November 2014

# Free to play

## Revisited

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CITY College, An International Faculty of the University of Sheffield. Executive MBA

# Free to play: Revisited

## Current issues in free to play games. Identification, redistribution and melioration of market segments and monetization techniques through game design.

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# Abstract

In this paper the need for thorough research regarding free to play games is identified and the main trends affecting f2p market are briefly analyzed. After consulting market segmentation, consumer behavior and free to play monetization and game design, a quantitative survey is conducted online.

The results show strong correlations between single, social and hardcore game types with various demographic and behavioristic player segments. The concepts of retention, core and compulsion loops are linked to game types as well. An initial guideline for game design, segments and monetization is presented in order to improve game design and create a starting point for aspiring developers and researchers.

This paper contributes to the lack of academic gaming references and suggests future research targeted in certain platforms and demographic samples.

# Declaration

All sentences or passages quoted in this thesis from other people's work have been specifically acknowledged by clear cross-referencing to author, work and page(s). I understand that failure to do this amounts to plagiarism and will be considered grounds for failure in this thesis and the degree examination as a whole.

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# 1. Introduction

The gaming industry is growing to unparalleled amounts each year. This growth has brought into the foreground new financing methods and game types. Free to play is the most prominent and upcoming way of paying for games. Since this is an entirely new market field there is little to none centralized knowledge to aid aspiring investors and developers on their market research. The methods that are used, the market segments and the customer's approach and behavior are commented on various gaming websites but they rarely have any focused research behind them.

Since there are many trends that are affecting this growth, a short review of all the involved platforms and technologies is being made while discussing traditional market segmentation and consumer behavior theories and applying them to the free to play gaming industry.

Psychological factors play a large role on the game type and financing options so the most crucial part of this dissertation revolves around the core and compulsion loops of the games and tries to find out what make customers hooked into certain game types and what makes them turn into in game purchases. This leads to focus on game design which is the heart of any free to play game and is a marketing approach way out of the ordinary since it involves trends and technologies that emerged during the last 2-3 years.

Based on the literature findings the goal is the creation of a survey that will try to correlate current game types and market segments, with consumer behavior and monetization preferences. The goal is to create a unified guideline for free to play games that will be used as a starting point and will provide an ideal mix of customer acceptance and potentially maximized revenue.

## Goal of this dissertation

Most of the current issues lie in the ever changing gaming world and the incredibly scarce truly academic references. The main points that have to be resolved are:

A) How we ended up here. The trends technologies and historical events that lead to the current market.
B) Which are the main game platforms and game types and how they evolved through recent times?
C) Which classic theories of market segmentation and consumer behavior relate to our subject and how do we link them with today's information.
D) Which are the main types of monetization. Analysis and their relation to different game types
E) What are the trends and theories that affect game design? How is consumer psychology related to our case?
F) And finally how can we alter and identify game design accordingly in order to accommodate the customer's needs.

All of the above will lead to certain hypotheses and assumptions that we will try to validate through research and a series of quantitative primary research inquiries. The main goal is to identify the current free to play gaming industry, take an in depth look into it and create ideal game design guidelines for each game type and market segment.

The term marketing will not be used as much as it could since free to play gaming products start and finish on game design. There is little to no packaging, promotion, product placement and most of the traditional marketing standards. Game design is what makes or breaks a game and it will be the heart of the following dissertation.

## What is a free to play (f2p) game?

So let's begin with the basics since free to play games didn't appear in the market until recently and most people are still unaware of their massive appeal and production.

Free to play games are games that have minimum to zero barrier to entry and are monetizing themselves through in game purchases and other similar means.

Zero barriers means that someone with the required device/platform can download and play the game and, supposedly, never pay a single euro in order to complete it. This free product is achieving monetization through clever game design and the willingness of the consumer to contribute.

They are not limited in a single platform and game type and can range from social mobile games to AAA PC and console titles. Some prime examples can be Farmville for social games, League of Legends for PC games and DC universe online for console titles.

Free to play will be one of the predominant ways that we will pay for games in the next decade. So it is crucial to understand the model and see how ic be better adjusted for companies and consumers alike.

Nowadays games and developers don't really know how to use this model so people end up with aversion towards certain game types and bad reputation for the scheme. Its problems mostly lie into the complete lack of sync between game design and monetization.

That's the issue that has to be addressed while proposing ideal game types and monetization schemes for different people and platforms.

## Why focus on a free to play game?

So why do we believe that free to play is a world worth exploring? In this part of our paper we will see the current market trends, free to play success stories and explain why it is crucial for any game company to have an in depth knowledge of free to play design in this brave new world.

As Luban (2011) states, “A free-to-play game does not require its full content to be created before its release, as most content is created gradually after the game launch”. This allows for flexibility and adjustment to the user requirements and thus increased revenues due to customer satisfaction. Also this allows initially successful games to thrive, and flops to be shut down quickly and move on to the next project without losing several years of development expenses.

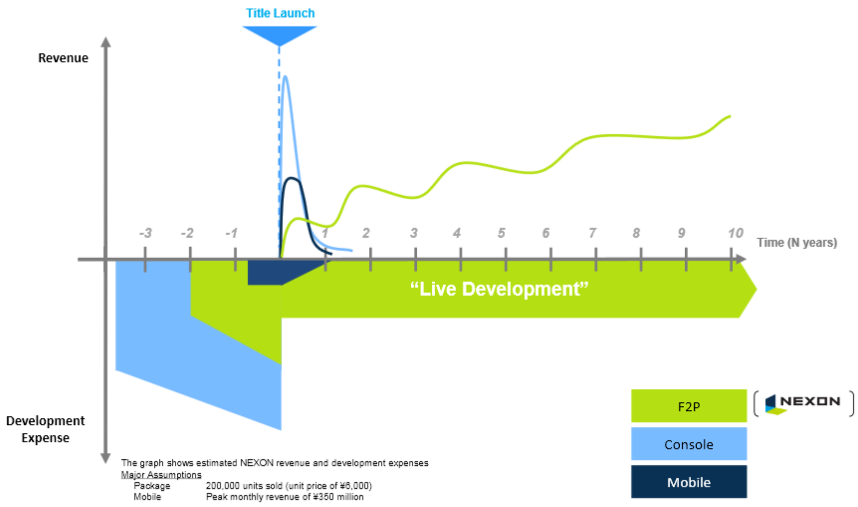



*Figure 1: Estimated revenue and development expenses for different game types*

On this slide taken by Nexon Co (2013), the largest online gaming company in the world, the development pattern for f2p console and mobile games is identified and we can clearly see why f2p games are considered to be the future. Until recently a gaming company would have developed a game for 2-5 years, marketed and launched it and then moved on to the next without any sustainable profit at all. It was either a success or a flop.

Right now a game can be thrown in the market with 30-50% of its content readily available and then develop based on its success. This is great news for small game studios since it is easy with the right mindset and creativity to create something from scratch, self-publish it and see how it goes. The market is already over saturated, but truly inspired gems always shine.

It only makes sense to develop as free to play. Most mediocre retail games either do well or bad, die off and the company moves on. Who wouldn't want a few billion potential customers with the risk of already questionable initial sales? It is certain that if the game is any good, the mass acquisition that it can get through free to play can convert 5-10% of the players to potential customers and most of all maintain them for a long run. With the jump to f2p the possibility to fix any issues that might plague the initial release is there and since it is free to play, customer tolerance is way bigger.

Companies do have the option to start off as a retail game and then turn to free to play but many design and player-base issues can come up, along with consumer regret if the game turns into free to play in a really short period. Especially for games that require a large player-base to be alive, competitive and accessible, it has to be a no minder that the monetization type should revolve around free to play. Consumer behavior will show that satisfied players will bring in more friends and create positive word of mouth that will in turn increase acquisition and conversion even more. It's an endless loop that can turn a possibly mediocre game into way more revenue than expected.

Why rely on a 40-50€ game sale when the same game, if designed well, can convert certain categories of customers into spending way more money on add-ons and aesthetics? It is a very deep, fair and interesting monetization that every game company out there should consider.

## Current trends affecting the f2p gaming market

While exploring the free to play marketing and monetization, it is crucial to see how the market reacts to it and how it has evolved through time. We shall see if it's becoming a dominant model and what other models there are to compare it with. Following up, game types, usage, revenue, external indirect factors and current f2p penetration will be briefly discussed.

Before we begin, there should be an emphasis on the role of the Personal Computer to this market. As Schutte (2013) posted in the Newzoo Trend report, "Games played on a PC will generate $27.6bn this year, 39% of the total games market. This includes money spent on casual websites and social networks." 40% of the game market is just onto one platform that is connecting all the current gaming trends.

The major competitors here are mobile and console gaming but for the cause of our study they are just more platforms of distribution and more ways to reach gamers. The more the merrier.

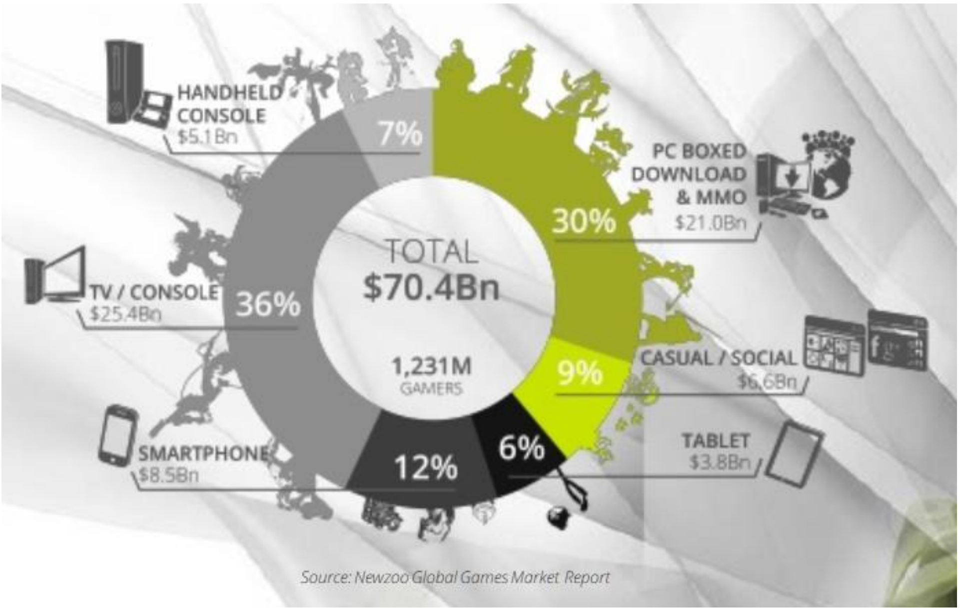



*Figure 2: Global games market per segment – (Schutte, 2013)*

## The internet

One of the major facilitator of the free to play bloom is "The internet". Without the internet, micro transactions and widespread recognition would be almost impossible and the current successful content distribution platforms would be nonexistent. Wherever the internet goes, it's a new market for any online product.

Cheap, stable and faster internet worldwide has vastly increased the audience for online games and digital distribution which are the two main reasons for the resurgence of PC gaming and the gaming in general.

| WORLD INTERNET USAGE AND POPULATION STATISTICS December 31, 2013 | | | | | | |
|---|---|---|---|---|---|---|
| **World Regions** | **Population ( 2014 Est.)** | Internet Users Dec. 31, 2000 | Internet Users Latest Data | Penetration (% Population) | Growth 2000-2014 | Users % of Table |
| Africa | 1,125,721,038 | 4,514,400 | **240,146,482** | 21.3 % | 5,219.6 % | 8.6 % |
| Asia | 3,996,408,007 | 114,304,000 | **1,265,143,702** | 31.7 % | 1,006.8 % | 45.1 % |
| Europe | 825,802,657 | 105,096,093 | **566,261,317** | 68.6 % | 438.8 % | 20.2 % |
| Middle East | 231,062,860 | 3,284,800 | **103,829,614** | 44.9 % | 3,060.9 % | 3.7 % |
| North America | 353,860,227 | 108,096,800 | **300,287,577** | 84.9 % | 177.8 % | 10.7 % |
| Latin America / Caribbean | 612,279,181 | 18,068,919 | **302,006,016** | 49.3 % | 1,571.4 % | 10.8 % |
| Oceania / Australia | 36,724,649 | 7,620,480 | **24,804,226** | 67.5 % | 225.5 % | 0.9 % |
| WORLD TOTAL | **7,181,858,619** | **360,985,492** | **2,802,478,934** | **39.0 %** | **676.3 %** | **100.0 %** |

*Figure 3: World Internet Usage and Population Statistics - Q4 2013*

According to a report from Internet World Stats, (2014)  the world population with internet access raised from 20% in 2007 to 40% in 2013. That's 1, 7 billion people ready to spread in these new markets and consume. Most importantly the penetration is steadily raising in Latin America and the Middle East and this percentage is bound to increase.

