Defining Gamification - A Service Marketing Perspective

Kai Huotari

School of Information, UC Berkeley California, USA

Hanken School of Economics, Finland

Helsinki Institute for Information Technology HIIT, Aalto University

PO Box 19215, 00076 Aalto, Finland +358 50 384 1557
kai.huotari@hiit.fi

Juho Hamari

Helsinki Institute for Information Technology HIIT, Aalto University, Finland

HIIT, PO Box 19215 00076 Aalto, Finland
+358 40 835 9563
juho.hamari@hiit.fi

ABSTRACT

During recent years "gamification" has gained significant attention among practitioners and game scholars. However, the current understanding of gamification has been solely based on the act of adding systemic game elements into services. In this paper, we propose a new definition for gamification, which emphases the experiential nature of games and gamification, instead of the systemic understanding. Furthermore, we tie this definition to theory from service marketing because majority of gamification implementations aim towards goals of marketing, which brings to the discussion the notion of how customer / user is always ultimately the creator of value. Since now, the main venue for academic discussion on gamification has mainly been the HCI community. We find it relevant both for industry practitioners as well as for academics to study how gamification can fit in the body of knowledge of existing service literature because the goals and the means of gamification and marketing have a significant overlap.

Categories and Subject Descriptors

H1.m. Information systems - Miscellaneous

General Terms

Theory, design, management

Keywords

Gamification, games, game design, service marketing, service design, persuasive technologies

1. INTRODUCTION

Gamification has raised a lot of interest both in industry [21] and also increasingly in academia [7][22][3] during the past few years. For example, the success of mobile services such as Foursquare and Nike+ are often attributed to gamification [7]. This discussion has remained, however, mainly in the realm of game studies and social sciences. Although an increasing number of games are offered as services to consumers, only very few academic articles that bridge game studies to service or marketing literature have been published (see exceptions e.g. [26][14][15]). Anchoring findings in game studies to the existing service marketing literature could provide a framework on how gameplay can be viewed as a part of the overall service and on how it supports the core service offering. It could also bring proven models from

service marketing to the development of "gamified" services.

In the next section of this paper, we give an overview to the central concepts of gamification in game studies. In section number 3, we introduce service marketing and then in section 4 go on in presenting some of its concepts relevant for our study. In section 5, we situate games to the service marketing literature and then in section 6, we elaborate on the experiential nature of games. In section 7, we present a definition for gamification from the service marketing perspective. In section 8, by referring to our definition we show how it can be used to identify four possible gamification providers. In section 9, we discuss how the new definition relates to game studies. In section 10, we summarize the results and discuss its contribution both to the scientific community as well as to the practitioners. In the final chapter 10, we give some directions for future research.

2. GAMES AND GAMIFICATION FROM THE PERSPECTIVE OF GAME STUDIES

In game studies, games are seen as a collection of multiple necessary conditions. None of these conditions alone is sufficient to constitute a game and it is only in combination of them that a game emerges [19][7]. Juul (2003) assembled seven previous definitions, analyzed them and then presented a new definition. In the definitions assembled, the conditions necessary for games vary from author to author. For example, [2] described game as an "exercise of voluntary control systems in which there is an opposition between forces, confined by a procedure and rules in order to produce a disequilibrial outcome." A more recent study [24] defines a game in turn in the following way: "A system in which players engage in an artificial conflict, defined by rules, that result in a quantifiable outcome". Juul (2003) describes a game as "a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable"[19].

Although, the definitions vary in emphasis they all include both a systemic component, defining how the game is constructed and an experiential component describing the human involvement within the game. In the Table 1 below, we have enlisted all these conditions of the definition of games and gamification from past literature.

In addition to the division along systematic/experiential axis, Table 1 arranges the conditions to three separate abstraction levels. The first and the most abstract level is shared by all game definitions. It simply states that games are systems, meaning that games are constituted of several interacting sets of mechanisms and actors (systemic condition) and that games always require the active involvement of at least one player (experiential). The second abstraction level includes conditions that are characteristic

to games, but are not necessarily present in all games. Under this category fall such systemic conditions as rules, conflicting goals and uncertain outcomes. Deterding et al. (2011) labels these conditions game design elements [7]. Level 2 experiential outcomes are hedonic experiences, suspense (that results from player valuing outcomes but being uncertain of them) and gamefulness. Also mastery and competence stated by [23] could be included in this category. The third abstraction level should include conditions that are unique to games. However, this level remains empty in the light of past literature defining games. There does not seem to be elements that were solely unique to games.

