DESIGNING GAMIFICATION

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This research studies gamification: the use of game design elements in non-game contexts. Gamification is a new phenomenon that has not yet been studied extensively in academic papers. There is a significant research gap to be filled. The purpose of this research is to study how gamification can be used for the benefit of marketing. This is achieved by studying the design process of gamification, the special motivational factors behind gamification, and the game elements that constitute a gamification system. The end result will be a framework for designing a gamification system that is suited for marketing.

This is a qualitative study that aims to acquire deep understanding about the phenomenon studied. This research uses a deductive approach to analyzing data. A theoretical framework is tested with an empirical study. The study is based on a theoretical framework created by a literature review. The empirical study is based on interviews that are analyzed using qualitative methods based on the theory reviewed. The primary data collection method is interviewing and the data gathered is analyzed with qualitative methods.

The main theoretical contribution is a new empirically justified framework for designing gamification. The framework is based on the framework that was tested but has been modified extensively according to the results of the empirical study. In addition three core motivational factors of autonomy, competence, and relatedness were confirmed by the study. These factors motivate consumers to use gamification systems. Eight managerial contributions are presented that help businesses use gamification more effectively. The main managerial contribution is a model of game elements for managerial use.

The theoretical results benefit the academic study of gamification while the managerial results are useful for more practical use. The results help in designing gamification from a marketing perspective. The generalization of results to other parts of Finland may be problematic because all of the Finnish interviewees are from Oulu. On the other hand one interviewee is from Bulgaria which allows some generalization to other parts of the world.
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1 INTRODUCTION

Gamification has in the recent years become a new way to think about marketing and customers. Because of its very recent appearance it is important to discover what kind of improving effect it can have on marketing. The full potential of gamification is still unclear and this research focuses on revealing a part of it. In this introductory chapter the topic and aims of this research are further explained. The research question and methodology are also presented.

1.1 Introduction to the research topic

1.1.1 Changing society

Already in the 90's a development was seen in the postmodern consumer that would change the way marketing is to interact with them. Cova (1996) describes the postmodern customer as an individual that seeks, not only to consume products, but also experiences, participation and links to a community. Later in the 21st century researchers are still coming to the same conclusion with Simmons (2008) suggesting that postmodern consumers are seeking both individualistic and communal brand experiences. An idea of an experience economy is also present in the gamification literature where the view is that customers, exhausted by the overwhelming quantity of goods, are finding more satisfaction in experiences (Radoff 2011: 16). Simmons also sees a challenge for marketers as to how they can engage consumers both individually and communally (Simmons 2008). Another problem presented for postmodern marketing is the tendency of customers to avoid commitment to any single idea, project or product (Dawes & Brown 2000). It is not only the customers that are changing but the whole media landscape. Kane et al. (2009) propose that previously firms used to have better management of community relations but with the rise of the social media that is no longer possible. These findings about experience economy, individual and communal engagement, and commitment avoidance present several challenges for marketing to interest, engage and motivate customers in the present.
1.1.2 Generation G

Recent years have seen the emergence of Generation G (Zicherman & Linder 2010: 163) or the Net Generation (Azizi 2009). They are the newest generation that has grown up with the internet and as well as games. They are inseparable from computers and internet (Azizi 2009) but they are not only active online, socially networking or using their mobile devices; they are also engaging in these activities principally through games (Zicherman & Linder 2010: 164). What is also interesting about the Generation G is that where the average young American has spent about two to three thousand hours reading books they have spent more than ten thousand hours playing video games (McGonigal 2011: 266). What makes this number interesting is that a whole generation exists that is full of exceptionally good gamers (McGonical 2011: 267). They have a deep understanding of games, how they work and what it can give them in terms of value. Generation G has it priorities and gameplay easily tops that list (Zicherman & Linder 2010: 165). The central challenge of marketing to the Generation G is to meet their expectations of fun, challenge and sociability (Zicherman & Linder 2010: 177).

For the Generation G playing games seems to be an everyday activity. Several sources confirm that people play games in vast quantities. It's not only that the average player spends 12 hours per month playing (Zicherman & Linder 2010: 33) but also the percentage of the population that is playing is big. Over 95% of teenage children play games (Dahl et al. 2006, Radoff 2011: 15) but it is not only children that play games. The common view is that games are only for children, and more specifically that only boys play games but statistics reveal another reality. In 2011 58% of video game players were male and 42% female, but what is even more interesting is that only 18% of players where under 18 years old, while the average age of a player was 37 years old (Ferrara 2012: 6). One more important discovery is that one player out of five, or even more, is over 50 years old (McGonigal 2011: 11, Ferrara 2012: 6) which means that games penetrate all age demographics.

Nowadays games involving social aspects seem to be enjoying great success. Especially multiplayer online games have millions of users. All over the world approximately 484 million people belong to the online gamer community
(McGonigal 2011: 3). Out of them one game called World of Warcraft alone claimed 11.5 million paying users in 2010 (McGonigal 2011: 52).

1.1.3 Economic Relevance of Games

Now there is no denying that games have power over people, but there is also the economic side of games. There is evidence that games present a huge economic opportunity and to just ignore games as something that has no economical value is not wise. First of all games have become the fastest growing form of human recreation and after surpassing Hollywood movies, games have become the world's largest entertainment medium (Ryan et al. 2006). The video game industry had a revenue of 24 billion U.S dollars in 2010 and in November 2011, Call of Duty: Modern Warfare 3 grossed in five days 775 million U.S dollars making it the highest grossing launch of any form of entertainment in history (Ferrera 2012: 6). It has also been noted by McGonigal (2011: 11) that 69% of household heads play computer and video games and that most gamers expect to continue playing for the rest of their lives. All of this points to the fact that games have economical value and that the business opportunities are significant.

With the changes in the society and the behavior of consumers in the new postmodern era, games are taking more and more space in people's minds and hearts. They represent something that people want and need from many products. But it is not only pure games that can give consumers what they want. Normal services can be made more game-like so that they appeal better to the needs of the customers. Gamification can be the answer that helps reform products and services in a way that is better suited for the gamers out there. With all these changes happening right now and shifts in global, societal, technological, economic and socio-economic trends will shape the future of work and lead to an increased use of game mechanics in the workplace (Smith 2011).
1.1.4 Need for research

As a term gamification was first mentioned in year 2008 but has only become popular in use in year 2010 (Deterding et al. 2011). In recent years this phenomenon has raised interest but until now main scientific efforts have been to towards defining what gamification actually is (Deterding et al. 2011). The area is new and lacks research especially from a marketing perspective. Some research has been done about the connections of gamification to service marketing (Hamari & Huotari 2012). More research is required in order to take full advantage of this new field in marketing. By researching how gamification is best used in marketing, new useful information can be gleaned for purposes of big and small companies in Finland.

1.2 Research Question and research methods

This research studies gamification as a tool for marketing. The aim is to find out what exactly motivates people to use gamified products and services as much as they do and then take those elements and use them for the benefit of marketing. This is not about making pure games for advertising and neither is it about advertising inside games. It is rather about clearly building a system for creating more engaging and motivating services and products. The end result is going to be a framework for designing a gamification system that is suited for marketing.

How to design a gamification system?

Three sub-questions were created in order to define the main research question?

What are the steps in a gamification process?
What are the elements that can be used to create a gamification system?
What motivates consumers to use a gamification system?

Research will be conducted as a qualitative study. The aim is to acquire deep qualitative information that can be analyzed to bring forth the most crucial factors in the phenomenon studied. The intent is to create an understanding of the phenomenon
and qualitative research methods work well for this purpose (Koskinen et al 2005). This research uses a deductive approach to analyzing data. A theoretical framework will be tested with an empirical study. The study will be based on a theoretical framework created by a literature review. The empirical study will be based on interviews that are analyzed using qualitative methods based on the theory reviewed. The primary data collection method is interviewing and the data gathered is analyzed with qualitative methods. The methodological choices are explained in further detail in chapter 5.

1.3 Main concepts of the research

Gamification combines research from very different fields of study and so too this is needed for this research. The theory of gamification is heavily based in the theory of games and the theory of motivation. In order to understand why and how gamification is engaging and useful it is important to go through these two before proceeding to the theory of gamification. Therefore findings from these three fields are used to explain the effectiveness of gamification. All fields are covered in greater detail in chapters 2, 3 and 4, but before that a brief explanation of each of them is provided.

*Games* in this study does not only refer to computer games or card games, but to all kinds of game that exist. It is a more general concept that applies to everything that has the qualities of a game without specifying the medium used. In this research games are defined to have four traits: a goal, rules, a feedback system and voluntary participation (McGonigal 2011: 21).

*Motivation* is the psychological cause, or purpose, of an action (Schacter 2011: 325). Motivational theories in this study focus on what motivates people to play games. The aim is to find out what are the motivational factors that engage players with games. The rationale for this approach is that after finding out what motivates players the same motivational factors can be used in gamification.
Gamification refers to the use of game design elements in non-game contexts. This practice does not involve designing full games but instead only uses those elements of games that are perceived useful in chosen context (Deterding et al 2011).

1.4 Structure of research

The structure of the research goes as follows. After the introduction comes chapter two where the theory of games is discussed. What makes a game and what kind of game thinking is required for gamification. In chapter three the theory of motivation is discussed and essential motivation theories are presented that tie together with gamification. In chapter four the theory of gamification is presented. This chapter combines what we can learn from games and motivation theories and puts it into the context of how they can be used in gamification. After that begins the empirical part of this research and in chapter five methodology used in this study is presented in detail. In chapter six the empirical material is described and analyzed. Finally in chapter seven conclusions based on the analysis are presented.
2 GAMES

This chapter discusses the theory of games. In order to understand gamification it is important to have a basic understanding of games. It is not essential to be well versed in actually making computer or board games, though it is helpful, but it is still good to understand the basic idea of how games work. This chapter also reveals the basic game elements and mechanics that are used in gamification.