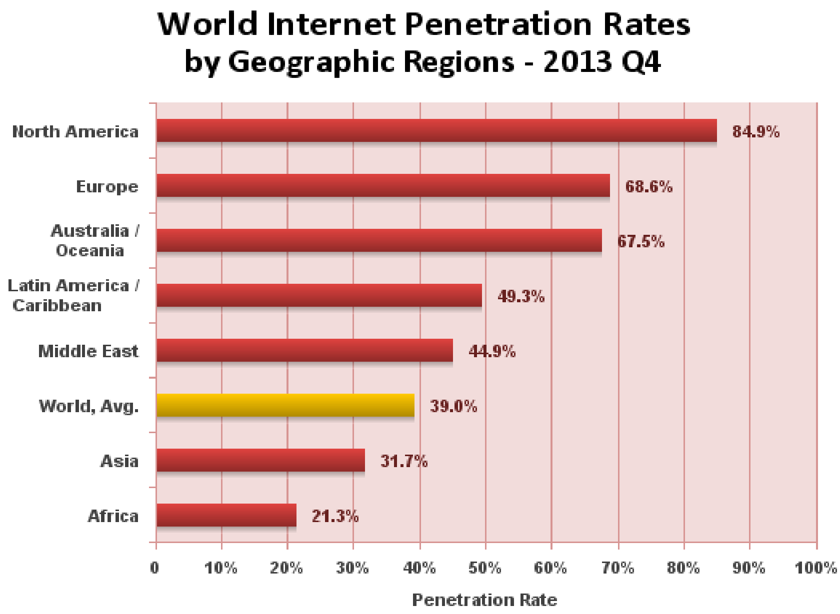



*Figure 4: World Internet Penetration Rates - Q4 2013*

This assumption is confirmed by Google's Executive Chairman, Eric Schmidt who said that: "For every person online, there are two who are not. By the end of the decade, everyone on Earth will be connected" (Cross, 2013)

Last but not least there should be a reference on mobile broadband. Casual single player games have turned into social multiplayer and competitive games that someone can play on asynchronous modes on the run. This opens more options for game developers and it has a lot of potential in developing countries. 3G and 4G networks and devices are still growing in popularity and there is still much to learn about smartphone and tablet capabilities once mobile broadband becomes even more stable and mainstream. Even streaming gaming platforms can come into discussion and for sure the industry will completely change in a few years and we have to be able to keep up in order to adapt, survive and grow.

## Streaming

Better internet speed has allowed for more user created content. Live video streams are one of the new entrants of this new age that has helped video gaming, e-sports and free to play. Specifically broadband internet and better upload speeds have helped more users start streaming from home.

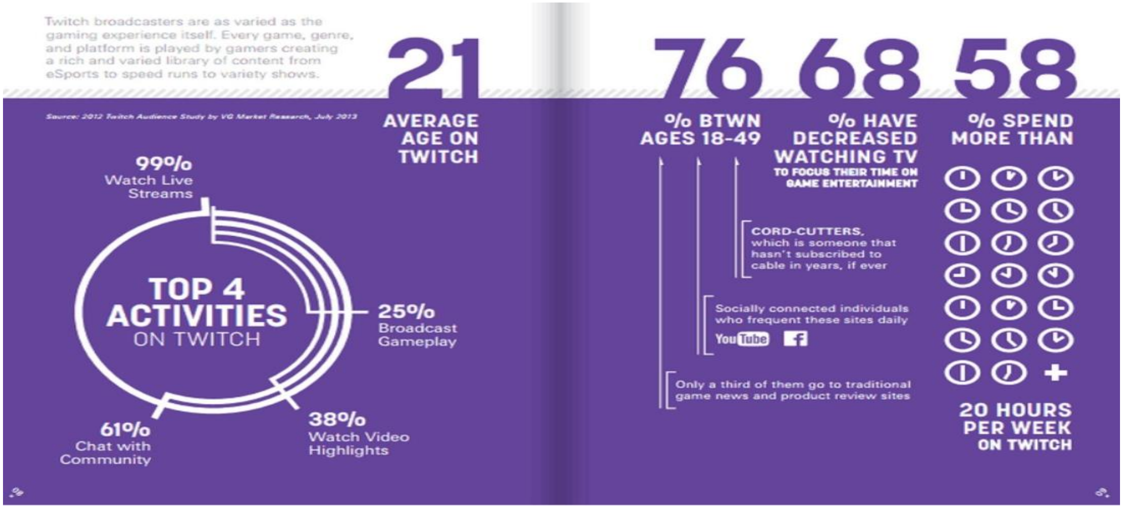



*Figure 5: Twitch.tv in numbers 2014 (Morris, 2014)*

The mass appeal of home streams has created many gaming personas who then turned into professional players and has created so many teams, fans and merchandise that would boggle the mind of any early 2000 marketer.

On top of that, gaming videos had peaked and multiplied during the last few year. Almost half of the views on you tube gaming videos were on user generated content. (Schutte, 2013) Additionally, twitch CEO recently announced that they are expanding on mobile video game streaming!

Streaming is a great promotional platform as well since streamers have a huge appeal on gamers and can easily promote new games and even in-game merchandise. It's also potentially profitable for the users so everyone is trying to get better at whatever game is the latest trend. They are streaming their efforts and are hoping for more subscribers, followers and at the end of the day fan recognition and maybe a spot at a top team.

## E-Sports

The Internet has allowed for another up and coming phenomenon, which requires its own dissertation since it is the future of gaming, E-Sports.

E-Sports is the evolution of PC and Console gaming into traditional sports. It is leagues, tournaments, cups, sponsors, teams and huge prize moneys that have been an upcoming gaming trend for quite a few years and have boomed to indescribable amounts during the last two years. League of Legends and DotA 2, the two main MOBA games are responsible for the media coverage that this phenomenon have received due to the huge prize pools and mind blowing viewership, organization and attendance. At this summary by Superdata Research (2013) some facts from 2013 are displayed. Those have already geometrically increased on the first semester of 2014.

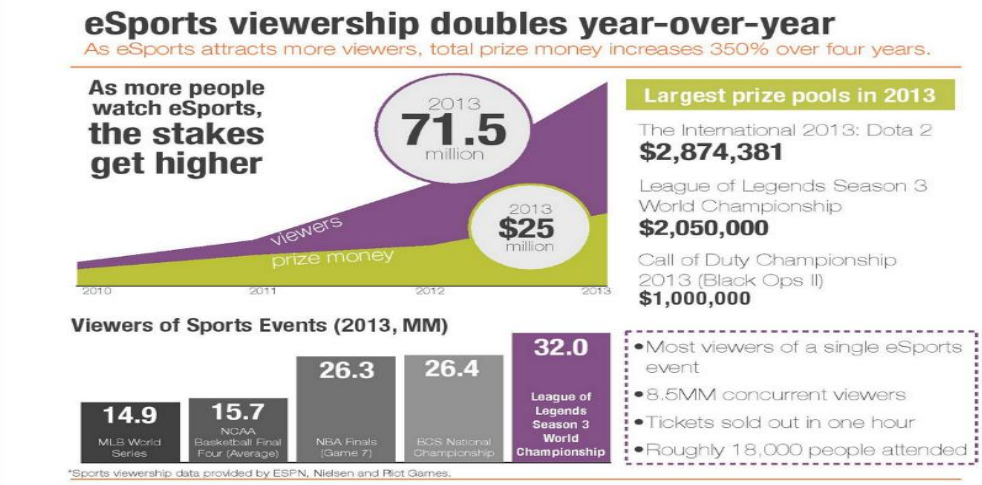



*Figure 6: E-sports facts 2013*

The prize pool for "The International 2014", DotA2 annual event, has been crowd funded and has reached the ~11 million mark while the same event last year without the community's contribution had a ~3million total prize pool. With the help of the community E-sports are bound to be huge and are making leaps and bounds towards dominance over the traditional sports.

A younger population has grown to their 30's and they are currently financing their once niche hobby into pure acceptance. The once frowned upon pastime is now mainstream and is being watched by millions.

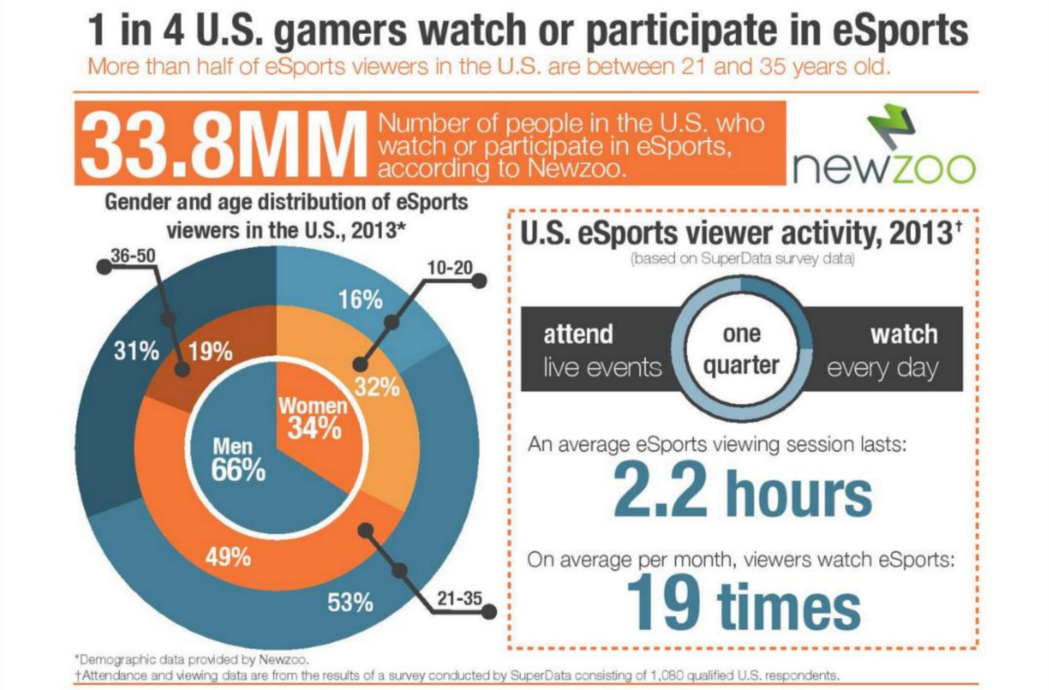



*Figure 7: Gamer participation in E-sports*

The New York times have featured e-sports as their main article quite a few times lately and are trying to explore this phenomenon because as their editor Wingfield (2014) states: "Global revenue for games is $20 billion higher than the music industry's and is chasing that of the movie business — the games industry has turned its ambitions toward the lucrative world of professional video game competition, widely known as e-sports."

Anyone can join this magical and profitable world of e-sports if he has the fingers, skills and perseverance required to grow up and improve as a gamer. This never ending cycle of fans and wannabe professionals is making this industry rapidly bloom since to join someone just needs a PC, the right mindset and a stable Internet connection.

## Digital Distribution

Digital distribution is a child of the Internet which in turn has given life to the free to play games. Managing to address such a huge audience with a simple online marketplace without the need for retail distribution and actual logistics is something companies couldn't even dream off a few years ago. Those, now irrelevant, expenses have given access to a whole new generation of indie and independent developers that don't have to rely on publishing companies. Anyone can create a game, publish it on one of the main distribution platforms and cross his fingers.

The alpha version of DayZ, which turned into a big success, "managed to generate $5m in revenue in the first 24 hours after its launch". (Weston, 2014). At the same time alpha versions are being sold at full price and kick starters are filling the market with flop and success stories. This leads into increased market saturation and hundreds of games getting into online markets daily. Some of them die off but the greatly designed and thought out games are never left out. Word of mouth is one of the most important consumer behavior aspects and it helps great games achieve great results.

Marketing in its traditional form is becoming obsolete and if someone cannot adapt from the older theories and mottos he is doomed to stay behind in this ever-changing world that is different every passing day. As Weston, (2014) says, "With the global video games market potentially worth up to $93bn in 2014, industry diversification brings rich rewards, but failing to exploit developments in the digital space could see traditional triple-A console developers increasingly challenged."

## Mobile gaming

The main mobile platforms for f2p games are devices that support Google play and devices that support IOS. It's an ideal medium since "mobile penetration has reached 93% of the global population" (Kemp, 2014). An extreme number by any means and a huge audience for any aspiring developer.

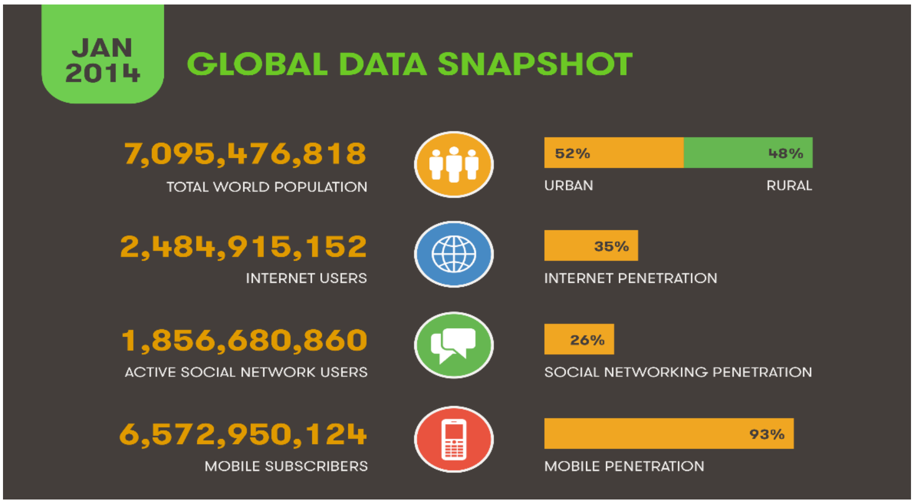



*Figure 8:Internet social and mobile penetration - 2014*

Traditionally developers were more inclined towards the IOS Apple Store since Google play didn't seem to create as much revenue. Sterling (2014) though is presenting data which shows that Google play app revenue has almost doubled from Q1 2013 to Q1 2014 with a positive trend still going.