Table 1: Game conditions

Level of abstraction	Systemic conditions	Experiential conditions
1st level (common to all games)	- Games are system (1, 2, 3, 4, 5, 6, 7, 8, 9)	- Games require voluntary involvement of players/users (1, 2, 3, 4, 5, 6, 7, 8, 9)
2nd level (characteristic to games, although not necessarily to all games)	- Rules (1, 2, 4, 5, 6, 7, 8, 9) - Conflicting goals (1, 3, 4, 6, 7, 8, 9) - Variable and uncertain outcomes (1, 2, 4, 6, 7, 8)	- Generates hedonic pleasure (2, 4, 5, 6) - Generates suspense (4, 6) - Generates gamefulness (4)
3rd level (unique to games)	- ?	- ?
Referred articles: 1.[2]; 2. [4]; 3.[5]; 4.[7]; 5. [17]; 6.[19]; 7. [20]; 8. [24]; 9. [27]		

The lack of systemic conditions unique to games is not surprising, as [19] and [7] have stated that a game emerges only as a combination of conditions and that none of the conditions alone is sufficient in constituting a game. However, it is surprising that none of the definitions describe an experiential condition unique to games. If this would be the case, how would anyone recognize a game? Or to put the question in [19]'s and [7]'s words, how would anyone know when a game has emerged from a combination of different necessary conditions if it were not for an experiential condition unique to games? The term 'gamefulness' could be used to describe such a unique condition, just like McGonigal [28] has suggested. Yet, [7] make a distinction between games and gamified services and state that both can lead to gameful experiences, thus rendering gamefulness a condition that is not unique to games. However, we think this is up for debate.

The term 'Gameification' was first used in 2008 in a blog post by Brett Terill [29]. He described the term as 'taking game mechanics and applying them to other web properties to increase engagement.' To a more widespread industry use the term became during 2010 in its current form 'gamification' [7].

In spite of the attention the term received quickly in the industry, the academia has been slow to react. To our knowledge there are only two definitions for gamification: the one given by Deterding et al. [7] and the one presented in the first short version and now a drastically different version of this paper. Deterding et al. [7] describe gamification as *the use of game design elements in non-game contexts*. While [7] discuss the experiential aspects of

games, their definition of gamification adopts only a systemic perspective to games. We argue that this approach has several shortcomings and we will discuss them in section 6. In order to give context to our arguments, let us first turn to service marketing literature: its origins and some of its key concepts.

3. EMERGENCE OF SERVICE MARKETING

In the late 1970's and early 1980's, a handful of marketing scholars started forming a new school of thought for marketing concentrating on services because the classical marketing axioms were based on the exchange of physical goods, which could not provide a sufficient understanding on services [13]. This line of research developed quite independently of the mainstream marketing science until the 1990's [12] when it started to gain popularity also outside the sphere of service marketing scholars. Marketing theory build to fit services started to seem applicable also for goods marketing. In 2004, [31] launched the term service-dominant (S-D) logic for marketing and proclaimed that the service approach should replace the classical marketing theory. Since then, the S-D logic for marketing has gained growing interest both in academia as well as in industry.

Two key concepts of the service approach, customer as co-producer and value-in-use, help to explain the ubiquitous applicability of the service logic and the profound difference between the traditional, goods-dominant logic and the new service-dominant logic.

In traditional marketing theory, the production is considered to be carried out by the company and value is considered to be created during the production process by the company and to be embedded in the resulting product. The product then "carries" the value in it and the value is transferred from company to the customer with the transaction. In service context however, this value-in-exchange approach becomes meaningless, as there is no physical product to which the value could be attached.

Service marketing literature sees the customer always as a co-producer of the service, i.e. participating in the production process as the value is generated only once the customer uses the service or the good. In this value-in-use model company's role in the value creation is to support the customers' processes by offering resources into them. Resources can refer e.g. to personnel, machinery, service setting, or to available information sources. Furthermore, the value is considered to be experienced and determined by the beneficiary phenomenologically [32].

4. SERVICE, SERVICE SYSTEM AND SERVICE PACKAGE

For the purpose of defining gamification, three key concepts of service marketing need to be defined: service, service system and service package.

Vargo and Lusch [31] define service as "the application of specialized competences (knowledge and skills), through deeds, processes, and performances for the benefit of another entity or the entity itself". Thus, any intentional act - no matter how small - that helps an entity can be considered a service.

A systematic bundle of services constitutes a service system that, according to [25], "is an arrangements of resources (including people, technology, information, etc.) connected to other systems by value propositions". A service system's aim is to use its resources and the resources of others to improve its circumstance and that of others [33].

The service package model [13] in turn helps firms manage bundled services or service systems. The basic service package consists of the core service, enabling services and enhancing services. Enabling services are required in the offering of the core service, while enhancing services support the offering of the core service and thus increase its value or differentiate it from competitors' services.