Games are very present in our everyday life. They are even a part of how we talk about everyday things. We say things like “Stop playing games with me!” or “You better get your head in the game!” Games are closely tied to our lives and even though we play a lot of games intentionally, as explained earlier in the introduction, we also play many games unintentionally. One good example is the “Customer Service Game” customers play at Starbucks (Zicherman & Linder 2010: 34). Though it is not considered to be a game, it has several similarities with games. You have to do things correctly and play by the rules to win the game – to get a cup of coffee. If a certain customer has learned to “play the game” more effectively he can get bonuses like upsized drinks or faster service. It's all a game but nobody thinks about it as one. This lack of awareness should be compelling to any marketer in any business because they can make this game in to a win for them. (Zicherman & Linder 2010: 35). The important thing to understand here is that it does not always matter even if the customers do not actively think they are playing a game. It can still be very engaging.

2.1 Defining games

It is surprisingly complicated to define what a game is exactly. In a way it is not necessary to have a complete definition of games because having a broad definition allows game designers to create new ways to play (Ferrera 2012: 16). It is relatively simple to point out games and give examples but presenting a good framework to really understand what makes a game is not that simple.
Ferrera (2012: 17) defines that games have three components: objective, environmental constraints and formal constraints. The objective is a specific condition or a set of conditions that all of the players are trying to achieve or to maintain. Environmental constraints are physical characteristics that limit what the characters can and cannot do. Formal constraints limit what the players can and cannot do through rules and mutual agreement.

McGonigal (2011: 21) suggests that games have four traits: a goal, rules, a feedback system and voluntary participation. The goal is the specific outcome the players want to achieve. The rules place limitations on how players can achieve the goal. The feedback system tells the players how close they are to achieving the goal. Voluntary participation requires that everyone who is playing the game knowingly and willingly accepts the goal, the rules, and the feedback.

These two definitions have similarities. They both agree that a game needs to have a goal and rules. Voluntary participation added by McGonigal is very important since it creates a lot of the fun that is involved in games. It is difficult to force people to have fun. Feedback is also very important because it is one of the core mechanics of gamification and will be covered in more detail later in chapter four.

The Magic Circle is a concept created by Johan Huizinga (via Ferrara 2012: 22) that describes how games create their own reality – represented by a circle. The idea is that when a player decides to play a game he steps inside the Magic Circle and agrees to abide by the rules of the game world for the sake of the game experience (Ferrara 2012: 22). Inside the circle different rules apply and everyone is expected to abide by them even if they make no sense in the real world. This voluntary acceptance of a different reality is what makes games interesting. It can be considered that one aim of gamification is to get as many people as possible to voluntarily step inside the Magic Circle and take part in the experience you offer to them.

The goal of any game can often be achieved relatively easily if you do not abide by the rules. Take chess for example. It is easy to just take all of the opponents’ pieces aside by hand and then reorganize your own pieces around the king for a checkmate.
This of course defeats the purpose of the game where you are supposed to achieve this goal by following the rules. The very core idea of a game is that the rules make achieving the goal more difficult and that players have to use creativity to reach the goal (MacGonigal 2011: 22, Ferrara 2012: 20).

A good and short definition of a game is provided by Suits (1978). He defines games as voluntarily overcoming unnecessary obstacles (Suits 1978: 41). This definition also mentions voluntary participation and the idea of achieving goals. It does not however specifically mention rules and feedback that are mentioned in other definitions. Out of these definitions the one that is used in this research is the one presented by MacGonigal because it covers combines many of the other definitions into one. In this research games are defined to have four traits: a goal, rules, a feedback system and voluntary participation (McGonigal 2011: 21).

2.2 Game players

An important part of game thinking is that not all gamers are the same. Not everybody plays games for the same reasons and just as importantly not all games are played for the same reason (Yee 2006). A taxonomy of players often used is the Bartle's Player Types (Yee 2006, Zicherman & Linder 2010: 144, Zicherman & Cunningham 2011: 22, Radoff 2011: 75). This model helps to identify different kinds of players and with that taylor your game experience based on that. The four types of players Bartle suggest are: Achievers, Socializers, Explorers and Killer (Yee 2006, Zicherman & Linder 2010: 144, Zicherman & Cunningham 2011: 22, Radoff 2011: 75).

Achievers are players who act on the world and are driven to achieve goals and perform well (Zicherman & Linder 2010: 145). They might not always even consider winning to be the ultimate goal but instead want to have the perfect performance (Radoff 2011: 75). They appreciate rewards, completing tasks, acknowledging, social networks and leaderboards (Zicherman & Cunningham 2011: 22). Socializers are players who interact with players and play games in order to connect to other players (Zicherman & Linder 2010: 146). For them it is the social connection that is most
important about playing. They enjoy collaboration and group play. Explorers are
players who interact with the world. They enjoy exploring the game world, finding
secrets and solving puzzles (Zicherman & Cunningham 2011: 22). They are most
likely to try and invent completely new ways to play the game and then sharing their
innovations to others. Killers are players who act on other players (Zicherman &
Cunningham 2011: 22). They like to win and often they will try to win on the
expense of other players. Competition is important to killers and they enjoy social
environments where they can show of their winning (Zicherman & Linder 2010:
147).

Yee (2006) has further refined Bartle's taxonomy by performing a study on massively
multiplayer online games. In his version of the taxonomy Yee presents player
motivations in three main components: achievement, social and immersion (Yee
2006).

Achievement component includes a desire for advancement and winning but also the
desire to learn about the games mechanics as well as competing against others.
Social component is not only about simple socializing and building relationships but
also about teamwork and belonging to a group. Immersion component includes
discovering secrets, roleplaying and creating a story. It also includes having an
interest in customizing the appearance of their characters and finally escapism from
real life problems. Immersion is all about the experience. (Yee 2006).

These models help to create player experiences that target the correct audience and
player motivations. Many games combine some or all of these elements and it is rare
to find a player that belongs strictly in only one of these categories. Players are a
mixture of these types but a good general rule is that if you take Bartle's Player types
roughly 75% are socializers (Zicherman & Cunningham 2011: 22). Yee’s model of
three main components of achievement, social and immersion (Yee 2006) is used in
this research. It is chosen because it is more comprehensively tested empirically,
based on newer research and can be considered to be an improvement to Bartle’s
model.
2.3 Game elements

Games have different elements, specific characteristics of games, that can be identified (Werbach & Hunter 2012: 77-78). Werbach & Hunter (2012: 77-82) have created a model of game elements that is in a form of a pyramid. The pyramid has three categories of elements: dynamics, mechanics and components. They are organized in a decreasing order of abstraction in a way that each mechanic is tied to one or more dynamics and each component is tied to one or more mechanics or dynamics. (Werbach & Hunter 2012: 78). This model of game elements was chosen for this research because it offers elements not only on the practical level of components but also on the more abstract level of mechanics and dynamics. In this way it provides a well rounded view on the elements instead of just one type of elements.

In this model Dynamics are the highest level of thinking with Mechanics coming as second and Components as third. The higher level directs the lower level and several lower level components can be used to achieve a higher level goal. Designing of a game should always start from the highest level with deciding what the core dynamics the game follows are. After that the mechanics are decided based on the Dynamics chosen and how they best fit into the concept of the game. Finally the Components are chosen following the decision made on Dynamics. It is not required to use all elements in one game and not all games benefit from all of them. It is always important to think about the core thing that makes the game fun and work around that. (Werbach & Hunter 2012: 77-82).
2.3.1 Dynamics

Dynamics are the highest level of abstraction of game elements. They are themes around which the game revolves. These elements show what the underlying forces that exist in games are. Dynamics are elements that are present in almost all games.

Constraints: Constraints are present in every game as the game limits players' freedom in order to create meaningful choices and interesting problems. In this way it is important to think what kinds of constraints are implemented into the game.

Emotions: Games can create many different kinds of emotions and from joy to sadness. Especially the emotion of fun is important in games and the experience and joy of accomplishment is the emotional reinforcement that keeps people playing.

Narrative: Narrative is the structure that makes the game into a coherent whole. Narrative does not have to be explicit, like a storyline in a game, to work. It can also be implicit where the whole experience just feels like it has a purpose and is not just a collection of nice ideas.

Progression: Progression is the idea of giving players the feeling of moving forward and improving. Instead of doing the same thing over and over again it is important to be able to progress.

Relationships: Relationships refer to the interaction players have with other players. It can be with friends, teammates or opponents. (Werbach & Hunter 2012: 77-78).
2.3.2 Mechanics

Mechanics are already more specific elements in the way that they imply towards more specific actions. They steer the actions of players into a wanted direction and depending on what mechanics are used the game can have a very different style and feel. Several mechanics can be included into one dynamic. For example feedback and rewards can both give a feeling of progression.

Challenges: The game sets an objective for the player to reach.
Chance: Not everything is decided by skill. There is also luck involved. Some results of player action are randomized which creates a sense of surprise and uncertainty.
Cooperation and competition: Both work towards creating a feeling of winning and losing. People working together or against each other in order to win.
Feedback: Feedback allows players to see how they are doing in the game. Feedback gives the feeling of progression and tells the player when they are doing the right things to win the game.
Resource acquisition: In the game the player can collect things that help him to reach the goal of the game. Sometimes the items or things collected are necessary in order to win.
Rewards: Reward is a benefit the player can get from an achievement in the game.
Transactions: Transaction means buying and selling or exchanging something with other players in the game. Transactions can also happen with non player characters.
Turns: Every player in the game has their own time and opportunity to play. Traditional games like card games of board games often rely on turns to keep balance in the game, while many modern computer games work in real time without turns.
Win states: The state which defines winning the game. (Werbach & Hunter 2012: 78-80.)

2.3.3 Components

Components are specific applications that can be seen and used in the interface of the game. This is the most concrete level of elements and might be what first comes to
mind when thinking about game elements. Several components can be a part of one mechanic. For example badges and content unlocking can both be part of rewards.