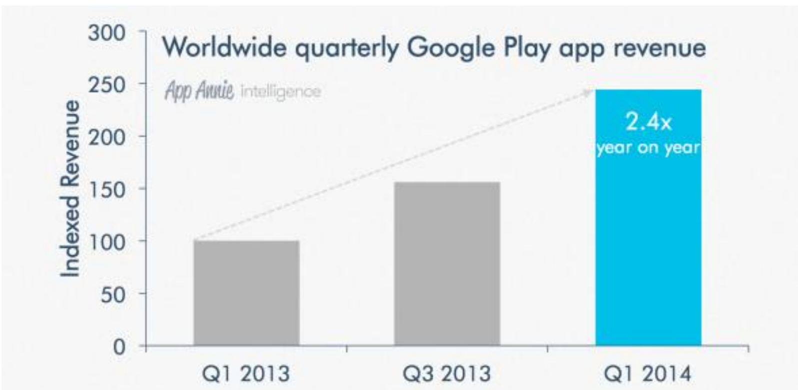



*Figure 9: Worldwide Quarterly Google Play app revenue*

The same data dictate that even though games are disproportionately less downloaded in comparison to the Applications, they account for almost 90% of Google Play's revenue for Q1 2014. At the same time reports show that 98% of the worldwide Google Play's revenue comes from freemium games and applications while for Apple store, the same percentage is 95%. Freemium is, as we will see below, one of the major f2p monetization types.

App Annie analytics (2014) confirms that games are topping the revenue charts on Q1 2014 reports on both Google play and Apple Store.

**Top Categories by Revenue**
**iOS Q1 2014**

| | Category | Rank Change vs. Q4 2013 |
|---|---|---|
| 1 | Games | - |
| 2 | Social Networking | - |
| 3 | Music | - |
| 4 | Education | - |
| 5 | Entertainment | - |

**Top Categories by Revenue**
**Google Play Q1 2014**

| | Category | Rank Change vs. Q4 2013 |
|---|---|---|
| 1 | Games | - |
| 2 | Communication | - |
| 3 | Social | - |
| 4 | Tools | ▲ 1 |
| 5 | Travel & Local | ▼ 1 |

*Figure 10: Top iOS and Google play Revenue categories - Q1 2014*

Having in mind that 98% of the total game revenue comes from freemium/f2p games we can confirm that Google play has transformed into a great f2p platform.

On the other hand, "The iOS App Store remains comfortably ahead in worldwide revenue, generating about 85% more revenue than Google Play" (App Annie analytics, 2014). According to Patterson (2014) "The Google Play Store mobile app revenue will catch up to Apple's App Store in 2018".

So even though we had sudden growth, Apple store is still the most favorable choice for developers. Despite all of this, we can see that the mobile gaming trend is positive and f2p has to be a game developer's choice for both Google play and Apple store. Either way as we will see further into our research, availability in both platforms is crucial for a game's success. Two very prominent and lucrative platforms set the rhythm for the free to play gaming market.

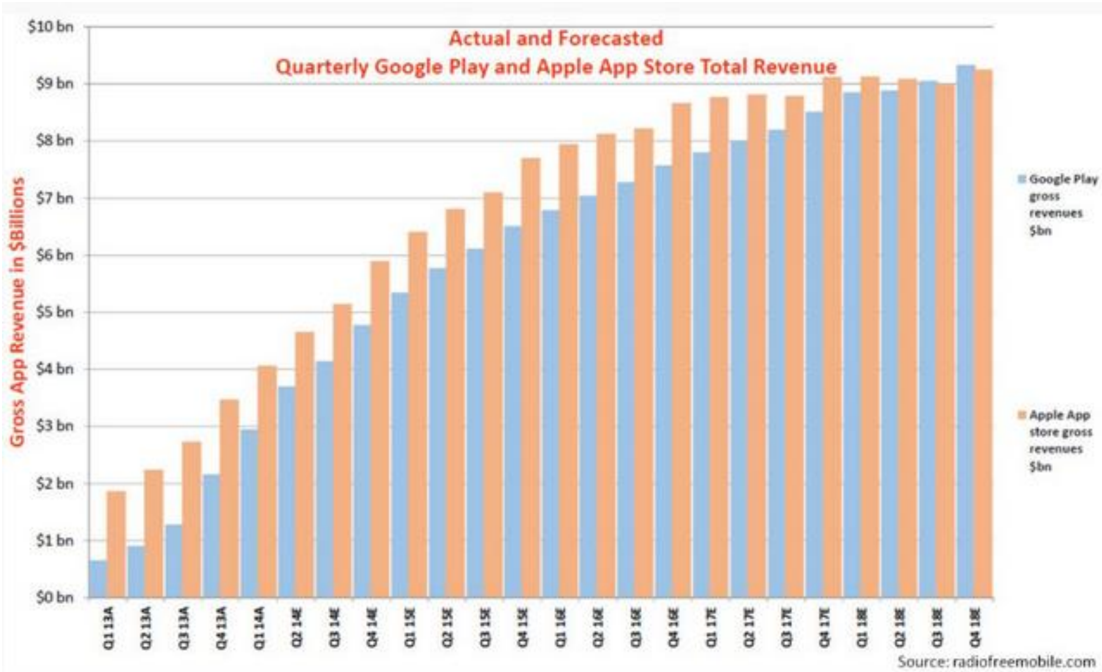



*Figure 11: Forecasted Google play and Apple store revenue till 2018*

The main mobile f2p game genres are puzzlers, social, match 3, grind, loop games and endless runners. Endless runners are covering ground and are becoming dominant in the Google Play and App Store. According to Galarneau (2014) "In the U.S. mobile penetration is 101%. A total of 48 million people play games on smart phones and tablets." And that's incredibly small if we consider the worldwide scale of the internet and the global penetration of mobile phones.

The upcoming mobile game streaming trend is going to create new markets, game types and opportunities for those that are quick to follow up, translate trends into games and applications and seize the future.

## Pc gaming

Pc gaming has been affected from quite a lot of changes throughout the last decade so the least we can do is identify the hardware and software market trends while trying to establish the f2p current and future potential.

### *Hardware*

PC games started thriving in the 1980's. When mice were introduced, and text adventures/ point and click games were the norm, they started creating a growing audience that "reached its zenith in 1999, when PC game sales in the U.S. hit an all-time high with $1.9 billion" (Haskins, 2007). That's when PlayStation 2 came along and things started going north.

Consoles were becoming powerful and affordable, while Personal computers were becoming powerful as well, but extremely expensive. This is partly true today but for the time being the gaming requirements are not making the leaps and bounds that they did for the past 20 years.

So today there is a turning point where one can acquire a gaming pc at the same price that he'll get a next-gen gaming console and where even low end PC's can handle quite a few games at medium settings. This developmental graphic and performance stall has allowed more people to join the "PC gaming master race" and has helped Personal Computers to make the come back and start becoming the major gaming medium once again.

### *Software*

A quick look to the main genres is required, to see how they formed the current market and what the ongoing trends are for each one.

## Massive Multiplayer Online Role playing Games (MMORPG)

Massive multiplayer online games are usually Action/Role Playing (RPG) games that take place in a unified universe where all the players are interconnected whenever they log into the game. They interact with each other and there is a large social part embedded into an otherwise "hardcore" RPG game. Those games started by applying a monthly subscription model and nowadays are slowly converting into free to play games.

The pioneers that started this were Ultima online and EverQuest which were released in the late 90's. At first the games looked unsuccessful in terms of retail sales, but when someone looks at the financial reports, "for 2000, Electronic Arts was reporting over $20 million in subscription revenue from a product released way back in 1997." (DFC Intelligence, 2008)

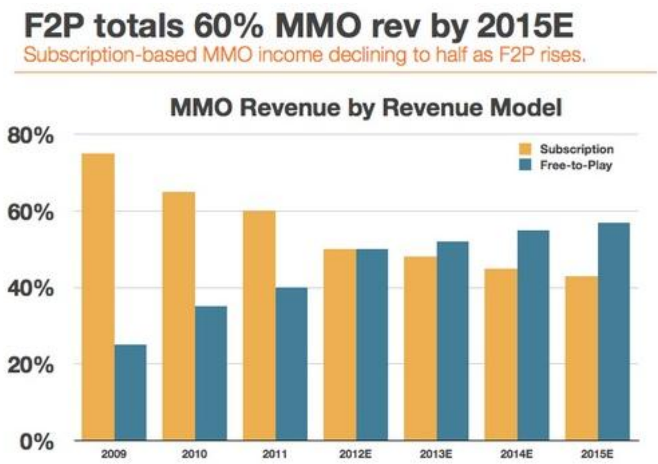



*Figure 12: The change from subscription to f2p in MMO (Superdata Research, 2014)*

World of Warcraft (WoW) was the game that made a huge entrance and revived the MMORPG genre for good. Many companies have tried to mimic it and failed, and this was the beginning of the f2p MMO era. The barrier to entry for new and upcoming developers became very low. Any aspiring developer could gather a small team, create like 30-40% of a game, throw it out as f2p out there and then develop depending on its success and the user needs.

## Massive Multiplayer Battle Arena (MOBA)

MOBA games are not as massive, game world-wise as the MMO's and don't delve into Role playing as much. They are usually limited into 30-40 minute sessions of 5vs5 action between two teams. The progression in these games is not based on grind but mostly on skill and win ratios. It is an entirely different world and is addressing a whole new audience of "hardcore multiplayer" players with different motives and incentives to play.

MOBAs first started with Defense of the Ancients (DOTA) which was a free user created map on the level editor of Warcraft 3. Blizzard has been using this game to force retail sales for almost a decade, until other games came along and threw DotA out of the market. DotA is one of the best case studies for user created content that vastly increased the lasting success of a game.

Currently all the successful MOBAs are entirely free to play and are basing their monetization on low ARPU and mass quantity of players while focusing on monetization from aesthetics (skins i.e.) and non-game altering boosts.

League of legends (LoL) has quite a low ARPU for the top 10 free to play MMO games with a mere 1.32$ ARPU.

**AVERAGE REVENUE PER USER FOR MAJOR FREE-TO-PLAY MMO TITLES—WORLDWIDE**

| Rank | Title | Publisher | Average revenue per user |
|---|---|---|---|
| 1 | World of Tanks | Wargaming.net | $4.51 |
| 2 | Team Fortress 2 | Valve Corporation | $4.36 |
| 3 | Guild Wars 2 | ArenaNet | $3.88 |
| 4 | War Thunder | Gaijin Entertainment | $3.26 |
| 5 | Planetside 2 | Sony Online Entertainment | $2.86 |
| 6 | Combat Arms | Nexon | $2.81 |
| 7 | Crossfire | SmileGate | $1.58 |
| 8 | DOTA 2 | Valve Corporation | $1.54 |
| 9 | Heroes of Newerth | S2 Games | $1.48 |
| 10 | League of Legends | Riot Games | $1.32 |

*Figure 13: Top 10 ARPU for MMO f2p (Superdata Research, 2014)*

On the same time on another chart by Superdata Research (2014) we can see that LoL almost tops the total revenue chart for free to play games targetting large quantities of low ARPU players.

**TOP 10 ONLINE GAMES, BASED ON FREE-TO-PLAY EARNINGS—WORLDWIDE**

| Rank | Title | Publisher | 2013 Revenues (mil $) |
|---|---|---|---|
| 1 | CrossFire | Tencent/SmileGate | $957 |
| 2 | League of Legends | Tencent/Riot Games | $624 |
| 3 | Dungeon Fighter Online | Nexon | $426 |
| 4 | World of Tanks | Wargaming.net | $372 |
| 5 | Maplestory | Nexon | $326 |
| 6 | Lineage I | NCSoft | $257 |
| 7 | World of Warcraft | Activision/Blizzard | $213 |
| 8 | Star Wars: The Old Republic | Electronic Arts | $139 |
| 9 | Team Fortress 2 | Valve | $139 |
| 10 | Counter-Strike Online | Valve/Nexon | $121 |

*Figure 14: Top 10 f2p games based on revenue*

E-sports are the main facilitator for MOBA games and are driving the market by creating aspiring new players, candidates for the vastly growing prizes that e-sports tournamenents are offering.