5. GAMES AS SERVICE SYSTEMS

As the previous section demonstrates, there are a lot of complementarities between the game literature and service marketing theory. Seen through the service marketing literature, game design elements can be described as services and games as service systems. This is supported by table 1 that shows that games are always regarded as systems that require an active involvement by the player.

Games are thus co-produced by the game developer and the player(s). The game developer's part of the co-production takes place when the game's storyline is created, rules invented, game design patterns chosen and visuals designed etc. The player(s)'s part of the co-production and of the value-creation takes place each time the game is played or otherwise interacted with. The game can also be solely or partly developed by the player, of course. The core service of the game is to provide hedonic, challenging and suspenseful experiences for the player(s) [21] or gameful experiences [22]. The quality of such a "game service" is strongly determined by the functional quality of the service or game experience, which is often referred to as flow [6].

6. SUBJECTIVE NATURE OF THE EXPERIENCED VALUE OF A GAME

It is noteworthy that from the service marketing perspective, it is always only the player's participation in the game, i.e. playing the game, that completes the production of the game service. This notion is consistent with the definitions of games presented in chapter 2 that see player's voluntary commitment and participation as one key building block of a game. However, according to the service marketing theory, the value of a service is determined solely by customer's subjective experience, as service providers can make only value propositions. What follows is that value of a game service, be it 'pleasure', 'suspense', 'mastery' or 'gamefulness', is always determined by the player's individual perception. In other words, it is possible that the use of a game service leads to gameful experiences with one user but does not do so with another user. This difference in outcomes may be due, for example, to differences in skills of the two users/players (see e.g. [30]).

The experience of playing a game as well as determining what *is* a game is deeply individual. Thus, in our view, a game emerges only when the use of the service results in a gameful experience. What follows is that we see gamefulness as a unique experiential condition to games.

This greatly differs from the gamification definition proposed by [7], which highlights that only non-games can be gamified. The obvious question is: How can a service designer possibly identify a non-game context, when the existence of game is dependent on the subjective perception of the player/user. If the sensation of gamefulness is not unique to games this question becomes impossible to answer even for individual consumers. For example, a stock market and dashboard for participating in it can easily be perceived as creating gameful experiences for some users although it is not generally perceived as a game by all users.

Thinking what is a 'full-fledged game' and what is not will only lead the designers astray from what should be their focus: customer/user/player experience.

These incompatibilities led us to seek for an alternative way to define gamification from the perspective of service marketing.

7. A PROPOSED DEFINITION FOR GAMIFICATION

Based on the literature presented above, we define gamification in the following way:

Gamification refers to: *a process of enhancing a service with affordances for gameful experiences in order to support user's overall value creation.*

We would like to emphasize that the definition highlights the *goal* of gamification - the experiences that it attempt to give rise to - rather than the methods. Past definitions rely on the notion that gamification is based on the use of game elements. However, there doesn't seem to exist a clearly defined set of game elements which would be strictly unique to games, neither they automatically create gameful experiences. We can find similar elements from a variety of non-game contexts as well. If we subscribed to the idea that game elements create a game or gamify a system, then we could conclude that also stock exchange dashboard, decision support systems, loyalty programs and other services that have for example levels, points and progression metrics would also be games, regardless of the subjective experiences the users have. Furthermore, gamification is not always carried out through any concrete elements alone. Therefore, we argue that the definition of gamification (nor games) cannot be based on a set of methods or mechanics, but instead it has to be understood more broadly as a process in which the gamifier is attempting to increase the likelihood for the gameful experiences to emerge by imbuing the service with *affordances* for that purpose (be it badges or more implicit cues). The term *affordance* here can refer to any qualities of the service system that contributes [11] to the emergence of gameful experience.

Another aspect we would like to highlight is that the definition does not imply that the process of gamification has to be successful. In the same way as game services or products, gamification can only attempt to support the user in creating gameful experiences.

Currently, it seems that the successfulness of gamification has mostly been measured through sales figures, "clicks" and general retention of users. However, if we accept that gamification aims to create "gameful" experiences, then the successfulness of gamification should also be measured through same measurement instruments as games are.

This notion also leads to another point that gives boundary conditions to gamification. If gamification is designed solely to increase figures related to marketing instead of gameful experiences, the designers are in danger to fall into a trap that leads to a conflicting situation between selling and creating valuable experiences. One of the defining aspects of gameful experience is that it is voluntary and that it is carried out by having intrinsic motivation. If, however, the designer attempts to direct player/customers decision making in a way that it reduces the player/user's free choice, then the design moves further away from what is in the core of a gameful experience. With 'gameful experience' we refer to an experience leading to 'gamefulness' - an experiential condition unique to games. However, defining

exactly what "gamefulness" means is outside the scope of this paper, as defining "gamefulness" would also require us to define games themselves.