Achievements: Giving a player a reward attached to doing a set of specific things.
Avatar: Visual representation of the player's character.
Badges: Visual representation of achievements inside the game that are often collected.
Boss fights: A really hard challenge typically at the end of a level that has to be defeated in order to advance further.
Collections: Assembling or collecting certain pieces or certain examples of something inside the game. Badges are often collected.
Combat: Fighting in the game and defeating opponents in a fight.
Content unlocking: The possibility to unlock and access certain content in the game if prerequisites are filled. The player needs to do something specific to be able to unlock the content.
Gifting: The possibility to give things like items or virtual currency to other players for free.
Leaderboards: Lists players in order of their scores.
Levels: Representation of how good the player is in the game. The level of the player increases as the player becomes better in the game.
Points: Signify what actions in the game are worth taking by awarding them with points. Points are often linked to levels.
Quests: Similar to achievements it is a game-like notion that you have to do some things that are specifically defined within the structure of the game.
Social graph: Ability to see friends who are also in the game and being able to interact with them. A social graph makes the game an extension of your social networking experience.
Teams: Possibility to work with other people towards the same goal.
Virtual goods: Things and items within the game that players can pick up and use. Things that are virtual and not real but that still have value to the player. Players are willing to even pay for the items either with in-game currency or real money. (Werbach & Hunter 2012: 80-81).
3 MOTIVATION

In chapter two the topic of player motivation was touched with Bartle's model of player types. There is however more to motivation than just one model. The psychological research on gaming has mostly concentrated on the potential negative effects of gaming and there has not been that much research done on what motivates people to play games (Ryan et al. 2006). Thus the existing literature on gaming motivation is scant. This chapter will look more closely at a few motivational theories that are relevant for gamification. More specifically the four types of fun, self-determining theory and behaviorism are discussed.

3.1 Four Keys to more emotions

Fun is the very core motivator in game-play (Lazarro 2004, Ferrara 2012: 33, Radoff 2011: 97) According to Lazarro (2004) people do not actually play games for the game itself, but instead for the experiences the game creates: an adrenaline rush, a vicarious adventure, a mental challenge; or the structure games provide. There is not only one way to have fun. There are four factors, Keys, that enable fun in a game: hard fun, easy fun, altered states and the people factor (Lazarro 2004).

Hard fun is about overcoming obstacles and the pursuit of a goal. Players use this Key to test their skills, and feel accomplishment. It is about challenge, strategy, and problem solving. Easy fun is more about enjoying the experience than winning. Players who focus on this Key want immersion and have a sense of curiosity. They want to have feelings of wonder, awe and mystery. Ambiguity and incompleteness can even be a good thing for the player because they want to figure it out. Altered states mean that players describe enjoying changes in their internal state during and after play. Players using this Key play to move from one mental state to another or to think or feel something else. The people factor means that it is players enjoy interaction with other people while playing. The interaction can be inside or outside the game. Players might even play games they do not particularly enjoy if they enjoy the company of the people. (Lazarro 2004).
3.2 Self-determination theory

Self-determination theory, or SDT for short, addresses factors that either facilitate or undermine motivation, both intrinsic and extrinsic (Ryan et al. 2006). Intrinsic motivations are those that derive from our core self and are not based on the world around us. Conversely extrinsic motivations are driven mostly by the world around us, such as to make money (Zicherman & Cunningham 2011: 26-27).

Intrinsic motivation seems to be the focus of this theory and indeed also the focus in several motivation theories related to games. It is a common perception that people play games as much as they do because they are intrinsically motivating. (McGonigal 2011: 45-46 and 149, Ferrera 2012: 145, Zicherman & Cunningham 2011, 26-27). According to self-determination theory there are three core intrinsic motivations: autonomy, competence, and relatedness (Ryan et al. 2006).

![Figure 2. SDT model (Ryan et al. 2006).](image)

Autonomy means a sense of volition or willingness when doing the task. A connection to the definition of games can be seen here: a voluntary activity that is not forced. Provisions for choice, use of rewards as informational feedback (rather than to control behavior), and non-controlling instructions increase perceived autonomy. On the other hand events or conditions that diminish a sense of choice, control or freedom for either the means or ends of action interfere with perceived autonomy. (Ryan et al. 2006).
Competence means a need for a challenge and feelings of effectance. A game that gives players opportunities for experiences competence also increases the intrinsic motivation to play the game. Possible opportunities are for example acquiring new skills or abilities, being optimally challenged, and receiving positive feedback. One effective way to ensure a sense of competence is to create controls and operating systems that are intuitive to use. (Ryan et al. 2006). Competence motivation can be connected to the achievement component in Yee’s model in chapter two.

Relatedness is the third core motivator. It represents the feeling of being connected with others. This connection can be to either real people or even to “computer generated” personalities inside a game. The requirement is that the game gives a chance for social interaction. (Ryan et al. 2006). This motivation of relatedness is very closely linked to the changes in society mentioned in the introduction and is relevant especially in relation to social media.

3.3 Fogg behavior model

After understanding the core motivating factors in self-determination theory it is possible to see what motivates people but there is still a problem of activating behavior. For this purpose it is useful to look at behaviorism and in particular Fogg Behavior Model (Fogg 2009), or FBM for short. The online consumption behavior research has identified two types of distinctive consumption behavior – goal directed and experiential consumption behavior (Novak et al. 2003). This is particularly interesting because consumer behavior in the internet suggest that the experiential process is for many individuals the most important part of the whole consumption process. Sometimes it is even more important than the end result (Novak et al. 2003). It has also been noted that in online environment information about experience goods is searched with more intensity and depth than search goods (Huang et al. 2009).

According to the FBM in order to have a person perform a target behavior he needs to be motivated to do the task, have the ability to perform the task, and finally triggered to perform the task. It is important that all of these three actions happen at
the same time or the target behavior will not be done. The three factors of motivation, ability, and trigger are discussed next. The basic idea is that it is possible to activate behavior by increasing the motivation, lowering the required ability, and triggering at the correct time. (Fogg 2009).

Three motivators presented in FBM are pleasure/pain, hope/fear, and social acceptance/rejection (Fogg 2009). Instead of using these motivators it is more relevant to substitute them with the three motivators presented above in the SDT: autonomy, competence, and relatedness (Ryan et al. 2006). They are more suited to games because they have been derived directly from research on game motivation.

![Figure 3: Behavior model (adapted from Fogg 2009, Ryan et al. 2006).]

Ability according to FBM is the other threshold of activating behavior. It is easier to lower the required ability than it is to teach people to do something more complicated. This is why FBM focuses on elements of simplicity. There are six elements of simplicity and all of them are important to keep requirements of ability
low enough: time, money, physical effort, brain cycles, social deviance, and non-routine. The action is not simple enough if one of the following things happens. If the action requires time and there is no time available. For people with limited financial resources, a target behavior that requires money is not simple. The action requires behavior that requires physical effort especially if it is physically impossible. If it is required to think too hard or in new ways. Social deviance means breaking the rules of the society and going against the norm. Routine activities are simple because they are done over and over again, but if something happens outside the routine it is not simple. (Fogg 2009).

Triggers are something that tells people that now is the time to perform the action or behavior wanted. After sufficient motivation and ability a trigger is required to spark the action. There are three kinds of triggers. A spark motivates behavior. A facilitator makes behavior easier. A signal indicates or reminds. (Fogg 2009). A spark increases the motivation. They can be tied to the motivations discussed earlier and presented in many different ways. It can be a text, picture or a video. Facilitators appropriate users that have high motivation but lack ability. A facilitator triggers behavior while at the same time makes it easier to do. An example could be a software update that only requires one click to do. Signals are used when people have high motivation and ability and are basically used as a reminder. (Fogg 2009).

Starting from what makes games fun for players and moving on to motivational factors and finally into turning motivation to behavior this chapter has concentrated on the motivation psychology of gameplay. What can be learned from this is that people do not play games for the games itself but for the experiences they provide and that there are distinct motivational factors that can help to identify what exactly are the reasons that people start and keep on playing games. Games need to have a feeling of autonomy and freedom and, they need to provide feelings of competence, without forgetting the social aspect. Increasing these motivational factors and the simplicity to act are key factors to activate behavior. After the motivation and the ability are both high enough a trigger is required to actualize the target behavior.

One more final motivational factor identified is a sense of progression (Amabile & Kramer 2010). The feeling of progress was the most motivational thing that workers
experienced related to their work. This connects directly to one of the dynamics of gameplay in chapter two: progress. There are specific ways to enhance the feeling of progress that are very useful for especially employers that want to motivate their workers. Another study related to working life revealed that 70% of high-level executives play games regularly play casual games at workplace (McGonigal 2011: 62). They report playing games to feel more productive, confident, energetic and focused. What is interesting is that when they feel they are not progressing in their work they play games to feel more productive. The implication here is that if the feeling of progress can be designed into as system or service it can boost motivation.
4 GAMIFICATION

This chapter will discuss the theory of gamification. Gamification as a concept and practice is explained and a distinction to advertisement in games is established. The theory of games and motivation is tied together and discussed in the context of using them together to create a gamified experience to customers. The most important parts of the theory are highlighted and in the end a framework for designing a gamification-based system is presented.

Computer games have already been used for marketing purposes and many companies have been using games as a medium for their advertisements (Mau et al. 2008). There are two main ways to advertise with full computer games: placing advertisement messages inside games and creating games for advertising (Mau et al. 2008, Dahl et al. 2006, Nelson et al. 2004, Zicherman & Linder 2010: 201). Although several benefits have been identified for this type of marketing it is still confined within the context of a single game and can mainly support product advertisement or brand visibility. It is useful for marketing to consider this type of approach as well, but ultimately it is not much different from product placement in movies (Mau et al. 2008). This constriction does not however apply to gamification.

4.1 Gamification defined

The core idea of gamification is taking game-elements and using them in a non-game context. As the term itself is very new, first documented in 2008, there are various definitions of gamification (Deterding et al. 2011, Zicherman & Cunningham 2011: xiv, Ferrara 2012: 10). Deterding et al. (2011) present the most convincing and well reasoned definition of gamification as “the use of game design elements in non-game contexts”.

