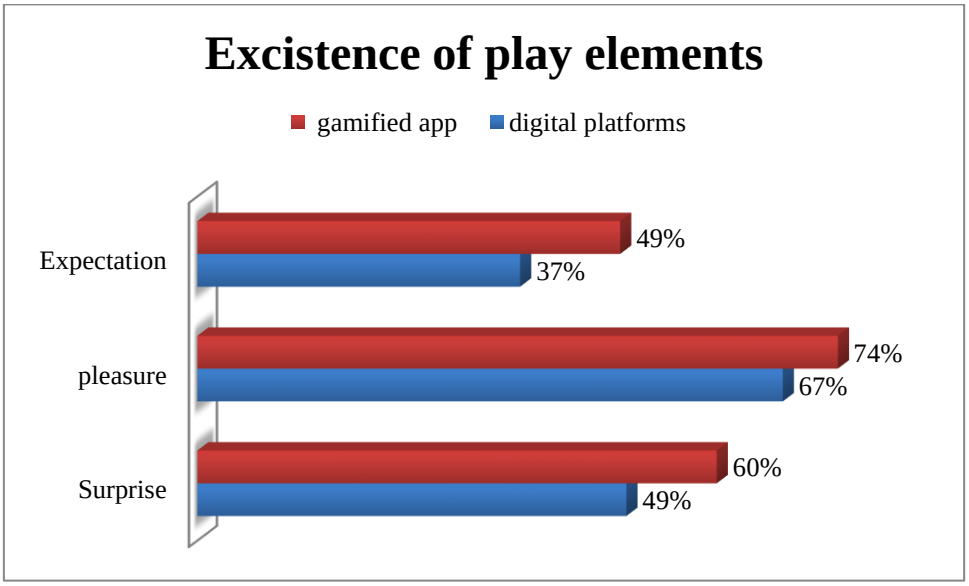

Figure 14 Comparison of play elements among users

4.3 Motivational factors that are triggered from psychological needs

In examining mobile device users, a motivational perspective is needed (Jih and Lee, 2003- 2004). So we take the three affective needs correlated with gratification (Katz et al.,1973) that drives motivation .

Table 19 Needs and gratification

Motivation								
	· Affective need		· Affective need		Personal Integrative needs		• Cognitive needs	
	Q11.Using digital devices, are you enthusiastic about discovering new venues of entertainment that you did not know before? *		Q13.Do you feel delighted when you join an online community of users and give reviews of places you've visited?		Q12.Does the reward with point scale and levels of users motivate you? ? (If applicable)		Q14.The ratings and information you collect affect you to have more involvement?	
	n	%	N	%	n	%	N	%
Not at all -1	20	6%	20	6%	58	18%	64	20%
2	29	9%	29	9%	55	17%	72	23%
3	85	27%	85	27%	89	28%	96	30%
4	104	33%	104	33%	65	20%	64	20%
Very much-5	80	25%	80	25%	51	16%	22	7%
Total	318	100%	318	100%	318	100%	318	100%
MEAN	3,61		2,80		2,99		2,71	
MEDIAN	4		3		3		3	
STANDARD DEVIATION	1,14		1,24		1,32		1,19	

- Comparing the results of gamified applications users (n=72), and examine the mean and the median, the results are almost the same.

Table 20 Needs and gratification for gamified applications users

	Q11	Q13	Q12	Q14
MEAN	3,64	2,85	3,0	2,75
MEDIAN	4	3	3	3

STANDARD DEVIATION	1,13	1,23	1,33	1,19

4.3.1 Treatment user as a player

A) Validity of a user treated as a player:

- 62% isn't affected of the type of player, as Bartle has categorized

(Bartle's type of players). So there are not potentials to be in the future a gamified user.