The word 'enhancement' in the definition refers to the service package concept of service marketing literature introduced in the section 4. It entails that gamification describes a service system where a core service is enhanced by another one. From marketing perspective it is essential to make this distinction.

According to the definition, Foursquare, for example, is not a gamified service in itself, but it can potentially gamify, that is, enhance other services, such as restaurants or bars, through rules, goal setting, variable outcomes, feedback and rewards. Moreover, the definition remains agnostic to the nature of the core service. This means that the core service can also be a game that can be further gamified, creating so-called meta games. From this perspective, it is not only non-games that can be gamified.

Table 2: Examples of gamification

Core service	Enhancing service	Gamified service
Profile in LinkedIn	Progress bar for measuring progress in filling personal details	The enhancing service increases the perceived value of filling all details by invoking progress-related psychological biases.
Café	Mayorship competition in Foursquare	The enhancing service creates a competition between customers where they have to visit the café frequently enough -> retention
Dry cleaner	Loyalty stamp card. You get 1 stamp for every visit	The enhancing service invokes the psychological biases related to progress and thus increases the perceived value of using the same dry cleaner service.
Gym	Heya Heya	Gym experience that sets goals and helps to monitor the progress of the training.

It is important also to notice that according to this definition not all service systems combining games and other services involve gamification, as it is essential that the enhancing service supports the core service, not the other way around. For example, if a geocaching [10] game brings a customer to a public park, gamification has not occurred, as the core service is the geocaching game. In contrast, gamification occurs if the public park offers a geocaching game to its visitors.

After the fact, it may be difficult to make the distinction between the core service and the enhancing service. Theoretically it is the customer's subjective perception that determines what should be considered as the core service. However before the fact, it is the gamification provider's perception that is decisive as it is the gamification provider who decides which service to gamify. Let us now, look how by referring to our definition of gamification we can identify gamification providers.

8. FOUR POSSIBLE GAMIFICATION PROVIDERS

It is not always the provider of the core service that also provides the gamification process. Based on our definition, we can identify four possible gamification providers, i.e. providers of the enhancing service. These are 1) The core service provider, 2) A third party service provider 3) The customer him/herself 4) Another customer. The enhanced service is provided either by one of these four parties or by a combination of them. Table 3 presents examples of gamified services with different gamification providers.

Table 3: Examples of gamified services with different gamification providers

Core service	Enhancing service	Gamified service	Gamification provider
Clothing store	Loyalty program offered through Facebook deals [8]	Customers who check in regularly using Facebook Places are offered reductions.	Clothing store (core service provider) and Facebook
Restaurant (e.g. Starbucks)	Local Badges in Foursquare	Customers who check in at least three times a week to a same location using Foursquare get a badge.	Foursquare (a third party)
Sports bar	Drinking game [34]	Deciding to incorporate a drinking game to watching hockey, for example.	Customer himself/herself
Coffee house	Tip offered through Foursquare [9]	Adding a quest-like tip to other customers while they are waiting coffee.	Another customer and Foursquare

9. CONCLUSION AND DISCUSSION

Game study literature and service marketing literature are for large parts complementary. However, the previously proposed definition of gamification by Deterding et al. [7] adopts a systemic approach, which seems incompatible with the understanding of value creation in service literature which, in contrast, emphasizes the experiential nature of services.

In this paper, we have defined gamification from the perspective of service marketing as '*a process of enhancing a service with affordances for gameful experiences in order to support user's overall value creation.* This anchoring of gamification into an existing body of knowledge of service marketing and its concepts like 'service package', 'value-in-use' and 'service systems' will help subsequent research to examine how gamification can contribute to marketing sciences. It also provides the gamification research with proven theoretical models to build upon. The proposed definition is agnostic regarding the nature of the core service that is being gamified. Thus, it challenges the view that gamification can only happen when game-like elements are used in non-gaming contexts.

Using the proposed definition, we have also identified four possible gamification providers. This will help service providers when designing the gamification of their service.

One interesting line for future research could be the investigation of customer loyalty cards and other widely used marketing techniques as gamified services. Gamification could also be used to expand the servicescape model presented by Bitner in 1992, from physical settings to more abstract constructions, as [1] have suggested. Servicescape gives a framework for the landscape where the service takes place and that is under the control of the

service provider [13]. Servicescape affects customers' behaviour and perceptions. An example of servicescape could be the layout of an IKEA store. The layout design forces the customers on a certain path that present numerous temptations to them. Gamification could be used to enhance the experiential dimensions of servicescape that lead customers to gameful paths through the service process.

10. ACKNOWLEDGMENTS

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