Game elements is specified because the idea is to use elements of games, not full games as can be the case with games for marketing for example. Games are broken
down to elements that are used as seen best. Game design is used opposed to using game-based technology like input devices or 3-D technology. It is not simply the technology that is used but a more abstract design thinking. Non-game contexts means using game design elements to a context of “other than games”. This means that gamification can basically be used for almost anything from productivity to health, finance and education. Although it is possible to also use gamification in the context of games and gamify them, it can simply be considered to be a part of designing a game. This way specifying gamification to non-game contexts is justified. (Deterding et al. 2011).

4.2 Benefits of gamification

There are several benefits to gamification. The concept is that gamification can be used to help marketing to achieve benefits that are difficult to achieve with the use of current marketing tools. Many of the problems marketing faces today were discussed in the introduction. Gamification can be a very useful tool in engaging, re-engaging, motivating, activating customers' behavior, and creating loyalty (Deterding et al 2011, Deloitte 2012, Zicherman & Linder 2010: 13, Zicherman & Cunningham 2011: xiv). There are tools for all of these problems in gamification and it is simply about using them right.

The potential of gamification is immense. One only needs to look at the most successful implementations of gamification to see they can have real impact. Foursquare and Frequent Flyer Programs (FFP) are the most known services that use gamification and have both seen tremendous success (Zicherman & Linder 2010: 111-138, McGonigal 2011: 164-167). Both Foursquare and FFP's have gamification at their core and this has created a service that offers customers experiences that motivate them to use these services frequently and with intensity. One of the greatest advantages of gamification is its usefulness in various different applications. Everything can be made fun and what is especially good is that gamification techniques can be tailored to suit business objectives (Zicherman & Linder 2010: 29).
4.3 Most common game elements in gamification

Next the most common game elements in gamification are discussed. This is done by cross-referencing the pyramid of game elements (Werbach & Hunter 2012: 78) against motivational literature and gamification literature. First the elements most related to motivation are presented and then the most popular elements in gamification literature are presented. Although all game elements can be used in gamification they might not all be equally relevant. Some are more potent and useful than others. As it is also a goal of this paper to examine which elements are the most relevant, based on the research done on motivational theory and gamification literature a distinction is made.

Elements to which motivational theories have an impact on are from the two higher levels of the model of game elements: Dynamics and Mechanics. This makes sense since these are the driving forces behind specific applications of Components – just like motivational factors are the driving force behind actions and behavior. Elements that have a relation to motivational factors from the level of Dynamics are emotions (Lazarro 2004), progression (Ryan et al. 2006) and narrative (Yee 2006). Elements from the level of Mechanics are challenges (Yee 2006, Lazarro 2004, Ryan et al. 2006), competition (Yee 2006, Lazarro 2004), cooperation (Yee 2006, Lazarro 2004), feedback (Ryan et al. 2006), and win states (Lazarro 2004). These elements especially motivate consumers according to the motivational theories. Findings from the motivational theories justify using these game elements with the purpose of increasing motivation.

Elements to which gamification literature refer to are a bit more varied and aspects from all levels of elements can be found. Elements found from the level of Dynamics are constraints, emotions, narrative, progression and relationships (Radoff 2011, Zicherman & Linder 2010). Elements found from the level of Mechanics are challenges, chance, competition, cooperation, feedback, rewards, and transactions (Radoff 2011, Zicherman & Linder 2010, Zicherman & Cunningham 2011, McGonigal 2011, Ferrera 2012). Elements found from the level of Components are
achievements, avatars, badges, boss fights, collections, content unlocking, gifting, leaderboards, levels, points, quests, teams, and virtual goods (Radoff 11, Zicherman & Linder 2010, Zicherman & Cunningham 2011, McGonigal 2011, Ferrera 2012). Almost all of the elements from the level of Components are present in the literature.

It is apparent that nearly all of the game elements that are presented in chapter two are used and in fact can be used in gamification. It is possible to implement game elements to non-game contexts even if, at first glance, it might seem strange. One goal of this research was to find out what are the most popular game-elements used in gamification and based on the literature review it seems almost all of them are used beneficially. Next the most popular elements in the literature are highlighted. While the previous listing was done in order to see if all of the elements from the Pyramid of elements (Werbach & Hunter 2013) are found in the literature, the following lists the most popularly used and most beneficial elements for gamification.

On the Dynamics level all of the five elements are seen as beneficial. There are always constraints in any given system, because there is a need to limit what the user can do. If anything can be done the system looses much of its appeal and focus. Constraints are also what create the obstacles that players seek to solve. (Radoff 2011: 35). Emotions are talked much in relation to fun (Zicherman & Linder 2010). It is somewhat more difficult to create emotional experiences in gamified systems that it is in full games, but nevertheless it is important to remember that positive experiences and emotions motivate people to play. The narrative is what combines the gamified system in to a coherent whole that is not just a sum of random elements but a purposeful system. Gamification does not work if it is implemented without thinking about the big picture and some level of narrative is needed to create the feeling of purpose in the system. (Radoff 2011: 228). Progression is a very important aspect of gamified systems because it gives the user a feeling of moving forward instead of getting stuck in the same place. It gives the user a sense of achievement and a goal to strive for. (Radoff 2011: 228). Relationships in gamified systems seem to be a very popular element. Many systems place users next to other users, friends, co-workers and family for competition, cooperation and interaction (Radoff 2011: 163, Zicherman & Linder 2010: 195).

Figure 4. Most common game elements in gamification (adapted from Werbach & Hunter 2012: 78).

This is not to say that the other elements are not useful or used in gamified systems. These are just the most commonly used elements derived from the literature. These elements can be used as a basis for creating a gamification system and can serve as a starting point to the designer. In the empirical part of this research paper it will be examined whether these elements are in fact the most used in business life.

This model will be used when interviewing companies about the most commonly used and most effective game elements they use in their business.

4.4 Design thinking

Gamification is not all about the elements and their correct use. Other things that are
important but do not fall into the category of elements can be thought of as belonging to design thinking. Design thinking is a way to think about processes that are important to creating a working gamified system. They are advantages and opportunities that rise from designing systems like a game designer. (Ferrara 2012: 12).

4.4.1 User as a player

When beginning to build a gamified system it is beneficial to think customers and users as players. The idea of a gamified system is to make something more game-like and thus it is important to think about who is using it as a player. This way the focus in the design process will be more about satisfying the needs of a player instead of a customer. Players seek fun and challenges and are even willing to pay for something that gives them challenges they want to defeat. (Radoff 2011: 63, Ferrara 2012: 10).

4.4.2 Onboarding

Onboarding is the action of bringing somebody who is a novice into the system in a systematic way (Zicherman and Cunningham 2011: 59). The first minute the player spends inside the system is when he makes the decision to either continue or quit. Because of this it is important to make that first minute count. A common mistake is to overwhelm the novice with a variety of options but that might only confuse. It is better to let the player experience the service firsthand, even if just a simple version, instead of offering too much information. Another mistake is to immediately ask the player to register before trying out the system. Before knowing what the system is about the player has little incentive to register. Something of value should be offered before registration is asked so that the player has a motivation to register. One crucial thing found in game onboarding is to make winners of novices. The player should never be able to fail in the first thing he does in the system and he should be rewarded after he completes the challenge. Finally it is important to try and learn something about the player during onboarding. There can for example be a question presented to the player that reveals some information about his motives or desires.
that can benefit the system. (Zicherman and Cunningham 2011: 59-63)

4.4.3 Iteration and constant development

Like games are playtested and developed before their launch, so should gamified systems. They should also be ready for constant development. Rather than launching a gamified system with all possible game-elements implemented from the very beginning, it is better to start of small. Launch a system with only the basic core mechanics and after it becomes clear what parts work and what parts don't the system should be developed further. It is very important to realize that the system needs to be always iterated, even after it has been launched. (Zicherman and Cunningham 2011: 73, Radoff 2011: 45)

4.4.4 Tracking

Tracking players in a gamified system helps to develop the system. With mechanics like points the gamified system can be tracked efficiently. The developer can track what choices and actions the players do in the gamified system and based on that discover what are the most popular and least popular parts of the system. The things that make the system fun can be strengthened and the things that do not work can be deleted or improved. A good way to track users is to implement a point system that sets a value for each activity in the system. With this it is possible to determine which actions are the most and least used. The point system is also able to highlight the most active users and can be used to create a profile on the average user. (Zicherman and Cunningham 2011: 73).

4.4.5 Gaming the system

Wherever there is a game there will be players that try to “game the system” which means exploiting the system (Zicherman and Cunningham 2011: 72). It is important to monitor such behavior and respond correctly by stopping such activities. After
such exploitation has happened the system should be developed further to stop the same from happening again. While it is important to be aware of the problem, there is no such thing as perfect security (Zicherman and Cunningham 2011: 72). It is very possible that creating a system that is impervious to exploitation is impossible.

4.5 Design framework

A design framework D6 for gamification presented by Werbach & Hunter (2012: 86) has six steps. This is a model that can help to develop a gamification system step by step. In this model theory of games and motivation come together in a six step model where each step starts with the letter D (Werbach & Hunter 2012: 86). Next each step is explained in detail and compared to the theoretical models of game and motivational theory presented earlier in this chapter. Many of the theories can be used to further enhance the D6 model. The D6-model has the following six steps: First define business objectives. Second delineate target behaviors. Third describe your players. Fourth device activity loops. Fifth don’t forget the fun. Sixth deploy appropriate tools (Werbach & Hunter 2012: 86). This model was chosen for this study because it is so new that it has not yet been tested in an academic journal and thus still requires validation from an empiric study.

Define business objectives: Because gamified systems are going to be used for business purposes, in the very beginning those business objectives should be defined. For gamification to work it is critical to have a good understanding of your goals. After that the system will be created to specifically address those objectives. A system should always have a goal it is created to achieve. There is little use in creating a gamified system just for the sake of a gamified system. (Werbach & Hunter 2012: 87).