Table 21, User characteristics analyzed by Barttle's type of player

Q: By participating in the digital media, does it express any of the following?	N	%
I like it because it looks like a game and I work with other users	31	10%
I like to be an active member of a community	72	23%
I like to collect points and unlock new items	13	4%
It mobilizes me because i am competing with other users	6	2%
None of the above expresses me	196	62%
	318	100%

The first four questions refer to Bartle's four types of user (**Achievers, Socializers, Explorers, Killer) .**If none of the referred questions express the user , an option of nothing of the above expresses me was given

A) Comparison with gamification heavy users.

Although we expected better results for gamified app user, only 50% feel like behaving as a player while acting.

- 50% is isn't affected of the type of player, as Bartle has categorized

Table 22, User characteristics as a player/no player

all users			gamified user	
	N	%	n	%
barttle types	122	38%	69	50%
No barttle types	196	62%	68	50%
	318	100%	137	100%

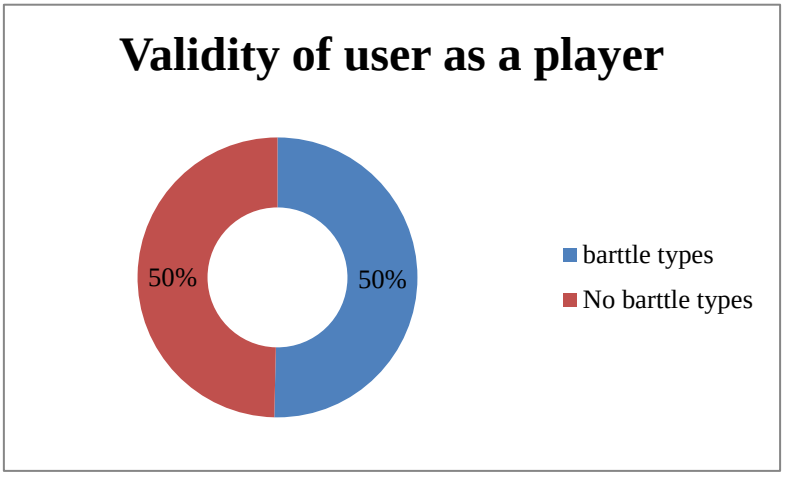

Figure 15, Validity of user treated as a player

4.4 User experience

We have enlisted 8 items to choose from a7 point bi-polar scale (-3 +3). Items 1-4 represent Pragmatic quality scale and items 5-8 represent hedonic quality scale. (Schrepp, et al.2017). We Calculate the mean per item, both for user experience from all the electronic devices (N: total 318) and for user experience of gamified applications (N: total 72)

We have to calculate the scale values for pragmatic and hedonic quality per person. The range -3 to 3 and we can interpret the means of the scales pragmatic quality and hedonic quality.

Values between -0.8and 0.8 represent a neural evaluation of the corresponding scale, values > 0,8 represent a positive evaluation and values < -0,8 represent a negative evaluation.

4.4.1 User experience of all digital platforms

Items represent Pragmatic quality represent a positive evaluation scale (values > 0,8):

- Summarizing the 8 items into the two qualities:

Table 23 Digital devices, User experience scales

UEQ Scales	
Pragmatic Quality	1,002
Hedonic Quality	0,590
Overall	0,796

- Extensively , per item only the ease of use scores good (1,3) as well the other items are just above the limit of 0,8 –(pragmatic quality item)
- All hedonic quality items score at a neutral evaluation

Table 24 Digital devices User experience scale per item

Item	Mean	Variance	Std. Dev.	No.	Negative	Positive	Scale
1	0,9	1,8	1,3	318	obstructive	supportive	Pragmatic Quality
2	1,3	2,0	1,4	318	complicated	Easy	Pragmatic Quality
3	0,9	1,8	1,4	318	inefficient	efficient	Pragmatic Quality
4	0,9	1,8	1,3	317	confusing	Clear	Pragmatic Quality
5	0,5	1,9	1,4	318	boring	Exciting	Hedonic Quality
6	0,6	2,0	1,4	318	not interesting	interesting	Hedonic Quality
7	0,7	1,7	1,3	318	conventional	inventive	Hedonic Quality
8	0,6	2,0	1,4	318	usual	leading edge	Hedonic Quality