### First Person Shooters (FPS)

First person shooters are one of the first online genres that actually exploded and created the first generation of competitive online gamers. Counter strike, which evolved the classic "Doom" style games into multiplayer is around since the late 90's, is still huge among teenagers and has inspired hundreds of clones and similar games that absorb a big part of the market.

Team fortress 2, Crossfire, Planetside 2 and Counter Strike Online are some f2p games that emerged in the fps scene, with Overwatch being the newest addition. Since the genre is one of the oldest in the market and the market has already matured years ago, the player base is steadily declining. That's bad news right? Well, no. Superdata Research (2013) is reporting a decline in the audience size but at the same time an increase in the ARPU. Players that stay tend to pay more and cover the space of the non paying audience that left.

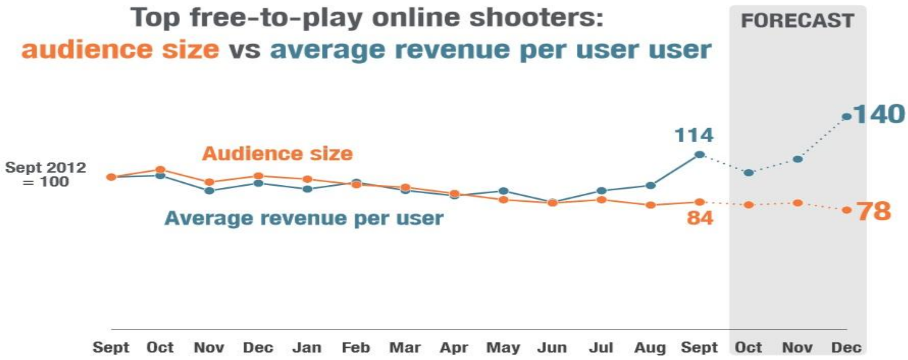



*Figure 15: F2p FPS - Audience size vs ARPU*

## Social/Browser Games

Social Pc games are usually direct copies of the mobile versions in all of their aspects. They are usually published through Facebook and related media, require heavy micro transactions in order to proceed and have 1-2 years life cycle with a mainly casual audience.

People that have never been involved in gaming and many female gamers have emerged into "big spenders" and have created a whole new market.

The sense of belonging and the increased accessibility of browser games have made many people hooked. Mafia wars, Castle age, Farmville, Petville and many other puzzle games like song pop, draw something and words with friends established themselves as browser game superpowers. Many newly found marketing strategies have showed up and word of mouth and viral are now in every marketer's everyday dictionary.

This new world has brought new obstacles and baby diseases that we have to learn how to get rid of. Sharing and spamming are unfortunately highly valued between the groups of decision makers, but as Hansen & Lee (2013) point out, "marketers must balance appeal of economic incentives with low disruption to play experiences."

## Console gaming

Console gaming has traditionally been the main platform for AAA titles and first person shooters. Since the NES and Master system there were usually 2-3 competitors for each generation and all of those generations were orbiting around retail sales and nothing more.

Even though digital game copies were available since the Ps3/360 era, hardly anyone preferred this method of distribution since there were no incentives at all to buy the game digitally. The price was the same and the user lost the physical copy assets and collectible aspect.

At the dawn of the PlayStation 3/Xbox 360 era though, digital games and online gaming services have taken the stage. PlayStation plus, which offers a library of games to download if you pay a monthly subscription, and Xbox games for gold have tried to make users more accustomed to digital games and were offering a large game library almost for free. That was a great stepping stone for Xbox One and PlayStation 4 that have been promoting digital game distribution since game one. Widespread digital distribution makes it easier for f2p games to get into the market.

As Konda (2012) speculates, “the penetration of f2p into consoles with mid-core hard-core AAA titles will help broaden the audience for these games”. Consoles are heading towards a mix of retail and f2p titles and the penetration from f2p is larger than ever before!

Llamas (2014) is expecting “console micro transactions to provide gamers additional content without infringing on the console game experience and offer publishers a healthy secondary source of income.” The same report presents “23 million console gamers in the US who use micro transactions, totaling $352 million in annual sales.” It’s an evolving market that has to be handled very gently due to the nature of the platform. If the model differentiates a lot there's always the fear of the "death of the consoles" which is already a hot topic in the gaming communities. They are considered glorified computers and they do need a major positive differentiating factor in order to survive.

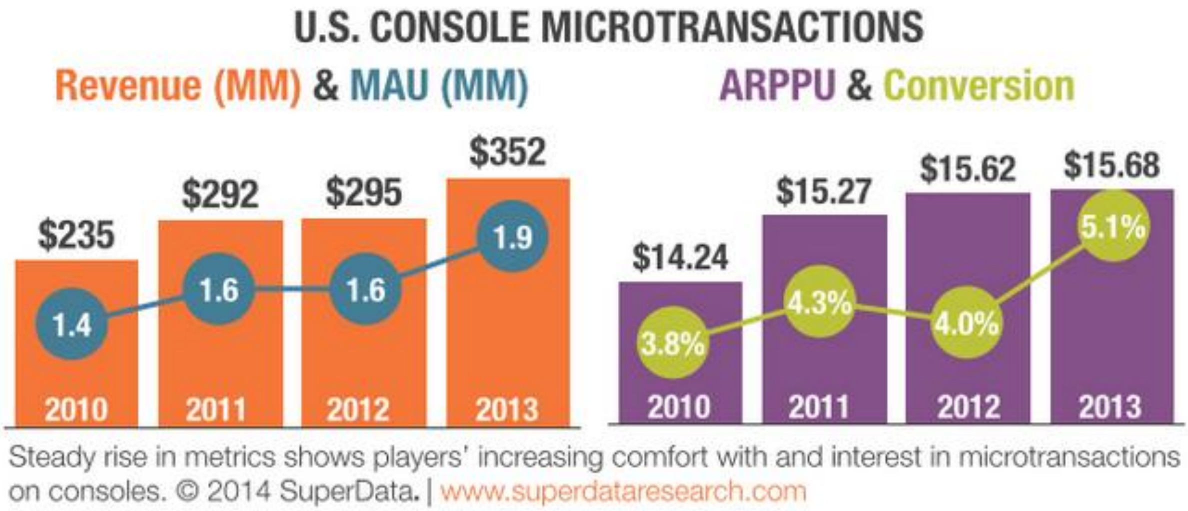



*Figure 16: US Console micro transactions 2014*

# 2. Applied Market Segmentation and Consumer Behavior

Chapter 1 has shown us that there are a few billion internet users, potential free to play players and customers. But who are these people? Where do they live, what do they do for a living, what is their genre and age group? What are they playing and when? How can companies make them pay for their games?

Market segmentation and consumer behavior are the two main classic theory paradigms that we will consult throughout this paper in order to answer those questions, observe trends, categorize segments and obtain results.

## Market Segmentation

Market segmentation is the division of the market into key segments that have the most impact on our business. Traditionally markets are primary divided into four segments:"

- behavioral
- demographic
- psychographic
- geographical" (Keller & Kotler, 2012)

Market segmentation will be the first step that has to be taken in order to identify consumer behavior on said markets and see how the improvement of conversion and ARPU can be achieved on any platform and genre.

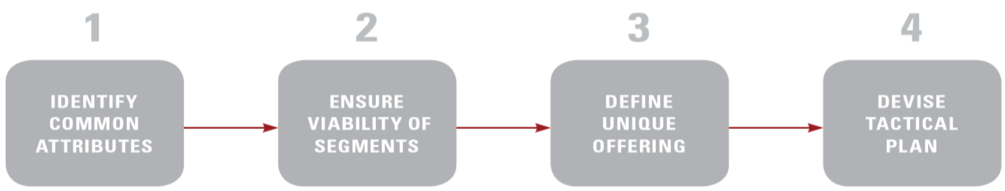



*Figure 17: Diversified marketing through segmentation*

In order to create segments for the research Keller & Kotler's (2012) main guidelines for market segment creation should be followed:"

- Clear identification of the segment,
- Measurability of its effective size,
- Its accessibility through promotional efforts, and
- Its appropriateness to the policies and resources of the company."

Through segmentation one should be able to achieve customerization. "Customerization combines operationally driven mass customization with customized marketing in a way that empowers consumers to design the product and service offering of their choice." (Keller & Kotler, 2012).

As the aforementioned authors say "Mistakes in choosing or switching target markets can be costly", so observers should be fully aware of the market, the segments and their future potential and make sure that they take into account anything that would affect target groups. After identifying said segments the Elaboration likelihood model and other related techniques should be used, in order to find the willingness to buy of each segment and the potential to offer products for each market segment and each elaboration route progress

Crawford & Lewis (2013) have conducted a large scale research regarding the f2p scene where they found out that 8/10 consumers could be characterized as gamers.

"Even though gamers exist in all demographic groups they are slightly more likely to be 13-34 year old males. The big spenders are males 18-24." (Crawford & Lewis, 2013). This sterotypical belief about young males being more prominent spenders should be examined in the research part.

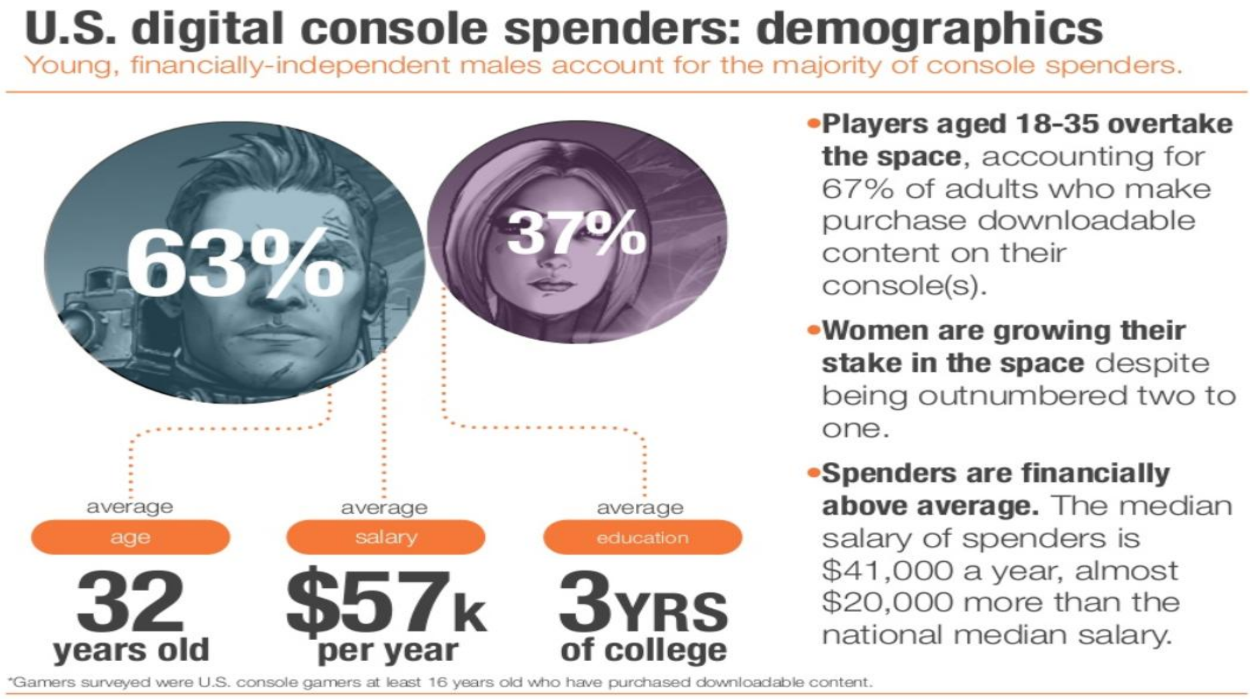



*Figure 18: Console spending demographics*

The same research from Crawford & Lewis (2013) has shown women leading the smartphone gaming audience with a whopping 45% top preference while male gamers topped at 49% for console gaming. On the game genre side, both male and female prefer Strategy games and then they expand to two opposites. Male gamers go for shooters, sports and everything action related while women prefer social and casual games.

"In short, the gaming population is becoming more and more diverse, and developers have taken notice." (Galarneau, 2014). We know nothing about the current and potential market segments. The rising gamer population is more diverse and complex than ever before and those segments have to be identified in order to create efficient and satisfying games.

## Consumer Behavior

A common definition of consumer behavior (also mentioned as consumer psychology) can be summarized into "The study of individuals, groups, or organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society." (Hawkins & Mothersbaugh, 2012)

The main usage of user behavior observation will be the alteration of the marketing strategy and the creation of behavioral segments

In consumer behavior, according to Cherry (2013) we study:"

- How consumers choose businesses, products and services
- The thought processes and emotions behind consumer decisions
- How environmental variables such as friends, family, media and culture influence buying decisions
- What motivates people to choose one product over another
- How personal factors and individual difference affect people's buying choices
- What marketers can do to effectively reach out to their target customers"

In gaming in general and in free to play more specifically we should be able to answer most of the above in order to maximize the conversion rate and the game's success.