Delineate target behavior: Werbach & Hunter (2012: 89) propose that you should define what you want your customers to do and how to measure that behavior. The target behavior should be as specific as possible and they propose two metrics to measure that behavior: points and win states (Werbach & Hunter 2012: 89-80). They do not however specify how to actually motivate customers to perform the target
behavior, only how to track it. The Modified Fogg behavior model (Fogg 2009, Ryan et al. 2006) presented in chapter 3 is useful in this situation and can be used to achieve customer target behavior.

Describe your players: Players are the ones that will be using the system so it is good to describe what kind of players they are. Not all player types want the same things and not all types are as present in the population. By knowing what type of player is going to be using the system it is possible to create a system that will appeal to them. (Werbach & Hunter 2012: 91-93). Bartle’s player type model presented in chapter 2 can be used in this step to describe players (Werbach & Hunter 2012: 92) but it is not the only model that is useful. Yee (2006) has taken Bartle's model and modified it. Yee's (2006) model of motivations in three main components: achievement, social and immersion is used in this research since it is an improvement of Bartle's model.

Devise activity loops: Activity loops move forward the action in a gamified system and they structure the core gameplay aspects. The concept is that an action provokes another action, which again provokes another action. There are two different kinds of loops: engagement loops and progression loops. Engagement loops describe what your players do, why they do it, and what the system does in response. The important part is to give immediate feedback to the user and with that motivate him to perform another action. The aim is that users always know when they do something good and get immediate feedback to prove it. Still, it is not enough to get feedback, because that will not tell the user whether he is advancing or note. Because of this progression loops are needed. Progression loops can give perspective on the player's journey on a macro level. The experience of the system should not be the same on the first day and the 50th day. If that happens the user might get bored and not motivated to use the system again. Progression loops give the impression that the experience changes as users move through it. That is usually achieved with escalating levels of challenge and difficulty. The difficulty to win challenges increases to match the ability of the user. (Werbach & Hunter 2012: 94-97).

Don’t forget the fun: Fun is the core of games and gamification. The whole idea is to create systems that are more fun and more engaging by gamifying them. Because of this it’s very important that using the system is ultimately fun, otherwise it does not
matter how well it should theoretically work. This is where testing and the overall experience are important. When creating a system it is easy to forget that it is all about fun. (Werbach & Hunter 2012: 98-99). The Four keys to more emotions model (Lazarro 2004) presented in chapter 3 can be used in this stage to identify what kind of fun is most relevant for the system and to work towards achieving that result.

Deploy the appropriate tools: After figuring out all steps from one to five apply the most relevant and effective elements and structures into the system. It is not the case that any elements applied to any system create a positive effect. Only the correct use of right elements leads to success. (Werbach & Hunter 2012: 99-101). Here the pyramid of game elements (Werbach & Hunter 2012: 82) can be used to choose the elements that best fit the goals, target behavior, player types, activity loops and fun. Either the full pyramid presented in chapter 2 or the reduced version from part 4.3 can be used depending on the scale of the system.

Figure 5. Gamification Design Framework (adapted from Werbach & Hunter 2012: 78).

In this research the D6 model is the focus of the empirical study. In the empirical part this model is tested to see how it works in practice. All six steps are tested to see if the model is a good representation of reality. At the same time steps 2, 3, 5 and 6 are given special focus and tested to see if the added models benefit the whole D6 model. The empirical study will be conducted as a series of interviews that aim to
reveal how companies in practice design gamification and if it is similar to the model presented here. The structure of the empirical study is explained in further detail in chapter 6.
5 METHODOLOGY

This chapter introduces the methodology behind this research. In the first part the research design is described. After that the methods of data gathering are presented.

5.1 Research design and methods

Research philosophy, research approach, ontology, axiology, research strategy, type of research, type of research design and time horizon are all defined one by one.

The research philosophy chosen for this research is interpretivism. Research approach is both deductive and inductive. The ontological stance chosen is subjective. Axiology is biased. Research strategy is qualitative. Type of research is descriptive research. Type of research design is case study with multiple case designs and holistic analysis. Time horizon chosen is cross-sectional design. These are now explained in more depth.

Research philosophy defines what the researcher thinks constitutes as knowledge (Wilson 2010: 9). For this research the epistemological viewpoint is interpretivism. This viewpoint believes that some aspects of business are too complicated to be measured with the same basis as natural sciences (Wilson 2010: 11). Instead the world is viewed as complex and open to interpretation and the intention of research is often to gain new and interesting insight into a particular context instead of being able to generalize (Wilson 2010: 11).

Deductive research approach is used in this research. Although deductive approach is often associated with quantitative research and inductive with qualitative, there is no reason why they could not be both used if it fits the research (Wilson 2010: 268). Deductive approach begins with and applies a well known theory while inductive approach is a theory building process that starts with observations and works toward building a new theory (Wilson 2010: 302-304). Deductive approach is used in the capacity that a theoretical model derived from literature is formed and will be tested.
with empirical data.

Ontology is about the nature of reality and the way people think the world is (Wilson 2010: 11). This research takes a subjective ontological view. This view is closely related to interpretivism and is interested in understanding subjective beliefs and attitudes motivating respondents to act in certain ways (Wilson 2010: 12.)

Axiology is about determining whether the researcher is separated or embedded in the research (Wilson 2010: 12). It's about either keeping your own values apart from the research or acknowledging that they might affect the research. Because this study follows the interpretivist philosophy it is difficult to be completely value free. Because of this it is determined that the axiological situation is biased. Because of this the researcher needs to try and ensure the production of credible results (Wilson 2010: 12).

Based on all the above choices and the nature of the research, qualitative research strategy is chosen. The aim of the research is to gain deep insight and understanding into the phenomenon studied. Qualitative methods, such as interviews, are well suited for this goal. By choosing qualitative research strategy a choice is made to pursue understanding instead of numerical analysis. Qualitative strategy is chosen because it can provide a new way to understand the phenomenon studied (Koskinen et al 2005).

According to Wilson (2010) descriptive research aims to describe an existing or past phenomena and can be both qualitative and quantitative. As a type of research descriptive was chosen because it is closest to the aims of this research. The goal is to describe the studied phenomenon and how it is different in reality from the literature.

Type of research design is case study. Case study is one of the most commonly used research designs in the field of business research and is a type of research that focuses on one or at most a few carefully chosen cases (Koskinen et al. 2005: 154). More specifically multiple case design with a holistic analysis will be used (Wilson 2010: 109). According to the multiple case design more than one company will be
observed, but with a holistic analysis the same one phenomenon will be studied in all of them.

In cross-sectional design data is gathered from several case but all at a certain single point in time (Wilson 2010: 112). This makes it possible to complete the research in a relatively short timeframe, which is important in a research of this scale. A shorter study has the benefits of lower cost of resources (Wilson 2010: 112, Koskinen et al. 2005: 44) that are one of the biggest limitations of this research.

The primary data collection method was interviews. Interviews allow the researcher to gain insight into the thought process of the person interviewed and gain large amounts of data on a single topic (Arksey & Knight 1999: 34, Wilson 2010: 138). Semi-structured face-to-face interviews were the first choice of primary data collection. Semi-structured interviews have a structure but allow flexibility in the order of questions as well as with possible extra questions (Koskinen et al. 2005: 104, Wilson 2010: 147). Interviews were recorded and transcribed for analysis. The main goal of the interview is to facilitate a discourse between the interviewee and the interviewer and the general themes can be chosen from the theory used (Aaltola & Valli 2010: 33-34).

5.2 Gathering of empirical data

Semi-structured interviews were the primary data collection method. The interviews were done specifically for the purposes of this research and conducted directly by the researcher himself. The sample size was relatively small but detailed qualitative interviews work better with fewer people (Arksey & Knight 1999: 34). Four different companies that practice gamification as a part of their business where approached for interviews and all of them agreed to be interviewed. All companies that were included in the study are small or medium sized companies that employ 2 to 10 people. Three of the companies practice gamification as a core business while one uses it to enhance their own products. One of the companies that use gamification as their core business is a Bulgarian company. The interview with this company was conducted via skype. Other four companies are Finnish companies that are situated in
Oulu. The interviews with them where conducted face-to-face. All companies are familiar with the concept of gamification which is why they were selected for this study. It was important to have interviewees that are knowledgeable of the topic of the research.

In total five interviews were conducted on 27th of February, 6th, 11th and 13th of March 2013. Three of the interviewees where CEO’s (interviewees A, C and E) of the companies in question and two were employees. The employees were a business manager (interviewee B) and a game programmer (interviewee D). The interviews followed a loose structure created by the researcher. The structure was based on themes that where picked from the theoretical model presented in chapter four. The themes and their significance to the company and their usage of gamification as a part of their business were discussed. The same structure was used in every interview in order to make sure the data is coherent and about the same topic. The interviews were recorded using a digital recorder and then transcribed. The interview transcripts are referred to in the empirical analysis when needed to present the reader the basis of analysis. References to interviewee A’s transcript are made in the original form because this interview was conducted in English. References to the other interviewees’ transcripts are translated to English to the researcher’s best ability because the interviews were conducted in Finnish.

5.3 Data analysis

Qualitative analysis on the research data was conducted in four steps: transcribing data; reading and generating categories, themes and patterns; interpreting findings; and writing the report (Wilson 2010: 225). When generating categories, themes and patterns deductive priori coding was used. In priori coding categories are determined prior to the analysis of the transcripts and are based on the theory that is tested (Wilson 2010: 258). The themes chosen were basic understanding of gamification, motivation, consumers as players, fun, game elements, and existing models. The themes were chosen in line with the themes used in the interviews.
6 EMPIRICAL ANALYSIS

6.1 Findings from the interview transcripts

Because the interviews were semi-structured they did not follow a strict structure. There were themes that were followed and covered in every interview but interviewees had slightly different approaches to some of the themes. The main themes of the interview can be categorized into seven parts. First the basic understanding of gamification and its nature was established. In the second part motivation was discussed. In the third part the view of consumers as players was discussed. Fourth theme of the interview was activity loops and re-engagement. The fifth category was fun and its importance. The sixth theme concerned specific tools and game elements that the company uses for gamification. The seventh and last theme was discussion about the models used in this research and the interviewees’ opinions on them.