Comparison to benchmark:

Pragmatic Quality: Below average, Interpretation: 25% of results better, 50% of results worse

Hedonic Quality: Bad, Interpretation: In the range of the 25% worst results

Overall: Below average, Interpretation: 25% of results better, 50% of results worse

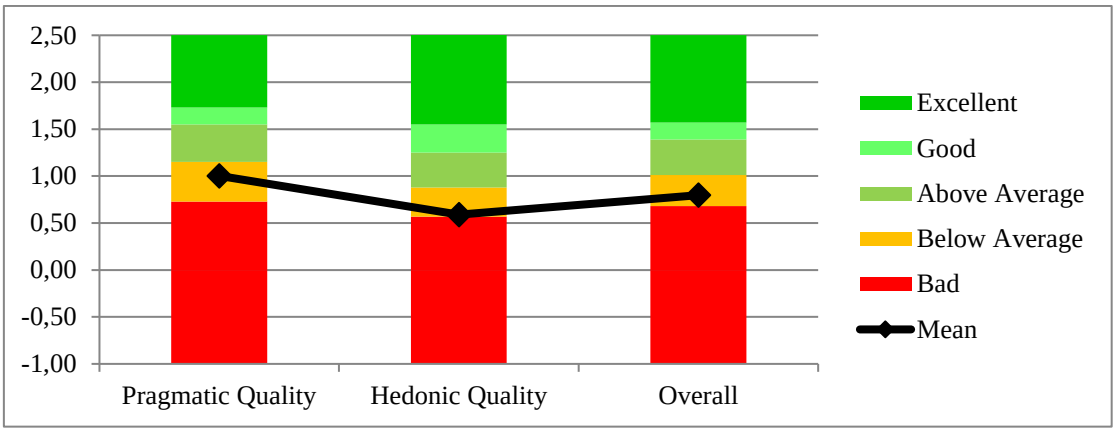

Figure 16 Digital devices, User experiencescales, comparison to benchmark

Calculating **Confidence intervals (p=0.05) per item:**

- The ease of use has the best result (1,34)

Table 25 User experience calculations with Confidence intervals (p=0.05) per item

Item	Mean	Std. Dev.	N	Confidence	Confidence interval	
1	0,871	1,350	318	0,148	0,723	1,019
2	1,343	1,405	318	0,154	1,188	1,497
3	0,855	1,357	318	0,149	0,706	1,004
4	0,940	1,343	317	0,148	0,792	1,088
5	0,478	1,380	318	0,152	0,326	0,630
6	0,645	1,426	318	0,157	0,488	0,801
7	0,679	1,297	318	0,143	0,537	0,822
8	0,557	1,406	318	0,155	0,402	0,711

Calculating **Confidence intervals (p=0.05) per scale**

- Pragmatic quality , for the precision of the estimation of the mean varies from 0,882 (limit to positive response) and 1,123

Table 26 User experience scales calculations with Confidence intervals (p=0.05) per scale

Scale	Mean	Std. Dev.	N	Confidence	Confidence interval	
Pragmatic Quality	1,002	1,094	318	0,120	0,882	1,123
Hedonic Quality	0,590	1,170	318	0,129	0,461	0,718
Overall	0,796	0,993	318	0,109	0,687	0,905

4.4.2 User experience of a gamified application

- The results showing better overall user experience
- The ease of use score better (1,7)
- On the other side it is not consider a leading edge(0,9)

Table 27 User experience of gamified application per item

Item	Mean	Variance	Std. Dev	N	Negative	Positive	Scale	
1	1,3	1,2	1,1	72	Obstructive	supportive	Pragmatic Quality	
2	1,7	1,4	1,2	72	Complicated	easy	Pragmatic Quality	
3	1,2	1,9	1,4	72	Inefficient	efficient	Pragmatic Quality	
4	1,3	1,5	1,2	72	Confusing	clear	Pragmatic Quality	
5	1,0	1,6	1,3	72	Boring	exciting	Hedonic Quality	
6	1,4	1,5	1,2	72	not interesting	interesting	Hedonic Quality	
7	1,0	1,3	1,1	72	Conventional	Inventive	Hedonic Quality	
8	0,9	1,7	1,3	72	Usual	leading edge	Hedonic Quality	