## Black box theory

Consumer behavior largely depends on a number of internal and external stimuli and on the client's immediate social, political and economic surroundings. The Black box theory supports that purchase decisions can be traced back on a mix of buyer's influences and marketing stimuli. This is giving marketers the opportunity to research those attributes, and try to alter and adjust what they can in order to feed the black box what they need and achieve better results.

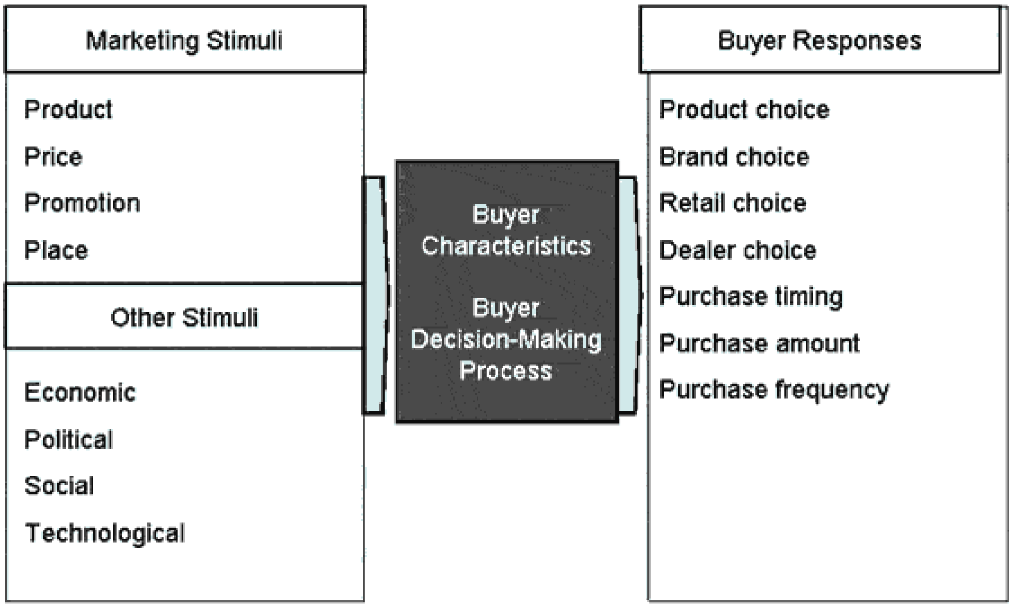



*Figure 19: The black box decision model*

All of the characteristics described above are working as one in order to influence a buyer's decision. However, we do not think about each purchase we make. There are some major purchases that people think about critically and then there are the impulse non-involved purchases that are a result of a peripheral route processing. Those are the basics of the ELM that will be described below.

## Elaboration likelihood model

The Elaboration likelihood model created by Petty & Cacioppo (1981) determines how likely is it that you will elaborate before buying something.

ELM can be divided into:

1. "Central route processing when you elaborate on things that really matter"

These are the products that the consumer chooses to buy after a lot of thought, comparison and heavy research. In gaming we should offer things that make sense and someone will be willing to obtain after rationalizing. Things that could save him time and aid his need for achievement and self-esteem, factors that are quite high on Maslow's hierarchy of needs.

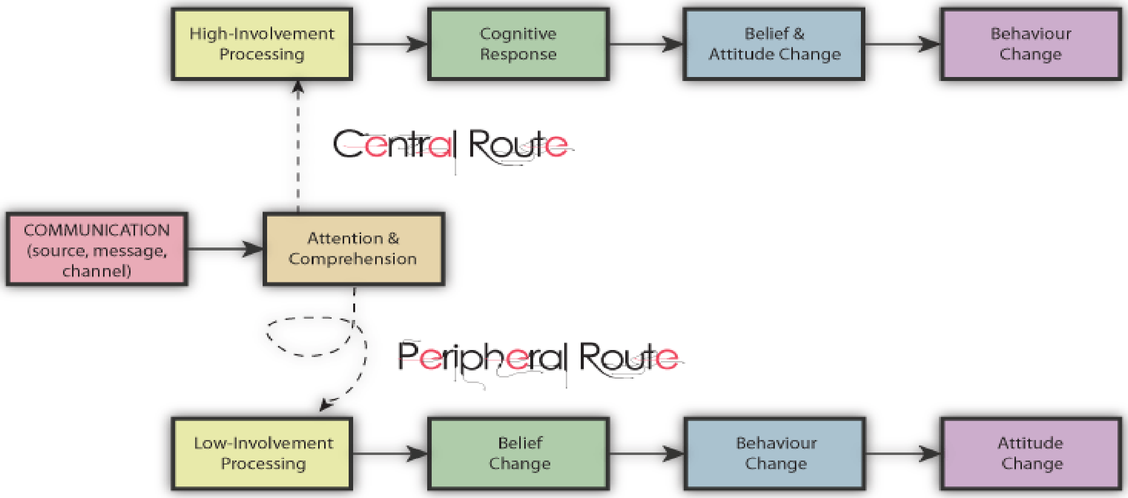



*Figure 20: Elaboration Likelihood model*

Gaming has been a great way out of real life problems and has created a whole industry out of people's drawbacks, fears and insecurities. The in game achievements and rankings are helping people to boost their confidence and easily fulfill their psychological and self-fulfillment needs. Its "cheating" and a placebo substitute but many people tend to buy their way into the pyramid.

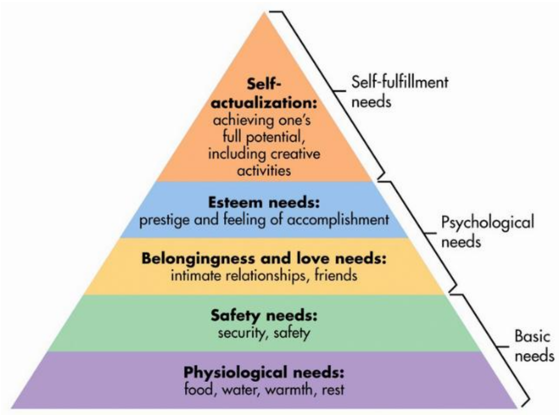



*Figure 21: Maslow's Hierarchy of needs (Maslow, 1943)*

2. "Peripheral route processing when you allow yourself to be influenced by others"

That's the process that takes place when people are affected by others and the attractiveness of a product or advertisement and not by direct logical thought. They are more willing to buy due to superficial factors and not by judging the actual worth of a product.

Peripheral route processing is also something that f2p marketers can take advantage of since compulsive and mimic buys are what drive micro transactions. The streams and professional players are great influencers for peripheral buys. The prestige buys can drive aesthetic item buys while the sense of belonging can make people buy things that will bring them closer and make them more recognizable in their online friend cycle.


*Figure 22: Practical and emotional incentives behind purchases. Big Fish (2013)*

## Initiation motive

With the increasing number of games and the limited time of gamers it's extremely hard to convince people to give 40-50€ for a boxed/digital title. Reviews and demos can promote certain games but this is not the case for most of the hundreds of games that get published daily.

Many players rely on free to play for their entertainment needs and they can spend hundreds of hours without ever giving a single euro. This is very important for younger gamers since their budget is limited and they'll prefer to turn to f2p anytime if they are given a valuable product. So trying without buying is for sure the major asset that f2p has to offer. The implementation of all the other payment and enjoyment options is what makes or breaks a game.

## Impulse Purchases

This is one of the main behavioral aspects that leads to in game purchases. Especially for certain kinds of games the flow and the availability of certain items can lead to increased impulse buying. This is crucial for game design and especially for the game interface layout and store availability that they have to be of higher quality that promotes impulse buying.

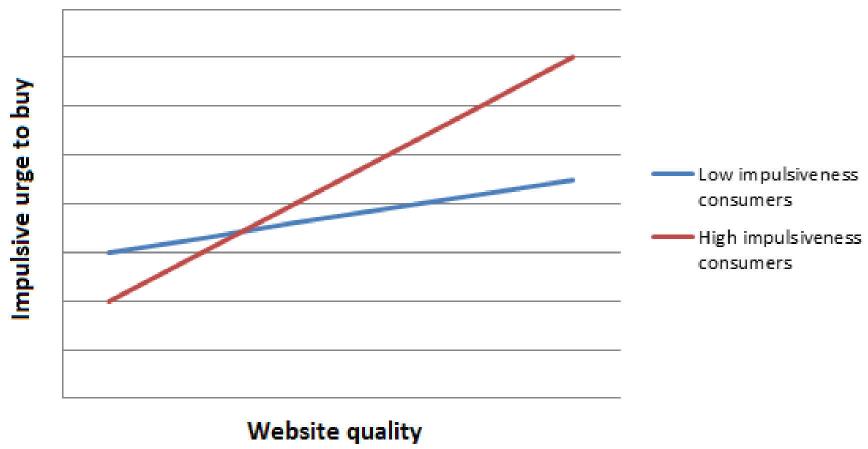



*Figure 23: Quality vs Impulse purchases*

(Konda, 2012) suggests that impulse purchases can be driven by two factors,

- “Demonstration of the product and its value
- Convenience.”

In League of Legends there are champion skins. When you equip them everyone in the game can see them and feel the need to buy them. On other games that are pay to win, the weapon damage or popularity can be deciding factors.

As far as convenience goes, boosts and power enhancements come into mind when someone is stuck in a difficult or time consuming task and wants to get over this part quickly and easily.

## Loyalty

Players can end up spending literally thousands of hours playing a game if they invest into it. The more they play, if the game is designed properly, the more they’ll come back to it. This game loyalty is very important for the fate of any game

Loyal players are not necessarily better clients that pay more. They do however bring in more players to the game and that’s why we need them around. They do provide a stable income with small purchases but the most important part is the word of mouth that they spread.

It’s the small clubs and groups of friends that expand and create this sense of belonging and community. The expectation of a friend to join and login covers very basic human needs translated and answered through the game world. As Williams (2014) proposes, loyalty can be related to a “Coffee shop parallel: Because we’re friends we are going to the coffee shop more often to hang out.” Loyal players drive the market just by existing as an anchor for upcoming core gamers.

## Word of mouth

In electronic word of mouth marketing, incentives are given for users to promote a company's products and that's what many games tend to do in order to easily increase their player base and potential conversion audience. This is a common strategy in social/browser games while it is rarely seen in other core genres. It exists in the recruit/refer a friend options that many games have but it's nothing compared to what most truly social games do.

The reality is that no one really likes spam and those who are technologically literate will never spam people for the sake of energy and other social game tidbits. A study from Hansen & Lee (2013) suggests that "as consumers feel social network advertisers' sincerity, they willingly become persuasion agents". If you go out of your way to state the needs of your application, or you are just honest about what you are offering, you may achieve better results on the long run that direct spamming exhortation. Sincere Word of mouth is what made LoL the colossus that it is today.

## Free to play Monetization

In this part of our paper we will categorize the main income sources of free to play games and briefly analyze them in order to understand their usage for our further research.

We have to identify all the current and potential revenue sources and then see how we can better mix them with the game types and said market segments

As we have previously observed the percentage of paying customer on f2p games is 6-10% in the best of cases so we have to see how we can lure the rest 90%. Unfortunately as Konda (2012) mentioned, "Market saturation is making discoverability challenging for new games, with some game makers struggling to find alternative ways to get their products known." This is a great obstacle for small companies with little to no market budget that only creativity and word of mouth can overcome.

According to Luban (2012), there are five major techniques to generate revenues:"

- Item-purchasing
- Affiliate marketing
- Advertising
- Freemium
- Restricted access"

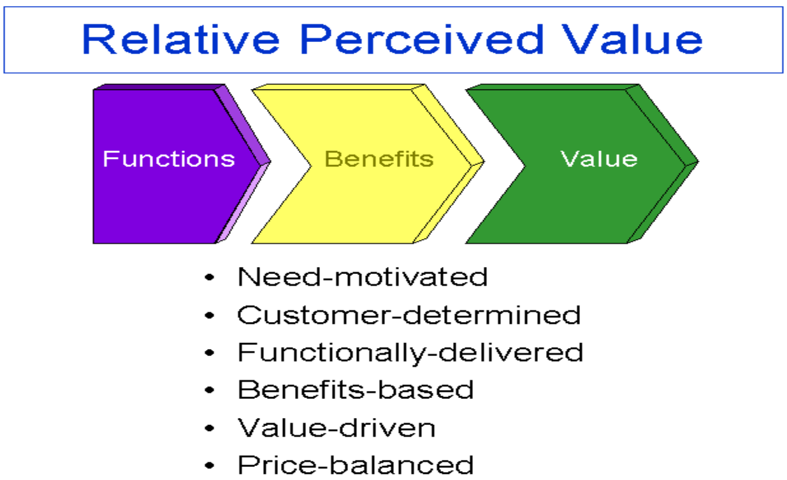
We will look into them and of course mention even more revenue avenues while trying to come up with new ones.

## Soft and Hard Currency

Hard currency purchase is the act of buying something with actual money, while soft currency is the act of buying something with funds that the user is able to generate in game.

Usually soft currency is a way of making the user come back with daily boosts or related incentives. League of legends for example has a "win of the day" function where the first win that you make each day gives to the player increased soft currency rewards.