6.2 Defining gamification

Defining gamification in layman's terms can be difficult because the concept itself is relatively new. The interviewees defined the term in their own words and the general idea was similar for all of them. Gamification is a process that aims to motivate customers and build up retention. Motivation was the core reason that was mentioned by all of the interviewees. Other goals include selling more, making products enjoyable and getting people excited. The way it does this is it takes game mechanics and dynamics from game theory but also borrows from psychology and implements them in a business context. Gamification is a consulting service that aims to add value in the form of games to businesses' core product or service.

"...applied game mechanics into real world activities in order to motivate and engage and... build up retention. It takes components from psychology...behaviorism... from game design and other things... We
are just an agency that is working with businesses that want to add value in the form of games to their core project or service” (Interviewee A)

“...you take game mechanics and also psychological things and bring them into business and use them in a way that makes people more motivated and excited on new things.” (Interviewee B)

“Motivating people with gamefulness to do something educational or learn new things or to get to know new things or to try and sell something through gamefulness.” (Interviewee C)

“In practice gamification is using rewarding styles from games in everyday things in order to make them more enjoyable and goal oriented.” (Interviewee D)

“Maybe it's about applying game mechanics and dynamics into real world processes. Using game mechanics and dynamics to motivate people to do things in different contexts.” (Interviewee E)

6.3 Most prominent fields for gamification

Four of the interviewees think that gamification can be used in any medium while one thinks that gamification is not usable in all fields because it can have a very negative outcome if not done successfully. In fields like health care a poorly designed gamification can result in loss of value to the user. According to interviewee A and B the term gamification has become somewhat tarnished by incorrect use of gamification. Especially when the use of gamification is not justified or it is used in a superficial manner that does not benefit the business. So even though theoretically gamification can be used in any field there is need to be careful when thinking about specific contexts.

“My opinion is that gamification cannot be used in many fields because
it can have an opposite effect if the gamification is done wrong... If you lack knowledge on how to integrate them [gamification] in a lean and agile way, you may create a so called whip effect.” (Interviewee A)

“Gamification can be used with anything [any field] but as a term it has gained some negative connotations because it has been for anything but badly. Used in a way that its use is not justified.” (Interviewee B)

The most prominent fields for gamification at the moment are seen to be education, mobile applications, sports and marketing. Education is using a system that is outdated and fails to engage students. Gamification could be used to enhance and evolve the system in order to make it modern. One term that can be used for this type of gamification is edutainment. Mobile applications are seen as an area where gamification could provide a competitive advantage especially because all of the mobile applications are very similar to each other and differentiation is crucial in order to gain and retain customers. One interviewee is already using gamification in the sports sector and sees value in motivating players and improving coaching. Marketing can benefit from enhanced retention and increased experience value.

“I think that the field that will be more beneficial with gamification is education. The term is called edutainment.” (Interviewee A)

“Recently many mobile applications have come out that compete about customers because they are all very similar to each other... with gamification you can get people to like your service and use it.” (Interviewee B)

“Well marketing of course is one. We take it [gamification] largely to sports and coaching.” (Interviewee E)
6.4 Gamification design process

Most of the interviewees could not specify clear working steps for designing gamification. The design process is an agile process that does not always follow a specific design framework. It is possible that depending on the customer the process can be very different each time. However the main steps according to interviewees A and C can be divided into 5 stages. The stages differ somewhat from each other as well as from the D6 model (Werbach & Hunter 2012) tested. Next the steps described by interviewees A and C are presented in a concise form that is based on the longer explanations that the interviewees gave.

The steps as described by interviewee A. First is to define the business objectives of the client and decide whether they can benefit from gamification or not. Second is to do market research on the field of the customer. Third stage is to choose the game mechanics that are to be used and game balancing. Fourth stage is to implement the gamification and gather analytics. Fifth and final stage is the follow up. (Interviewee A).

The steps as described by interviewee C are presented here in a form that was interpreted by the researcher. First step is to decide the concept and target of gamification. After that in the second step the motivational factors of the target group are described. Third step is to decide on the game mechanics that are used to bring out the gamefulness. Fourth step is analyzing data and metrics in order to find out how the product can be further developed. Fifth stage is then further developing the product according to the customer data. (Interviewee C).

After showing the interviewees the D6 model (Werbach and Hunter 2012) and discussing it interviewees B and E agreed on the model and the order of the steps directly. Interviewees C and D agreed that the model has its merits but in their company the design process does not always follow the same structure. All of the steps were recognized to bring value to the design process but not necessarily in the order presented. And not all steps in all productions. There was some disparity between answers on what steps of the process are the most important ones. Interviewees C and E said that defining business objectives is the most important one.
in order for the gamification to have business value. This is an understandable point of view coming from two CEO's. On the other hand for interviewee D the most important part is the core mechanic and the activity loops. This is a game designer perspective.

“Often it goes in a way that the thoughts come at the same time, the ideas come at the same time but if there were a systematic process, a very straightforward one, then yes, this is how it would go.”
(Interviewee B)

“A lot of the same themes here: business objectives, target behavior... These are pretty much the same steps in every production but not all of them. Of course business objectives are defined. Maybe we think about this target behaviors to some extent. End what we think about most is our players and customer base. The demographics and so on.... This activity loops we haven't thought about too much for now. Don't forget the fun. This is probably pretty much build into the system.“
(Interviewee C)

“Personally I rarely start with business objectives. I think the idea starts with activity loops. There is already an idea about a story or a core mechanic... This describe your players is one of the first to be defined. To whom the game is done. Of course this business objectives... Of course it should be fun. You should always keep that in mind... For me either the order did not become very clear.” (Interviewee D)

“Yes they are all in there. Some stronger. But of course like this. But these are of course, the first most important thing is that you have some sort life there, make a living [points to define business objectives].”
(Interviewee E)
6.5 User motivation

According to the interviewees' experiences gamification increases the motivation of customers towards the product or service. The most prevalent reason why gamification increases motivation is fun. Other motivational factors that were identified were a sense of autonomy, progression, social recognition, rewards, competition, a sense of purpose and a sense of mastery. When motivational factors discovered from the transcript are compared to those suggested by the Self-determination theory (Ryan et al. 2006) similarities arise. The self-determination theory proposes three core motivational factors: autonomy, competence and relatedness. All of these can be found from the factors proposed by the interviewees. A feeling of autonomy is mentioned specifically. If the customer feels that their effort to use the product or service is voluntary and that they choose to use it from their own volition, it is much more motivational to them. Progression, competence and sense of mastery are all parts of competence. Social recognition is a part of relatedness. The three core motivational factors of self-determination theory are present in practice even though the users do not consciously use the self-determination theory.

“In the core of it all it just has to be fun.” (Interviewee B)

“If you are making educational games than you can see clearly how the difference between playing a fun game and learning is mixed by the child. The child is learning as a byproduct of playing the game and having fun.” (Interviewee C)

A lot of time is used to find out how to motivate users using gamification. There are several game mechanics that can be used to motivate users and relying on just one will not work. Every case of gamification is different and because of this the motivational mechanics also need to change depending on the context. Some of the more motivational mechanics that were mentioned were progression, competition, badges, social recognition, levels, points and rewards. Out of these mechanics progression and competition have been mentioned in the literature review as mechanics that increase motivation. In the case of these two mechanics literature and
interviewees agree. Gamification is very context sensitive in a way that any given solution is unlikely to work in different instances. Just implementing mechanics that work in one case does not guarantee they will work in another. A deeper understanding of the reasons of motivation is needed in order to choose correct motivational mechanics.

“We have consulted a lot of plans how to motivate the end user. Every solution was different.” (Interviewee A)

6.6 Player profiles

Player profiles are not used by most of the interviewees. Only Interviewees A and B were familiar with player profiles models like Bartle's player types (Yee 2006) and only A said they use them often. More traditional customer profiles and intuition are used instead by other interviewees. It is interesting that although many of the interviewees think about their customers as players and see benefit in that kind of thinking, they do not employ player profiles in their work. One reason is clearly a lack of knowledge about existing player profile models. A problem in profiling customers that interviewee C faced was that children are hard to profile. Unlike adults, children’s behavior is erratic and difficult to profile. In that sense profiles are not always useful if the customers cannot be easily profiled into certain types.

“I don't use any specific models there. Mostly it's intuition and my own experience. Like, what kind of models could one use here?” (Interviewee D)

“We don't profile that much. Perhaps children as a customer group are difficult to even profile.” (Interviewee C)

Interviewee A uses profiles to describe their users as players. Bartle's player types model is used but not exclusively. The model is modified according to the context and new roles are added if the basic roles are insufficient. Profiles such as in the Bartle model are useful to some extent depending on the project.
“Yeah we have couple of such profiles. Most of the time we use the Bartle types. Do you know them?... The socializer, achiever, explorer, killer. Sometimes we loose... We don't use them in the strict form, the original Bartle types. We expand them with other different roles because most of the projects have different needs.” (Interviewee A)

6.7 Activity loops

Engagement and progression loops are in active use in gamification. Activity loops are a driving force behind the business value of the product and because of this they are a very important part of gamification. Progression is recognized to be one of the most important parts of gamification. The feeling of progressing is seen to make users happy and think about the product in a blissful way. All interviewees mentioned progression as a way to keep customers interested.

“Sometimes we are actually doing a lot about progression and solely on progression because we think that if you progress in something you release endorphins in your brain that will make you happy.”
(Interviewee A)

“You have to get something new all the time” (Interviewee B)

“You have to have progression. And it's a bit challenging.” (Interviewee C)

Feedback loops are essential in gamification. There should always be a reaction and feedback for a user's actions. One interviewee describes the lack of feedback loops as being in a vacuum. With this he means that when there is no reaction to anything you do it is like the user is not even inside the system and that situation can be perceived as a bug from gamification design perspective.