- Pragmatic Quality scores positive (1,382)

Table 28 User experience of gamified application per scale

Short UEQ Scales	
Pragmatic Quality	1,382
Hedonic Quality	1,090
Overall	1,236

Comparison to benchmark:

Pragmatic Quality: Above average Interpretation: 25% of results better, 50% of results worse

Hedonic Quality: Above average, Interpretation: 25% of results better, 50% of results worse

Overall: Comparison to benchmark, Interpretation: 25% of results better, 50% of results worse

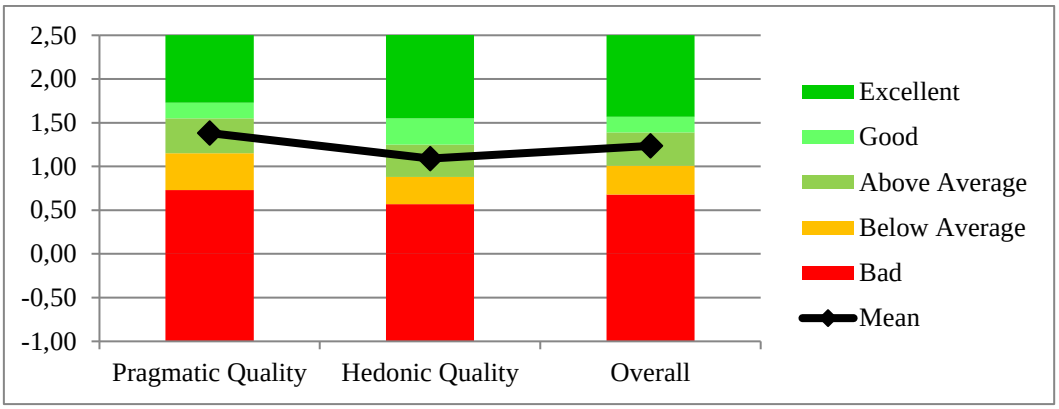

Figure 17 User experience of gamified application per item, comparison to benchmark

- The users find it more interesting (1,39) –Hedonic quality and supportive (1,32)-Pragmatic quality.
- For the precision of the results items leading edge , inventive and exciting vary from neutral to positive

Table 29 Confidence interval (p=0.05) per item of gamified application

Confidence interval (p=0.05) per item						
Item	**Mean**	**Std. Dev.**	**N**	**Confidence**	**Confidence interval**	
1	1,319	1,072	72	0,248	1,072	1,567
2	1,722	1,201	72	0,277	1,445	2,000
3	1,208	1,363	72	0,315	0,894	1,523
4	1,278	1,236	72	0,285	0,992	1,563
5	1,014	1,250	72	0,289	0,725	1,303
6	1,389	1,205	72	0,278	1,111	1,667
7	1,042	1,131	72	0,261	0,780	1,303
8	0,917	1,308	72	0,302	0,615	1,219

- Confidence intervals show a variation in estimated in positive degree.

Table 30 Confidence intervals per scale of gamified application

Confidence intervals (p=0.05) per scale						
Scale	**Mean**	**Std. Dev.**	**N**	**Confidence**	**Confidence interval**	
Pragmatic Quality	1,382	0,954	72	0,220	1,162	1,602
Hedonic Quality	1,090	0,972	72	0,224	0,866	1,315
Overall	1,236	0,849	72	0,196	1,040	1,432

For the consistency between the items in the same scale, correlations with Cronbachs Alpha-Coefficient have been calculated:

- Correlations in Pragmatic quality and Hedonic quality considered as sufficiently consistent (Alpha > 0,7).