The hard currency on the other side is kept in order to balance a game's economy and give a premium (but not pay to win) character to whatever can be bought with just actual money.




The customer must feel the value for money of that hard currency and believe that he will greatly benefit by using it. Many companies offer some hard currency rewards after a certain amount of games in order to "hook up" the player with a taste of premium content.

Something that we should keep in mind throughout this section is that a customer should never be tempted to regret his early purchases by changing the prices drastically in a short term. If a price change is crucial they should be given the appropriate credits and rewards, or even refunds.

## Item-Purchasing

According to Luban (2012) "almost 90% of a free to play game's revenues comes from item purchases". This shows the weight that has to be put on this category and its optimization.

The major item categories are:

- Game resources
- Customization items.
- Comfort items.
- Game modules.
- Collectible items.
- Affiliation items.

<u>Game resources</u>

Game resources usually refer to in game boosts. They can give double soft currency, time warps, more lives or special powers for single player games. Experience gains, fastest leveling and everything related to in game boosts and power enhancements.

<u>Customization or Vanity items</u>

One of the most important and not game altering methods of monetization are customization and vanity items. Those items affect the appearance of the characters or user interface and do not give any competitive advantage against fellow players. The most successful companies are using vanity items as their main f2p income.

Vanity items ensure the competitive balance and exist for people that truly enjoy the game and want to contribute with hard currency. A successful recipe for a free to play game is making a game that people truly enjoy and they decide that they want to contribute.

Comfort items.

Very similar to game resources, comfort items tend to give an advantage over the other players. In single player games they act the same way as boosts and are making a few daily actions unnecessary and optional. But for ladder games they give an advantage over other players and create a pay to win category which is frowned upon in the gaming communities.

Game modules.

This is something that console games and most AAA titles are using. More maps, characters, skins or even missions come in the form of DLC or purchasable content. For single player games this is acting more like an expansion or optional content, while for multiplayer games this is a main form of monetization.

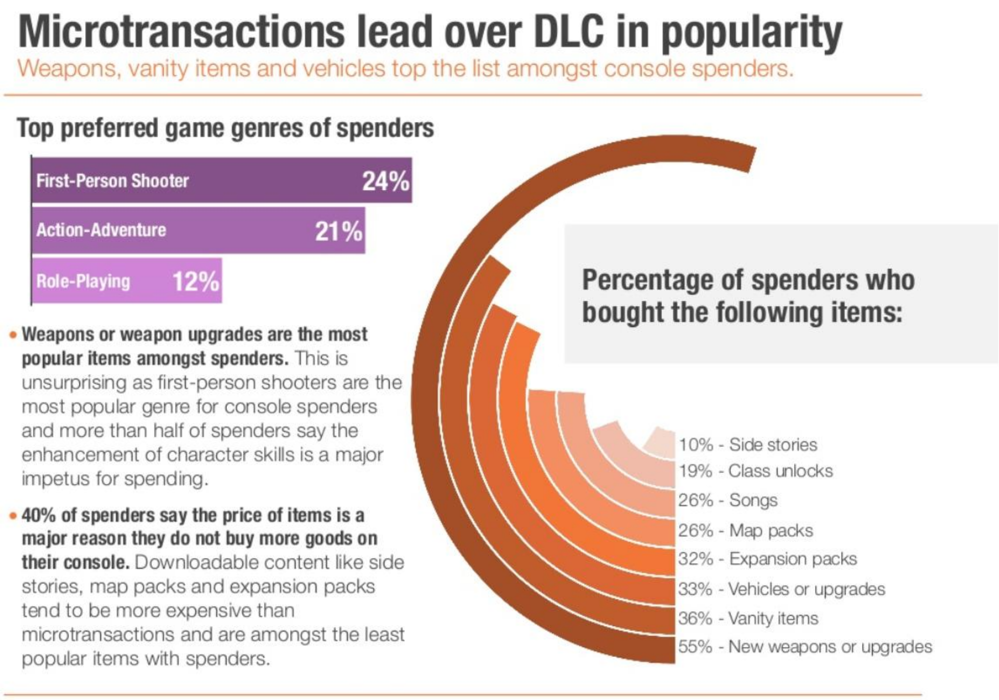



*Figure 24: Console micro transaction trends*

Console games can benefit from this scheme and there are already games like Forza or Killer instinct that are giving the game almost for free and are then charging for cars, or characters.


*Figure 25: Overdoing it with Call of Duty: Complete Bundle*

## Collectible items.

Collectibles are mostly aesthetics/ non game altering items that are offered for a limited time or under certain conditions. Hearthstone which is a Collectible Card Game (CCG) is offering collectibles in an interesting way. Gold cards are the same as normal cards but require large amounts of dust, a soft currency, to build them making soft currency boosts thrive via the need for collectibles.

## Affiliation items.

These items are mostly targeted to existing core players that want to belong in a community or show their support for a certain faction, guild or even e-sports team. League of legends has icons for their championship teams. Users can buy them to show their support and a certain percentage of the profits goes directly to the teams. Other examples can be guild banners, national flags or other items that can be considered vanity/customization but are directly related to affiliation.

## Advertising

Advertising in free to play games was the main reason they were created in the first place, but in-game purchases took place. Most of the first generation f2p games were made with ads in mind or even made to promote certain brands. Doritos crash course and dash of destruction are the first games that come to mind. They were completely free to play and they just had the Doritos ad into the background. The games themselves were really fun to play and were the only free games available in the Xbox marketplace. Being free in a huge audience is something extremely important and Doritos understood this pretty early.

According to Morrison (2014) players highly prefer non-intrusive advertisements that are coded into the actual gameplay. More specifically, banners and brand integration are the least frowned upon methods. Gameplay implementation though means that the game was designed with this in mind and that should be a priority at game design.

For advertisements to worth the trouble the game has to be widely known and huge already or to be lucky enough to go extremely viral. Flappy bird, a 2014 fad has launched in November 2013. Somehow the extreme difficulty and clumsiness of the game has made it bring in millions of downloads and in the span of a month "The app has been downloaded 50 million times earning on average $50,000 a day from in-app ads." (Hamburger, 2014)

It's interesting to point out that the increase of the free to play popularity brought in more advertising investments. As Patterson (2014) wrote, "mobile advertising industry reached about $12 billion in 2013, a large share of which can be attributed to the promotion of apps. Mobile advertising can reach the $30 billion mark if its growth continues and app advertising spending remains proportional."

## Affiliate Marketing

There are many ways to achieve affiliate marketing in free to play games. The most common is to make the user win soft currency if he visits a certain partnered website. Some games invite you to register through certain websites for increased soft currency or even some boosts and power enhancements. It's an interesting strategy but it has to be limited and not interfere too much with the core game.

## Freemium

Freemiums used to be a big deal. They were like VIP subscriptions for an otherwise free to play dual currency game. VIP subscriptions ensure that the players will get all the extra content for an "x" amount of time. This model is pretty similar to the currently trending season pass that offers all of the extra content for a minimum price. This rewards loyal players and is helping monetize the game's assets before they are even scheduled.

Freemium monetization is also common in browser games like travian or tribewars. VIP members get faster recharges and more energy options with their monthly subscription so they have a competitive advantage over the others. It's a pure pay to win scenario and of course it has its large market of truly engaged players.

| GENRE | MONETIZATION STRATEGY | NARRATIVE APPROACH |
|---|---|---|
| HOGs | Energy, Power ups, unlock more gameplay | Solve a mystery, progress past cliffhnagers, collect embedded clues (objects) |
| Match 3 | Power Ups | Characters and story as progress markers |
| Hero battles | Card packs, gacha, fusion | Characters as cards |
| Builders/ Resource | multiple currencies used for upgrades, storage and acceleration | PvP - base camp battles |
| Time management | Energy, upgrades | control third person character on real world mission |
| | | branded content/Characters we know |
| | Time-limited events →irrational spending | |
| Episodic adventure | pay to progress in narrative | character driven narrative with strategically placed cliffhangers |

*Figure 26: Narrative and monetization approach for various f2p (Dinkin, 2014)*

## Restricted Access

The most recent example of restricted access is the MMORPG Archeage. Archeage has just launched to open beta a few days ago (September 2014) and is promoting a freemium/restricted model. The game is completely free to play but there are some areas and features in the game that the user can't access without being a premium member. It's very important to know what should be freely available and what not since it's too easy to lean towards the pay to win/mostly restricted category and flop.

## Subscriptions

Even though access subscriptions are not entirely relevant to free to play they can be used in a form of VIP or sub-only mode and be implemented in a completely free to play game. Subscriptions can be a bundle of all the aforementioned techniques. Subs can get boosts, sales or maybe a certain gallery of skins for a monthly fee. PlayStation network is offering a similar service. Psn players can play online for free but if you subscribe to Playstation Plus, for a monthly fee you also get a whole lot of goodies like free games and themes as long as you are subscribed. It's an interesting implementation because they are offering many features for a really affordable price. This is looping players into the psn and leads them to even more purchases due to their subscription. It's a very successful model and it is fair for both developers and consumers.

## Early Access/Kickstarter

Kickstarter is a website where aspiring developers can show off their project and users decide if they want to contribute to its development or not. It is used for everything but games occupy a large part of its subjects. It is an interesting process of user involvement in the developmental process since users decide for the fate of the game in several stages of development and feel the game like their own project. Those that kickstart are receiving a founder status and they get the game for "free" when it is released while also having access to earlier alpha and beta phases.

Early access on the other hand brings in players when the game is almost finished but still under development. Gamers get a discounted price and can enter the alpha/beta stages of the game and decide its fate with user feedback as well.

## Donations and Pay what you Want (PWYW)

There is another uncharted territory in f2p monetization. Even though there are pay what you want bundles, there are no pay what you want offerings for single games. Pay what you want is a method where you pay whatever you believe is right for a game, usually with a minimum of 0,50€. We believe that PWYW can boost game sales for well-designed games. Also, on the same note, donations are something similar. The developer doesn't oblige users to pay anything and he just expect from them to donate whatever they believe is right, if and when they desire.

Piracy is a very common practice amongst those who don't want to pay for games. So they're going to play the game anyway. Why not increase the user base, appear community friendly and rely on the goodwill of the customers that were going to pay anyway to compensate you for the great game? PWYW is huge for steam games and we believe it can convert to every major platform that we know of.

## Free to play Design

Free to play games extremely rely on game design to be successful. Design is the actual resemblance of the marketing process that makes or breaks a game. Monetization, graphics, loops and flow must all dance in perfect sync if in order for a game to succeed.  That's why there is an analysis of a few game design basics in order to take them into account into the research and search for valid correlations that reach into the core of each game's design and can turn around the revenue tables.

### Waterfall and Agile design processes

Before going into internal design we will start from the external processes and how they adapted to the free to play scene. The two major methods for game design are waterfall and agile.

Waterfall methodologies are characterized by their one way nature and the inability to turn back on a certain process and reassess. Games used to be developed under the waterfall methodologies. For years the product was the retail games. The analysis, design and production processes could lead one-way to the finalized product.

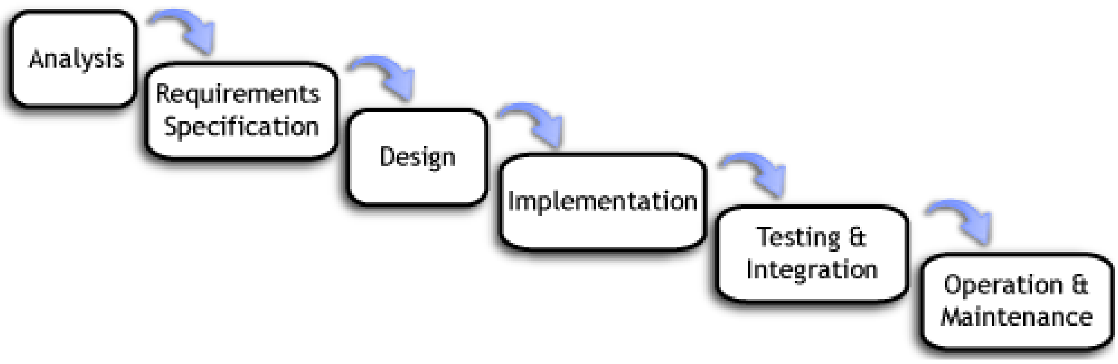



*Figure 27: Waterfall design process*

The Standish Group though finds waterfall projects to be extremely lackluster. "Findings demonstrate that a majority of Waterfall projects failed, largely due to being bloated or out of date by the time they were completed or reached the market." (The Standish Group, 2013)

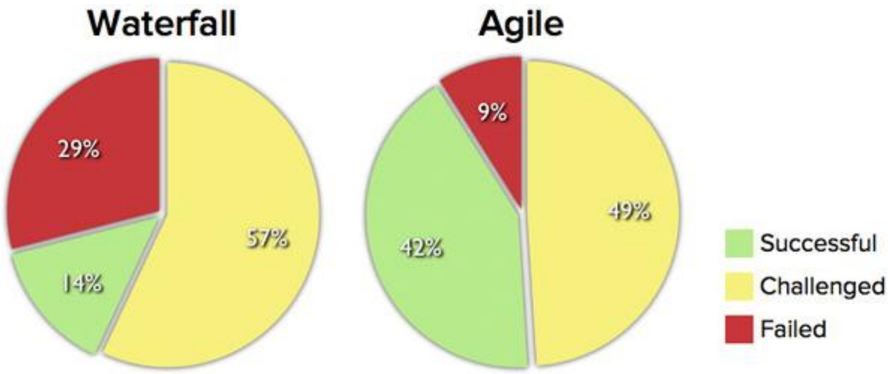



*Figure 28: The reign of the Agile model*

Today games, and especially free to play can't be dealt with waterfall project management and design. That's why Agile came into place.