“That [feedback] is really important actually in all games. There should
always be a reaction if you do something.” (Interviewee D)

“When you don't have feedback we call that being in a vacuum. That you are not actually in the system.” (Interviewee A)

### 6.8 Fun

Fun is a core aspect of gamification that cannot be left out of the design process. One can even go as far as to say that gamification without fun is not gamification. If an attempt in gamification does not produce a fun experience it has failed in the effort. It is very important that you think about it as a game and that it feels voluntary. It is impossible to force someone to have fun. It has to come from a genuine experience.

“Maybe if you don't have fun it cannot be called gamification... So when it's voluntary you are dealing with it in the sole purpose to have something that will entertain you.” (Interviewee A)

“If you gamify something and you forget the fun, then you haven't gamified it but instead done something else. Just put something on top of it.” (Interviewee B)

While fun is recognized as one of the cornerstones of gamification there is still a lack of understanding behind its functionality. None of the interviewees alone recognized very many different types of fun but together all of the four types of fun (Lazarro 2004) were mentioned. Hard fun, easy fun, altered states and people factor have been recognized in practice but in different types of applications. There was no clear way to intentionally and precisely implement fun in gamification that would work in every case.

“I know a lot of players whose playing does not look fun at all from the outside. There is a lot of yelling and cursing when they lose. But for them the reward of success and winning is so good that it makes up for the other stuff.” (Interviewee D)
“We think about what the client wants the user to do... do they want to bring their friends in, there is the social element, or is it just something simple fun they can have while waiting for the bus.” (Interviewee B)

“The fun can come simply from the story and the characters.”
(Interviewee C)

There are challenges with fun. It is difficult to guarantee that the end product will be fun, especially without prototyping the concept. Some types of fun can be more difficult to create than others. For example an experience type of fun with altered states or easy fun is perhaps the most difficult because it depends heavily on transferring the designers own feeling and experience to the user. On the other hand hard fun that has to do with competing and overcoming obstacles is the easiest to create. One challenge is that something that is fun for Finnish customers might not be fun for international customers.

“That experience fun is the most difficult one to produce... Even if you have that feeling in your own mind, it's very difficult to make the player feel the same thing.... Because of that the fun should come more from doing things.” (Interviewee D)

“When you are trying to make international application it is really difficult to find internationally working fun things.” (Interviewee C)

6.9 Game elements

The exact same model of game elements (Werbach & Hunter 2012) and mechanics that is introduced in this paper is not used actively by any of the interviewees but one is familiar with the model. One of the main reasons for this is a lack of knowledge about the existence of this or similar models. Some models that have many similarities are used by two of them. One of them uses a tool designed by Jesse Schell that is called the Scavenger Game Deck. This deck has many similarities with
the model presented by Werbach and Hunter (2012). One of the interviewees approached the issue of appropriate tools in a systematic way where they go through all of the known mechanics one by one and assess whether they are useful in a specific case. Other interviewees did not have such a clear way of coming up with game elements and relied mostly on intuition and examples they know from other applications.

“We sit down and we have like a one hour to discuss every known feature... every known mechanic that we may use for this client.”

(Interviewee A)

While the interviewees did not specifically use the pyramid of game elements (Werbach & Hunter 2012) they have used many of the game elements in their work. One of the interviewees has consistently used all of the mechanics listed in the pyramid of game elements by Werbach and Hunter. Other four interviewees had used many of them in their work but not all of them. The majority of the game elements were used by at least two interviewees. The exceptions were boss fights, combat and content unlocking that where only mentioned by one interviewee. Four of the elements were mentioned by all of the interviewees. They are narrative, progression, challenges and achievements. These four are core elements that are the most important and widely used in gamification in practice. All four are also on the list of most common elements used. This means that both theory and practice value these four elements.

The second most widely used elements are the ones that have been used by four of the interviewees. There were also four elements mentioned in this class: feedback, rewards, levels and points. These elements rank second in the popularity of usage and are very close to the importance of the first category. Similarly all of these mechanics are mentioned in the literature review as most common elements used. In this case too literature and practice agree that feedback, rewards, levels and points are commonly used important elements.

The third most popular elements were those that have been used by three interviewees. This category was the biggest with eleven elements: emotions,
relationships, chance, cooperation, competition, transactions, win states, badges, leaderboards, social graph and teams. With more than half of the interviewees using these elements they can also be considered to be useful in practice. In literature review not all were mentioned in the most commonly used elements. The ones that were mentioned are emotions, relationships, competition, cooperation, transactions, badges, and leaderboards.

The last two categories are elements that were used by two or only one interviewee. The elements that were used by two interviewees were: constraints, resource acquisition, turns, avatars, collections, gifting, quests and virtual goods. The ones used by only one interviewee were: boss fights, combat and content unlocking. These elements while possibly very useful in the right context are not used much in practice. Out of these last two categories only one element was also mentioned in the most common elements and that was virtual goods.

After reviewing both the literature review on most common elements and the transcripts on most used elements the follow listing of most common and used elements can be made. The elements in this model are both the most common found from literature as well as most used in practice by interviewees. The elements are organized in order of importance with the most important elements mentioned first in their own categories. The number after the element signifies how many of the five interviewees mentioned that particular element.

Figure 6. Empirically justified model of most common and used game elements.
6.10 Design thinking

A clear design process is not always enough to ensure successful gamification. There are other considerations that affect the end result. The transcripts reveal that thinking like a game designer in some aspects can help create more compelling gamification systems.

6.10.1 Users as players

It is useful to think about users as players as opposed to consumers or end users. This is an aspect of gamification that gives the designer a different kind of perspective on what is important in the gamification. The player perspective is important when creating the fun factor that gives value to the product. The player perspective helps to create a game-like experience instead of just a product experience.

“We think about users as players because I think that this gives a different perspective about how we perceive the current project or the current service. So when you think about them as players you are constantly thinking about how to make the whole process more fun or more game-like. And that is the key for gamification thinking.”
(Interviewee A)

6.10.2 Onboarding

Onboarding like it was described in chapter four is not practiced by the interviewees. While onboarding as a concept is seen as important no systematic use of it appears to happen in practice. This is one area where practical implementation is lacking severely. Either there is no need for onboarding or there is room for development. While not completely on the same topic interviewee E had interesting ideas about marketing gamified products. In his opinion the marketing and advertisement should be a hybrid between traditional advertising and game advertising. Game advertisement happens mostly internationally on the web with videos and banner advertisements. More traditional channels like television and radio are not direct enough and ineffective in getting buyers into a web store for example. Because
gamified products are a combination of these two worlds they require a combination effort that uses the best of both worlds in order to attract users from both sides.

“The marketing is not game marketing, but on the other hand it’s not tradition marketing. It's a combination of these two worlds. You should use more channels than in the game industry... but try to use the game world’s ways of bringing it forth with the story.... I think definitely gamification brings a whole new dimension.” (Interviewee E)

6.10.3 Iteration and constant development

Especially in the software business field iteration and constant development are normal business practices that are not seen as specifically a part of gamification. Iteration is described to be a norm in the business where products are sometimes published as unfinished versions and then developed further later. In this sense it is natural for software companies to use iteration in gamification as well. Especially the interviewee who has game designing background saw a lot of importance in iteration and prototyping. In his opinion game mechanics can only be balanced out if they are first tested by several prototypes and working through various iterations.

“Sometimes we put them live pretty rare because we cannot always feel what things really interest people. Then we analyze how much it is downloaded and how much it is used and how many remove the application and how long it is used. Then we develop it further.” (Interviewee C)

“That is closely related to prototyping. Like prototyping is really important for game mechanics. You can rarely get it right on the first try so that it works perfectly.” Interviewee D)

6.10.4 Tracking

Just like Zicherman & Cunningham (2011: 73) propose tracking is a crucial part of making sure that a gamified system continues to work as planned. It is important to
track what the users are doing and use the data gathered to identify strong and weak points of the system through analyzing customer behavior. It is possible to prioritize possible development targets with more precision if tracking is used.

“...what the user does there [in the gamified system] as to be followed so that based on that you can analyze possible development targets and surely prioritize the most important ones.” (Interviewee E)

6.10.5 Gaming the system

The phenomenon of gaming the system does not appear to be a major problem. It is fairly common and there are a lot people who enjoy finding vulnerabilities in game mechanics. It could almost be profiled as an optimizer player profile. Exactly because those people enjoy gaming the system the interviewees do not see the activity very harmful. Especially when creating a fun experience is one of the goals of gamification. Sometimes it can even be positive. Finding a flaw and sharing it with friends can create positive feelings for the user and at the same time gives visibility to the product. If the situation is not bad in the sense that the gamification is broken and unbalanced so badly that other users start to suffer, gaming the system can be beneficial to the product.

“It's very common. There is this specific player type that is always thinking about optimization and maximizing.... I don't really know how to fight against it [gaming the system]. In my opinion you shouldn’t try to fight against it.” (Interviewee D)

“It's probably a lot of fun. So in that case the gamification was successful... It can also be useful. Then if there is something seriously broken, then of course we fix it. Like if it's just bad.... It really depends if it harms the other users.” (Interviewee B)
7 CONCLUSION

This chapter summarizes the findings of this research. Theoretical and managerial contributions are also presented. In this chapter the quality of this research is evaluated, the limitations of the study are presented and future research suggestions are made.

7.1 Theoretical contributions

The purpose of this study was to study the use of gamification and find out how to design a gamification system. The subject was approached by examining how companies use gamification in their work to enhance products and services. As the phenomenon and term are relatively new there is little research on the use of gamification, especially on local level. In order to understand gamification theory of games and motivational theories were studied. A design framework for gamification (Werbach & Hunter 2012:86) was used as a base for the study and modified according to the literature review. The framework was tested through an empirical study to see if practical applications of gamification are similar to those suggested by the theory. One main research question was formed to guide the study:

How to design a gamification system?

Three sub-questions were created in order to define the main research question?