Table 31 Correlations with Cronbachs Alpha

Pragmatic Quality			**Hedonic Quality**	
Items	**Correlation**		**Items**	**Correlation**
1,2	0,62		5,6	0,82
1,3	0,54		5,7	0,54
1,4	0,31		5,8	0,29
2,3	0,47		6,7	0,56
2,4	0,36		6,8	0,36
3,4	0,59		7,8	0,51
Average	0,48		**Average**	0,51
Alpha	**0,79**		**Alpha**	**0,81**

4.5 Discussion

4.5.1 Level of involvement with digital media and marketing strategy

The results show a tremendous usage of search engines via electronic devices, followed by social media rather than gamified applications. Enterprises should consider the follow if they want to apply a gamified technique to their marketing mix:

- Consider if their target audience should be specific or broad. Promoting in Search engines give an advantage by: Larger age group users and more potential users.
- If their firstly priority is to give a differentiation to their product/service implementing niche marketing, Gamified applications show that there is a perceived better user experience
- At the level of Segmentation of the market should be considered the rate of use as a behavioral criteria
- The strategy depending on the objectives and available resources, means, skills. Alternative Product Placement Strategies in user-based product positioning must be evaluated

4.5.2 Level of involvement with gamified applications. (Experience of use)

The involvement with gamified applications depends on the type of enterprise. In Greece and specific in the research of entertainment venues, dining enterprises were used more rather than coffee enterprises. Examine the user by the means of consumer behavior, the avoidance of risk due to information of food maybe is an outcome.

High involvement of gamified applications has the 35 % (Often, Very often) of the users who use digital devices. Concerning and the moderate users (28%), the penetration of gamification applications to digital device users, is 63%.

Although there is an increase of usage by gamified applications for entertainment venues, Gamification object is to increase users' engagement and has not been about to become with the specific applications

Gamified applications that are enlisted searching for entertainment venues: There is a poor game design because the play elements don't show to be unfolded during the use. It wasn't too challenging or too easy**.**

Game elements like comments/reviews and the rating system, has a much better affect to the rate of use in gamified applications. So consider them as game elements, they have obviously more dynamic to use and engage with them regarding the other digital media. The rate of use of uploading photos is bigger to the users of social media, but this is an accepted fact due to the reason that these media are most to upload photos. Maybe game designer should enlist better this game element

The results are matching with the theory .Enterprises would be forced to explore new game practices and attributes to develop gaming strategies to drive game-like behavior in existing applications/tasks to make them more engaging to the end-users. (Maan J, 2013). It seems that the uses are not so motivated

Gamified applications are not the only circumstances surrounding elements of games that have been repurposed. Validated with the theoretical framework that Deterding referred: It is not possible to determine whether a given empirical system 'is' "a gamified application" or "a game" (Deterding et al. 2011)

4.5.3 Psychological needs that drive motivational factors

Analyzing the motivational factors, determined by Katz, the needs affect users mostly at a neutral degree. There are the same results for both gamified app users and all digital device users. So the satisfaction that a user takes is the same. From this aspect we can suggest that the uses and gratification theory has the same results to gamified applications users, so there is no difference. It is one indicator that confirms the detractors of gamification.

Furthermore it confirms the initial benchmark set by the researcher, that the gamification arises from gratification and uses theories and further studies in gamification should focus and search these established theories.

4.5.4 User experience findings

To get a better frame on the quality of the product, comparison between the users of gamified applications and the users of all the digital media have been done, concerning user experience.

There are better results regarding pragmatic quality, hedonic quality and the overall result of user experience of the gamified application.

For all users, the ease of use item have the best results. This suggests with the theory “perceived usefulness will be influenced by perceived ease of use, because the easier a technology is to use, the more useful it can be” (Venkatesh, 2000),

To determine areas of improvement a connection of product features to the measurement is required and cannot be examined by a quantitative measurement of user experience. (Schrepp, M et al 2014).

Overall gamified applications users also perceive better user experience. These create strong emotions that are the key factors for a continuous **engagement**.