Agile is tailor made for free to play games since they are full of changes, fast moving problems and short notices. It's the future for most of the programming processes and is swift, agile and adaptable instead of sequential, stiff and predictable. .

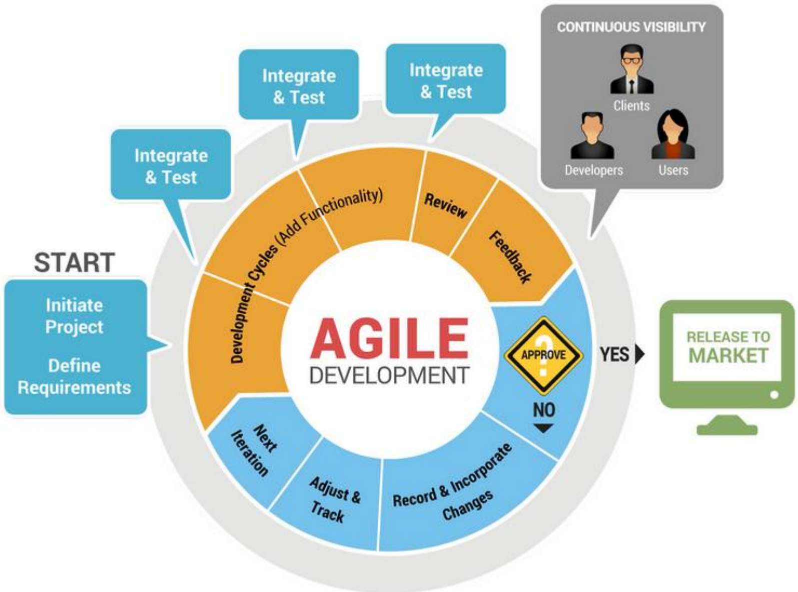



*Figure 29: Agile development cycle (Source: stagrp.com)*

## Core Loops

We couldn't look anywhere else in the internal processes without identifying the core design concept of a free to play game. Free to play games want to make the user revisit the game and engage with it with a "promise". This promise is led by what is identified as the Core loop.

Core loops are the heart and center of each game. The main Core loop for every game genre "loops between Action, Reward, and Anticipation." (Kim, 2014) The user does stuff in order to unlock rewards that will let him perform actions to repeat this scenario and that's how a core loop is created. It is as simple as it looks and even the most complex games rely on core loops. It has to be as simple as that and then add any monetization and retention features.

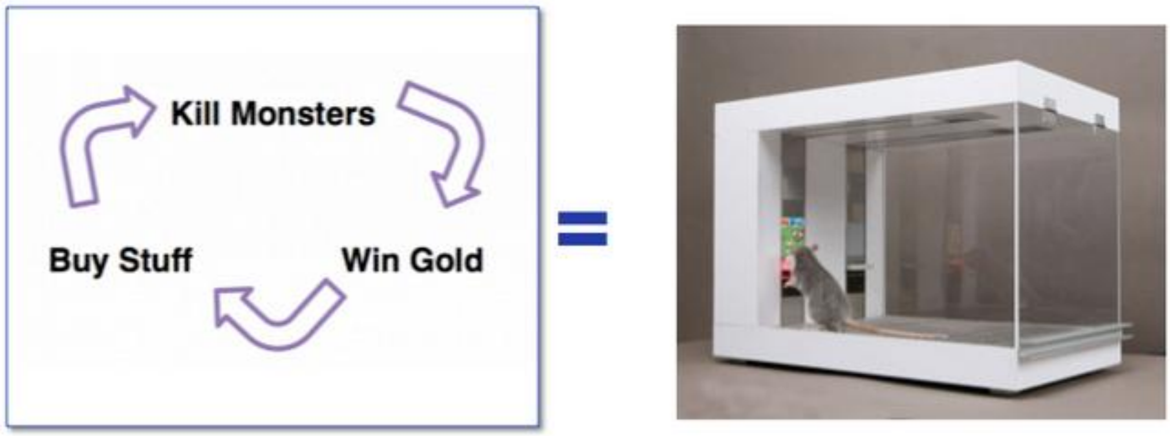



*Figure 30: The repetitive nature of Core loops*

Even the best monetization strategy in the world cannot support a game with a weak and boring core loop. It is the alpha and omega of any game and it should be completely differentiated from monetization. If you present a paywall to the core of the game then chances are the user is going to give up soon and the game is going to flop. We want a fresh idea to a simple but deep core loop that can draw new and experienced players into the game. "Usually a short loop with the possibility of an extension if the players wants to is the best game session balance". (Suuronen, 2013)

## Compulsion loops

The main reason that compulsion loops exist is psychology and Maslow's (1943) needs. The huge range of everyday choices that people have in life makes them dull and unresponsive. "Modern marketing wants to help people manage this overwhelming sense of choice in order to achieve a sense of belonging". (Crowe, 2012). A lot of people turn into games in order to cover those needs and this is a green light for developers to create a perfect compulsion game.

High scores, progress, maps and achievements along with engaging gameplay that can keep the player playing for hours. Those are the ingredients for an OCD nightmare and a perfect compulsion loop.

Compulsion loops are created by making the player feel relieved when a task is completed. Making him feel enjoyment for achieving a rank, climbing a ladder, finding a collectible or being better than a friend.

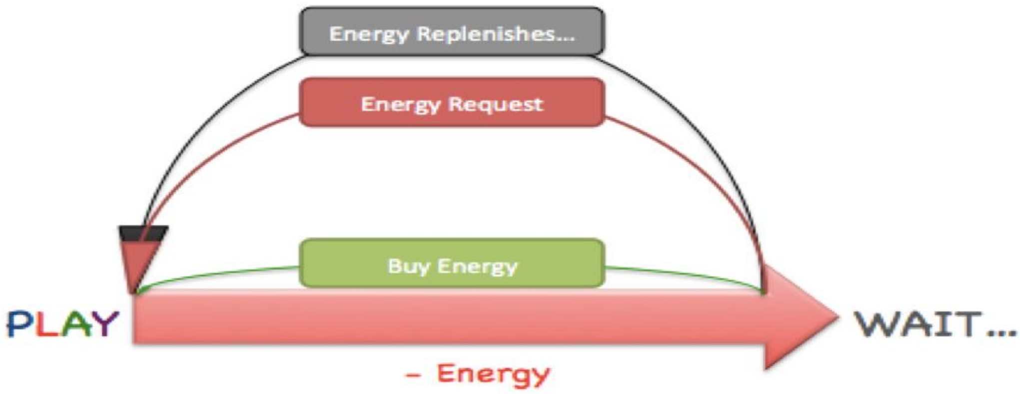



*Figure 31: Energy games' Core loop and Compulsion driven monetization (Katkoff, 2013)*

Those loops "resolve our need for security and novelty by rewarding us for achieving a sense of control while fostering loyalty and commitment because they give a sense of making progress" (Crowe, 2012). They create a situation where you are not as satisfied with the current actions but you are satisfied with the expectation of an upcoming reward. It's the exact same response as gambling. The user plays over and over until he gets the coveted result.

## Retention

Retention should be bound to the core loop and is closely related to compulsion. “Retention can be achieved by gradual unlocking of features or resources at 3 days, 1 week. 1month and 2 months of game. We don’t want new players feeling overwhelmed but at the same time we don’t want high level player to lose interest due to lack of progression.” (Suuronen, 2013)

Lovell (2013) briefly outlines retention game mechanics in the following: “Scores, Levels, Simple progression mechanics, Levelling up, Narrative, Achievements, Leaderboards and competition”

Icons and freebies for certain events or actions, daily quests, boosts and variable content that is challenging and fun at the same time is what drives retention. Retention has to be able to differentiate the assets for casuals and hardcore players. Hardcore players cannot exist if there’s no casual audience. Lovell (2013) assimilates the free to play business with a funnel where you get users, you try to retain them and then at the end of it you get your game’s monetization. He also assimilates its design with a pyramid where the core loop is the basis for a retention audience that will turn some of the users into “whales” who are the main facilitators of monetization in free to play games.


*Figure 32: Free to play game pyramid (Lovell, 2013)*

Retention game mechanics can stay relevant “by leaving unfinished tasks (The open loop) at the end of each session. Players will keep coming back if they have limited resources or are rewarded to login regularly to do mandatory tasks or take part in special events or interactions with friends”. (Luban, 2011)

## Flow Theory

Flow theory is considered as one of the most crucial game design techniques that goes hand in hand with consumer behavior and can greatly influence the user that stays into the game. The flow is a unique and unified experience that positively reinforces someone's creative side and makes him play more and more until he is fully immersed into the game. It is a gradual process and Csikszentmihalyi (1990) says that "Focus and concentration hold the key to achieving flow.

Distraction interrupts flow and it may take hours to recover the peace of mind one needs to get on with the work. As McWilliams (2013) observed, "The churn in social games is tremendous because the friction curve quickly gets so steep it curves most players right out of the game." The first 15-20 minutes of the game determine if someone will keep on playing it or not. It seems that most developers (or marketers when they get their hands on the product) show their greed right at the beginning. This lacks sincerity and is a precursor of a game littered with annoying pop ups that no one wants to deal with.

Furthermore, flow is important in a larger scale. Casual gamers should be incentivized to transition from one genre to another and become mid/core gamers on the long run.

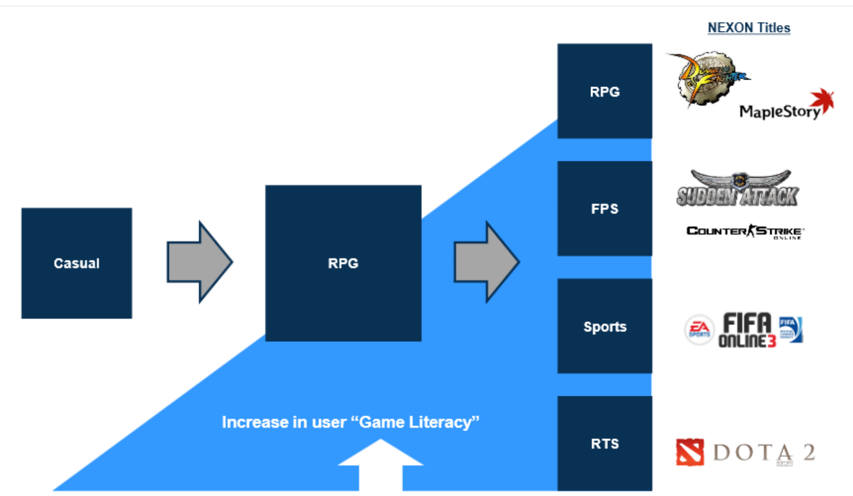



*Figure 33: Transition of popular game genres (Nexon Co, 2013)*

## Online Store

An important part of the Flow is the Store interface which should be implemented seamlessly in order to promote browsing and buying. Koufaris (2002) confirms this assumption since "Results confirm the double identity of the online consumer as a shopper and a computer user because both shopping enjoyment and perceived usefulness of the site strongly predict intention to return." Konda (2012) confirms the need for a shop that is simple and easy to navigate with value added search mechanisms.

A responsive online store that fits the game's profile while being easy to navigate is one of the first things that game designers have to look at. Stuffed and overloaded, slow and unresponsive shops that are a hell to navigate and buy must be avoided.

Sales are a common practice in online game stores and the accessibility and clarity of their worth and duration are important. They can boost retention and customer return. Prices should be as stable as possible to reduce issues and consumer regret cases. If the change is irrevocable, refunds or other forms of compensation should be considered.