What are the steps in a gamification process?
What are the elements that can be used to create a gamification system?
What motivates consumers to use a gamification system?

As an answer to the main research question an empirically justified gamification design framework is presented. The transcript analysis revealed that all of the phases proposed by gamification design framework (Werbach & Hunter 2012:86) are important and used in practice by companies that work with gamification. Define business objectives, delineate target behavior, describe your player, device activity
loops, don’t forget the fun, and deploy appropriate tools are commonly used steps in gamification. However, the order by which the steps are implemented did not follow the framework. This means that the model should be adapted according to this new information. While defining business objectives was found to be the most common first step and the most important also, the rest of the steps followed in a very different order depending on the company. A strict order appears not to be paramount to gamification. A flexible model, where there is not strict order, is more suited for the varied situations where gamification can be implemented.

Defining business objectives step got confirmation with interviewees agreeing on the business side of gamification to be important. Gamification, like any other product, requires justification from the business objectives before it is wise to use it. Delineate target behavior step got confirmation that it is an important step in the design process and motivational factors that can be used to motivate users into target behavior were also confirmed. As the motivational theory of Self-determination suggests, autonomy, competence and relatedness are motivational factors that apply to gamers (Ryan et al 2006). These three motivational factors were confirmed by the empirical research as things that repeatedly motivate users and can be used to guide them into target behavior. Describe your players step was confirmed as well as the Bartle’s player types model (Yee 2006). Both were used in practice and have been found useful. In addition Bartle’s model is not the only one that can be used. Other models were also used and modified by the interviewees in order to fit into a specific context. Device activity loops step got confirmation from the research. Progression loops and feedback loops have been used extensively and they have been found to both motivate users as well as keep them active. Creating a feeling of progression and giving feedback to the users are both crucial parts of the design process. Don’t forget the fun step got a strong confirmation from the study. Fun is so important that without it there is no gamification. Hard fun, easy fun, altered states and people factor as proposed by Lazarro (2004) were all supported. Deploy appropriate tools step was also supported but all of the elements in the pyramid of game elements were not strongly used. A new listing of most common elements was created based on the empirical data.
While all of the steps in the design framework were supported, the empirical research also revealed new steps that can be included into the model. Market research on the field where gamification is planned to be implemented is a step that gives important background information to the designer on which gamification can be built on. Because gamification can be used in a variety of fields, often the designer has to work in an unfamiliar context. Using correct information ensures a better gamified system. Iteration and prototyping is very important in order to balance game mechanics used in the gamification system. Before the actual product or service is launched a prototype should be made and tested to be sure it works as planned.

After the launch there are two steps supported by the empirical study that can be added to the framework: tracking and further development. In tracking phase the users’ actions in the system are tracked and analyzed in order to find out the weak and strong points of the system. It is possible to prioritize possible development targets with more precision if tracking is used. Further development is done according to the tracking and ensures that the system can change according to its users’ needs.

![Design steps diagram](image)

Figure 7. Empirically justified gamification design model.

### 7.2 Managerial contributions

There are eight managerial contributions in this study that can help practitioners understand gamification. As a practice gamification is new and thus there is lack of
experience on what works in practice. This study reveals some of the practicalities that affect successful gamification. First gamification increases the motivation to use the product or service. Second fields of education, mobile applications, sports and coaching are especially beneficial for gamification. Third it is important to set clear business objectives for a gamification system. Fourth gamification is case sensitive and merely copying successful gamification might not work in another case. Fifth a deeper understanding of game mechanics and their motivational factors increases their successful implementation. Sixth it is useful to think about customers and users as players. Seventh prototyping and iteration are important in order to create a balanced gamification system. Eighth a list of most popular and useful game elements is suggested.

Gamification increases the motivation to use the product or service it is implemented with. This is based on tapping into intrinsic motivational factors that are related to games and game-like products. Autonomy, competence and relatedness are the three core motivational factors that gamification uses to boost retention, motivation and loyalty in users. In this sense gamification can bring extra value to new or existing products.

While there are no limits to where gamification can be used, it seems that some fields are more relevant. Especially at this moment marketing in fields of education, mobile applications, sports and coaching can benefit greatly from gamification. In education more game like methods can increase students’ motivation to study and can help in evolving the current educational system into a more modern direction. Mobile applications face tough competition and similar products face the problem of distinguishing themselves and surviving long enough to gather a sufficient amount of users. Gamification can help in differentiating from the mass and keeping customers more efficiently. In sports and coaching gamification can increase motivation by transforming sometimes tedious activities into something more fun.

Like other areas of business there is a clear need to set clear business objectives for gamification. The clearer the objective is from the beginning the more assuredly the whole process will be beneficial. It is likewise important to be sure that gamification is the right choice to achieve those objectives. It is not something that always works
despite of the context. Misguided attempts of gamification can lead to failure and even negative results. In sensitive areas, like healthcare for example, the attempts of gamification to make things more fun can be seen as distasteful. The practitioner should therefore be careful in choosing where to implement gamification and where not.

Gamification is very case sensitive. Just implementing mechanics does not work. Deeper understanding is preferred.

The use of gamification is not an exact science where specific game elements always yield same results. Because of this an approach to simply implement game mechanics into a product or service without thinking about the context is likely to lead to bad results. Gamification is not only about applying points, badges and leaderboards to every product you want to gamify. It is more about understanding the mechanics and how they motivate users. After that the correct mechanics can be applied with a higher chance of success. Adopting a game designer perspective helps in this.

Another part of adopting a game designer perspective is to think about users and customers as players. This serves and important function in creating experiences that attract the player aspect of the user. Since gamification aims to create game-like experiences it’s important that they genuinely feel like that. The easiest way is to adopt a perspective where the product is being designed to players. Following this line of thought when profiling users to different categories, player profiles can be used instead of customer profiles.

Gamification systems are rarely ready on the first try. Similarly to software development practices prototyping and iteration is important in order to create a balanced product. Especially if the gamified system uses many different game mechanics that affect each other it is crucial to find a balance between them. After the product has been launched it is still important to be ready to develop it. Tracking user actions within the system and analyzing it is an efficient way of finding out what are the most prominent development targets. Parts that do not work can be either corrected or completely removed and parts that work well can be focused on more.
This way the system is able to react to the users’ actions and develop itself into an even more engaging and motivating experience.

Different game elements that can be used in gamification are plenty. This may be confusing if the user is not familiar with games or gamification beforehand. Thus a reduced version of the most used and effective game elements is provided in order to ease the selection of elements. This saves time from having to look over and analyze every single element that exists. Instead it enables the practitioner to focus on a smaller group of elements that are most commonly used in practice. It provides an easy starting point for beginning gamification and suggests an order of importance.

Figure 8. Game elements for managerial use.

7.3 Limitations of the study

When evaluating the quality of a study it is important to think about validity and reliability of the methods and results. Reliability refers to the repeatability of the results whereas validity tells about the ability of the used methods and metrics to measure what is supposed to be measured. (Hirsjärvi et al. 2000: 213.) Firstly reliability and validity of the results and methods are discussed. After that some notions regarding the further generalization of the results are presented.
According to Hirsjärvi et al. (2003: 214-215) reliability of the results can be increased by explaining the research methods in a detailed manner. This was done in this research. In the analysis part, are presented the essential information and data to see, how the researcher arrived in such conclusions. Referring to earlier literature has been done carefully and the earlier research was gone through relatively extensively. A notable limitation was that previous literature and research on the topic was scant. This made it difficult to find earlier research that could be used on the basis of the study.

External validity is somewhat worsened by the sampling method utilized for interviews. Data was gathered through convenience sampling which refers to using people easily accessible as a sample. Using this sort of non-probability sampling might lead to some sampling biases, and the sample is not likely to represent the population as accurately when probability sampling used. (McDaniel & Gates 2006: 313.). Still, convenience sampling is the prevalent sampling method in business studies (Bryman & Bell 2007: 197-198), which justifies its use. An important part of the study was to study gamification and finding people who are familiar with it was challenging. Because of low availability of acceptable candidates the amount of interviewees can be considered a limitation. Most of the interviewees were from Oulu with one exception being from Bulgaria. This makes it difficult to generalize the results for whole Finland.

Time and resources set some limitations for the study. A limited amount of time for each step of the process set boundaries to how much time could be used at any given time. Lack of resources prevented the researcher from conducting a face-to-face interview with one of the interviewees and instead a skype interviews was used. The time table of the interviewees was beyond the control of the researcher and resulted in some of the interviews to be delayed from schedule. This put some pressure on the data analysis because of reduced time.

The possibility to generalize results to other parts of Finland and the world is limited. All of the Finnish interviewees were from Oulu, which makes it problematic to generalize the results to whole Finland. Because one of the interviewees was from Bulgaria the results can be generalized outside Finland to some extent. The results
show that at least to some extent there are similarities between gamification in Finland and Bulgaria. Two of the companies also had clients and customers in several countries. This makes it possible to generalize the results to other parts of the world to some extent.

7.4 Suggestions for future research

Since research on this field is scarce there is much room for further research. The model presented could be tested and developed further. Tracking and further development of a gamification system could be studied with a more detailed empirical study. The effectiveness of different types of tracking and the tools used in the activity could be categorized in a more detailed manner. This would help gamification to endure long time use and lengthen the product life cycle.

Another interesting topic for future research could be the study of different types of gamified systems. Because gamification can be used in a variety of fields and in a variety of situations, the end product can be very different each time. One model may not be enough to define gamification systems in all of their different forms. A larger scale study that examines the differences of gamification systems in order to create a taxonomy would be beneficial to both current literature as well as practice.
REFERENCES


EMPIRICAL REFERENCES

Interview transcripts

Five gamification user (2013) transcripts. In the text the five different interviewees are referred to “Interviewee A”, “Interviewee B”, “Interviewee C”, “Interviewee D” and “Interviewee E”. Interviews were conducted between 27th of February and 13th of March 2013. Interviewer was Julius Kuutti. Duration per interview was approximately 60 minutes.