For consistency purposes, the two scales measured with Alpha-Coefficient Correlations in pragmatic quality and Hedonic quality were considered as sufficiently consistent (Alpha > 0,7) and indicate that all items measure a similar construct. Because both scales are over 0,7 pragmatic quality with Alpha-Coefficient 0,79, the internal consistency is acceptable and hedonic quality Alpha-Coefficient 0,81, the internal consistency is sufficient. We have to mention that there are no clear rules that describe how big the Alpha-Coefficient should be. Some rules of thumb consider values >0.6 or >0.7 as a sufficient level.

There is a positive correlation between all items in pragmatic qualities and in hedonic qualities (table 31).

Pragmatic qualities relationship:

Strong positive relationship is between items 1 (supportive) & 2 (easy), 3 (efficient) and 4 (clear), 1 (supportive) & 3 (efficient), 2 (easy) & 3 (efficient)

The ease of use, combined with the supportive of the gamified application, should be accompanied with solutions and proposals for the user. The efficiency also depends on the target oriented of a gamified solution (clear). This is because the users are searching and using applications with a specific purpose. We could assume that the user is more engaged and even more highly involved with product. Moreover, the connection between the efficiency and the ease of use means that digital application users can divert to

gamified applications. Lastly, the efficiency has a positive connection to the supportive of the product and this shows how well designed the application is.

Moderate positive relationship is between items 2 (easy) and 4 (clear), 1 (supportive) and 4 (clear).

Hedonic qualities relationship:

Very strong positive relationship is between items 5 (exciting) and 6 (interesting) and it seems that the game elements that are introduced are perceived as good experiences from the users. These elements make the product more attractive and can retain the attention of the users.

Strong positive relationship exists between items A) 6 (interesting) and 7 (inventive), B) 5 (exciting) and 7 (inventive), C) 7 (inventive) and leading edge (8)

The innovative characteristic that the platforms have, are incentives to engage users and to avoid leaving them in a situation of boredom. New and exciting things are competing with older ones, as mentioned in theory. The rapid development of new technologies in hardware and software brings leverage to the use.

Weak positive relationship is between items 5 (exciting) and (8) leading edge. Gamified users want always something novel to be attracted and this is related to game design techniques. This is a key factor that shows that someone want to be always rewarded in order to be engaged. When the user goes from the situation of flow to the situation of boredom, he will no longer be a user.

5 Conclusion

Through research and granted for the preparation of this study came the following conclusions:

Customers use very often digital devices and digital media (daily) and their preferred method is through search machines. The same results extract and for the object target (entertainment venues) which the use of the will be their next

As far as companies are concerned, their adaption to gamification is on a small scale mainly and depend by multinational corporations who operate globally in technology or digital media. At this period, enterprise gamification can be proceeding to a b2b.

Enterprise gamification can be concerned to those who design and develop gamified techniques like high tech giants and all the other enterprises which implement gamified techniques as an added promotion to their marketing mix.

Regarding enterprises that provide digital services, gamification as a tool of new innovative technologies will give new impetus and make the industry evolving operational. More hedonic qualities should be implemented in order to increase user experience and from this aspect a better attractiveness.

Regarding the rest of enterprises gamification is an alternative solution and not a necessity to implement Modern Technologies of Digital Marketing. Other solutions like from Digital Technology like advertising, direct marketing and social media should be evaluated as an alternatives due to the competition between them and the common objective of products and services.

The results from user experience comparing the users of gamified applications with the other digital media show better results overall and mostly in hedonic qualities. Also positive relation are between the items of the scales .The results confirm the supporters of gamification that makes better experiences for the users.

5.1 Limitations and Implications

Although the term gamification has tended to engage the global community in recent years, in the academic community there are no extensive references to substantiate several serological findings in different areas.

- To interpret sufficiently the user experience, we have to calculate the five scales: Efficiency, Perspicuity and Dependability that represents Pragmatic Quality, and the two scales Stimulation and Novelty for Hedonic Quality. Because we use only one or two items per scale, a justification to the values from all scales has been calculated.
- Most studies relate to areas such as learning curve related and behavioral changes. There are few marketing studies and especially strategic marketing to refer to.
- It is not clear, both to academia and to the researcher of this dissertation, whether gamification as a term is something new and innovative or is just the implementation of different marketing concepts.
- In studies concerned with gamification and motivational affordances, psychological and behavioral outcomes were mentioned. It is not amongst the main purposes of the current thesis to expand or provide suggestions on the sciences of medical community
- Other subjects conceptually or theoretically have approached the concept of gamification, such as the role of play, serious games and the medium for using gamification through technology. For this reason, there is a large field of research that can be potentially studied to extract quantitative and qualitative features, implementation of gamification for enterprises in the future.

Appendix

Questionnaire

1 Gender

2 Age

3 Residence Area

4. Level of involvement in entertainment venues

5 How frequently do you involved in the following:

- 5.1 Search engines
- 5.2 Social media
- 5.3 Applications with reward systems
- 5.4 Any other application (app)

6 Do you use your electronic device (mobile / computer) to search for

- 6.1 Coffee / Bar
- 6.2 Dining options
- 6.3 Other entertainment venues

7 Are you searching for entertainment venues by the use of electronic devices

- 7.1 Search engines
- 7.2 Social media
- 7.3 Applications with reward systems
- 7.4 Any other application that do not have a rewarding system

8 Do you know and use applications that have rankings, points and user levels?

9 How often do you use the following to search: coffee / restaurants / other entertainment venues;

- 9.1 Applications with reward systems
- 9.2 Social media
- 9.3 Search engines
- 9.4 Applications (Applications) that only produce results

10 Compared to 2 years ago, is there an increase or decrease in the use of the digital media to find entertainment venues?

11 Using digital devices, **are you enthusiastic** about discovering new venues of entertainment that you did not know before?

12 Does the reward with point scale and levels of users **motivate** you? ? (If applicable)

13 **Do you feel delighted** when you join an online community of users and give reviews of places you've visited?

14 The ratings and information you collect **affect** you to have more involvement?

15 In the place you are living, at what level of **trust** would be the next selection of entertainment venues, a digital search?

16 To search for entertainment venues via electronic devices, what is your most common choice?

1 Applications with reward systems.

2 Social media.

3 Search engines.

4 Applications (Apps) that only produce results

17 Which of the following features do you prefer to use? (If applicable)

17.1 Comments – Review

17.2 Rating (stars)

17.3 Upload photos from the place

17.4 Participation and reward through points, badges

18 Which factor has most affected you?

1 It has good and reliable proposals that I did not know before

2. I participate and I am rewarded with my participation

3. I get away from everyday life and it's fun

4. At least 2 of the above

5 None of the above

19 By participating in the digital media, does it express any of the following?

I like to collect points and unlock new items

2. I like it because it looks like a game and I work with other users

3. It mobilizes me because i am competing with other users

4. I like to be an active member of a community

5. None of the above expresses me

20 Using the digital search medium, exist the following element?

20.1 [Surprise] Yes / No

20.2 [Pleasure] Yes / No

20.3 [Expectation] Yes / No

21 Decide as spontaneously out of the following contradictory terms as it best describes the digital medium you use for entertainment venues. There is no "correct" or "wrong" answer. Only your personal opinion counts!

21.1 obstructive o o o o o o o supportive

21.2 complicated o o o o o o o easy

21.3 inefficient o o o o o o o efficient

21.4 confusing o o o o o o o clear

21.5 boring o o o o o o o exciting

21.6 not interestingo o o o o o o interesting

21.7 conventional o o o o o o o inventive

21.8 usualo o o o o o o leading edge

22 Reasons for limited use

-I do not have a reason to search for a point of interest (cafes, restaurants, attractions, etc.) via mobile / PC

- I used the applications in the past (google maps / trip advisor etc) but did not seem useful to me

-I used the applications in the past and I was involved but now I do not find it interesting

23 Which factor affected you most?

-I do not need such information

-I do not need to create a 'profile' in a virtual world

-I used and earned points but did not seem useful to me

-It does not express me and does not thrilled me

-No need to spend time

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