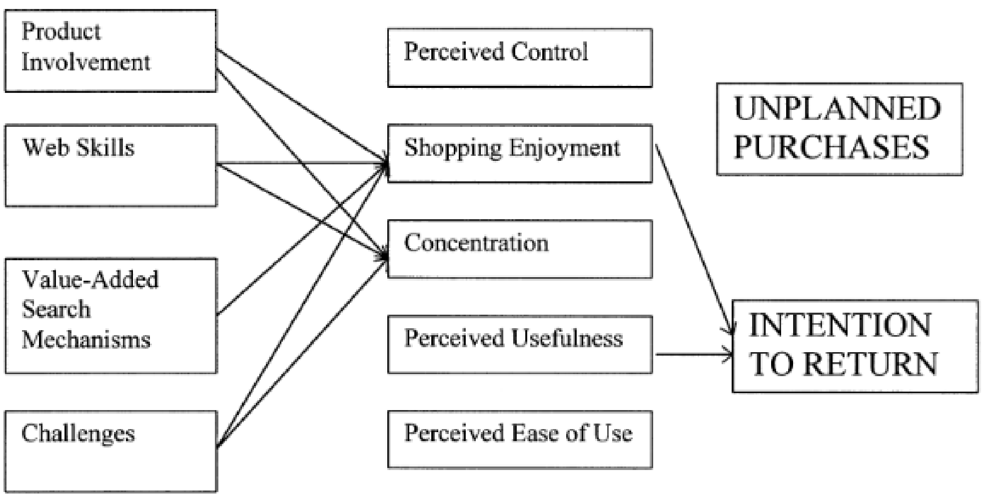



*Figure 34: Relationships supported by empirical studies (Koufaris, 2002)*

## Payment methods

On the same page, payment options should be plenty and clear. Messing with logins, complicated processes and unsafe looking credit card inputs can drive potential customers away. A safe looking secure connection with proper order and categorization is indispensable if we want to promote impulse and planned purchases. According to PayPal "just adding one alternative payment method can increase conversion by 14 percent."

Some game clients store credit card information and make any purchase way too easy. But in this case the company has to ensure and inspire security in order to make the customer link his credit card, something that can subsequently convert to impulse buying. Blizzard and Apple with the App Store are main examples since they have a unified platform and don't require external access to suspicious looking providers and external credit card forms.

## Data Analysis

An important aspect that should be implemented in every game is data and statistical analysis. Integrated analytics are crucial since we want to gather data from user patterns of play and preferences and try to reassess them. If a proper core loop and normal acquisition are in place, then data can help the developers find flaws in the system and maximize retention while correcting any issues that make players drop out.

Williams (2013) strongly supports the need for metrics and constant game reassesement while Konda (2012) agrees that "it's critical to continually evaluate whether players' lifetime value (LTV) is higher than the game's CPA (cost per acquisition).

(Luban, 2011) highlights a few examples of the key learnings one can obtain by analyzing the correct data:

- “The moment in the game progression when players tend to "drop out"
- The parameters in the open loop that are the most effective at generating daily visits
- The factors that drive the first purchase
- The average amount of individual purchases
- The impact on revenue of a item price modification
- The revenue generated by the different player profiles. In other words, who is generating the most revenue, the few heavy users of the game, or the numerous casual users?”

The biggest issue with Game analytics is the mass flow of data and the need for organization. Data can be gathered but if we don’t know what hasto be done with it it’s just an overwhelming storage space and a lost opportunity. Big Data is what comes into place in these cases since companies move away from traditional SQL databases and are creating raw data that have to be handled somehow.

As Manyika, et al (2011) observe, ”Big data is making information transparent and usable at much higher frequency. We can collect more accurate and detailed performance information on everything and therefore expose variability and boost performance”. The main issue here is the huge storage and computer power that we need to assess all this and of course the potential lack of true goal that can be created by such a large amount of information.

## Game type Overview

We have left this overview last since many design terms that had to be communicated are being used. Fortugno (2014) identifies three basic free to play game types that can characterize all the existing game genres:

- “Single player
- Social Multiplayer
- Hardcore Multiplayer games”

Single player games are mostly progress games. Their main platform for f2p is mobile and browser games but they can easily extend into console gaming. They are usually simplistic with a strong core open loop. Leaderboards, high scores and direct comparison with friends can be core compulsion attributes. Their monetization is based on boost and power enhancements and is highly relying on impulse purchases and peripheral processing. Retention can be achieved with multiple levels, difficulties and interesting, fun and challenging content.

Social Multiplayer games are mostly grind and small/return session games. Mobile and browser games need to provide continuous and multiplatform accessibility to work well. They are all about level and power progression and their core loop is usually related to raising armies or killing monsters by entering clans and guilds. The community sense is huge and monetization comes for boosts, power enhancements and vanity items. The social aspect of the game is what drives retention and the need to show off and this is what makes people purchase items. Many aspects of MMORPGS and CCG’s can be characterized and treated as Social Multiplayer games.

Social multiplayer games advance easily for the first few sessions but eventually require more and more time resources from the dedicated players. Enhancements can save days of gameplay by time boosting so if someone is hooked on the game and wants to advance, buying with hard currency is usually a one way road.


*Figure 35: Structure completion times per level - Clash of Clans*

Finally Hardcore multiplayer games are mostly skill based games. They require fast responses and deep knowledge of a game and are very competitive. Pc and consoles are the main platform for this type of games and they cannot work well on Mobile. MOBAS, Fps, and end game MMORPGS can be put in here along with a few card games (CCG).

Collectible, vanity items, aesthetics and in game advertising are the way to go. Pay to win are not viewed well and the moment that we create an uneven playing field on an otherwise competitive game, the game is done.

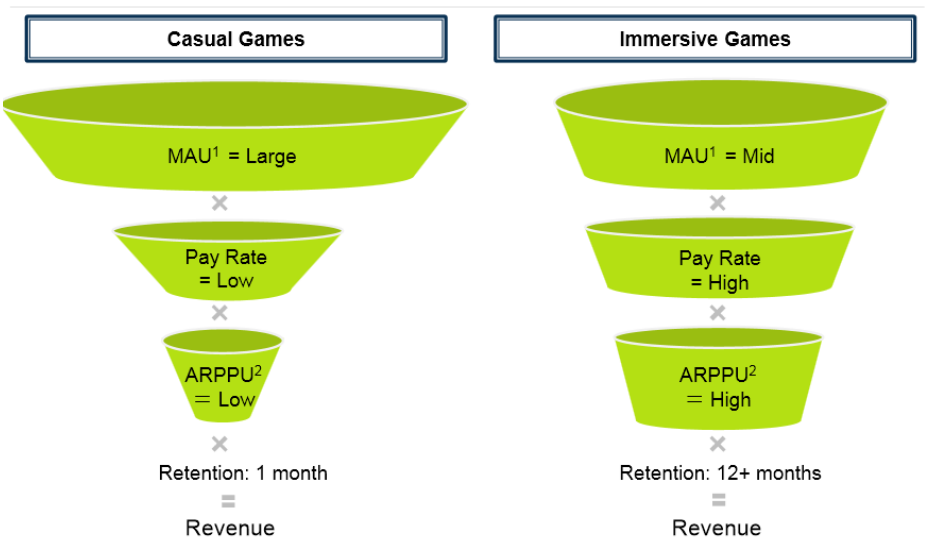



*Figure 36: KPI for the f2p Business Model (Nexon Co, 2013)*

As can be seen from the diagram above, hardcore immersive games with depth and competitive aspects can maintain a large user base for years and have a large ARPU. Casual and short term games on the other hand that rely on power boost and enhancements will die off quickly with little to no retention.

# 3. Research methodology

The goal of the research is to identify market segments in the gaming world, see how they approach the current f2p gaming field and what their gaming preferences are. This will lead to the creation of ideal game design guidelines for each game type and market segment. Those guidelines will be constantly reevaluated afterwards through big data analytics for each project but nevertheless a proper unified starting point is needed in order to build upon.

The desired segmentation scheme will be the one that maximizes retention and customer satisfaction.

## Quantitative research

Quantitative research with the use of surveys and questionnaires is the main research tool.

A selection of demographic, geographic, behavioristic and psychographic line of questions precedes the actual gaming related content of the QS. A screening question has been used in order to determine whether the sample is a gamer or not and then we follow with the rest. Afterwards the focus is on the way the users like to play games, what types of games they play, when and how they pay and what makes their gears grind. The survey is delivered online so there was the opportunity to have preplanned answers in multiple selection boxes, something that greatly helped in the analysis process.

This led to data analysis and patterns that show positive and negative trends for different types of people and games. The results are mixed with what was learned from literature and at the end of it all the results lead to optimized segment, design and monetization correlations.

## Methodology

For the research Google forms has been used to gather online questionnaires. There were many methods to choose from, but physical forms would be way too focused and hard to handle and would limit the sample geographically. Since f2p is a global phenomenon we wanted as much geographic diversity as possible to profile the segments, so a global platform was suggested.

That's why online distribution via e-mails and mostly via Reddit was decided as the way to go. Reddit has a huge online community of gamers and non-gamers. We decided to post some threads in related sections and ask for help with the questionnaires in order to collect the ~100 reply sample.

Forms were created online in the Google form platform and have been double checked for ethics issues and any possible mistakes that they could contain. A random alpha sample of 5 people was used to test the speed and consistency of the questions and then they were asked about their experience. Most questions made sense even to non-gamers and only a few details had to be added for clarity. We merged and edited quite a few questions out in order to minimize the time spent to fill the questionnaire. The initial forms required almost 15 minutes while the final distributed forms were in the 5-7 minute range.

In the beginning of the form an Agreement button was added following an ethics statement that informed the sample about their rights and that was reviewed by our ethics committee. A screening question was provided shortly after and the form submission was online and immediate. A brief analysis and statistics are provided directly from google forms something that greatly helped data analysis.

## Questionnaire

The questionnaire was a 50 question Google form with multiple choice questions that were roughly divided into six parts.

In the first part the questions were regarding age, gender, occupation, social class, lifecycle and education. The goal was to create demographic segments that would be linked to behavioral aspects. The second part that included geographic questions such as country, population density and climate had the exact same goal.

The third part tried to identify the sample's psychographic elements by asking about physical activity, life, economy and politics perception. The idea behind that part was to create market segments that go in depth into the mind and lifestyle of a f2p consumer.

The fourth and most important part of the questionnaire included the behavioristic questions. Many questions regarding game genre preference, reasons to play, gameplay element perception and relation to achievements and streamers were asked. This was the heart of the questionnaire that tried to identify consumer behavior and the player's internal and external stimuli.

Monetization questions that regarded payment methods, tendency to cheat, impulse buying, money spent and in game spending preferences were the integral content of the fifth part. In the same context the opinion about alternate payment methods was identified. The answers created spending groups which were correlated to demographics, game types and core gaming habits that were directly linked to the ELM, impulse purchases and initiation motives.

Afterwards we asked questions about the sample's opinion towards spam and promotional methods and the questionnaire was finalized with things that people like and dislike in free to play games. The need to identify word of mouth habits and what the consumer enjoys playing in order to integrate it to f2p game design, led to this final part.

# 4. Analysis and Discussion of Findings

The questionnaire was quite thorough and since 110 people answered it, large amounts of data were collected and made it difficult to analyze everything in the span of this dissertation. A few major correlations were identified but before that the major data cluster have to be presented.

## Demographics Overview

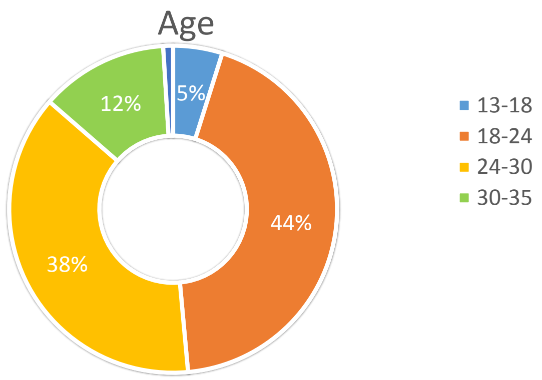



*Figure 37: Gamer's Age chart*

There are two major Age groups that seem to act differently in certain circumstances. People up to 24 years old seem to have different preferences and spending patterns as we will see in our further analysis.

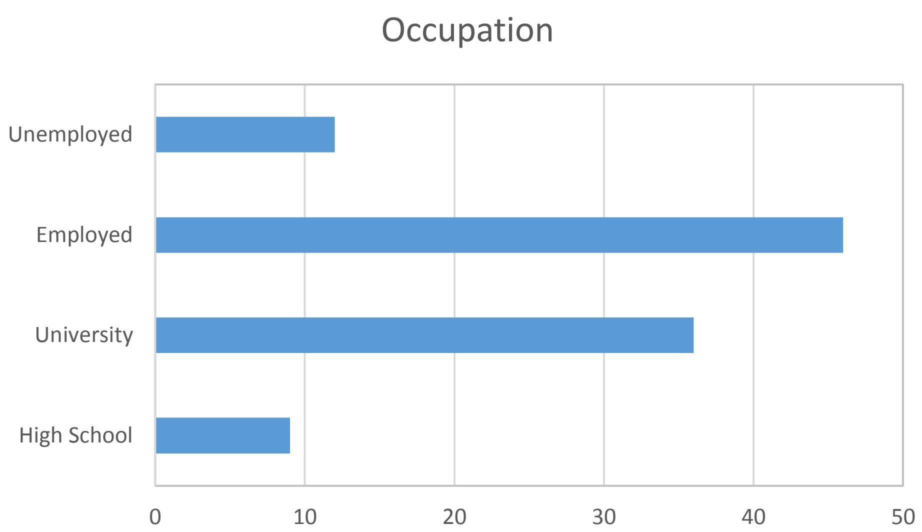



*Figure 38: Gamer's Occupation chart*

Occupation-wise, gamers are not just Students with a lot of time to waste but they share the charts with Employed people that want to have fun and achieve a sense of progress.

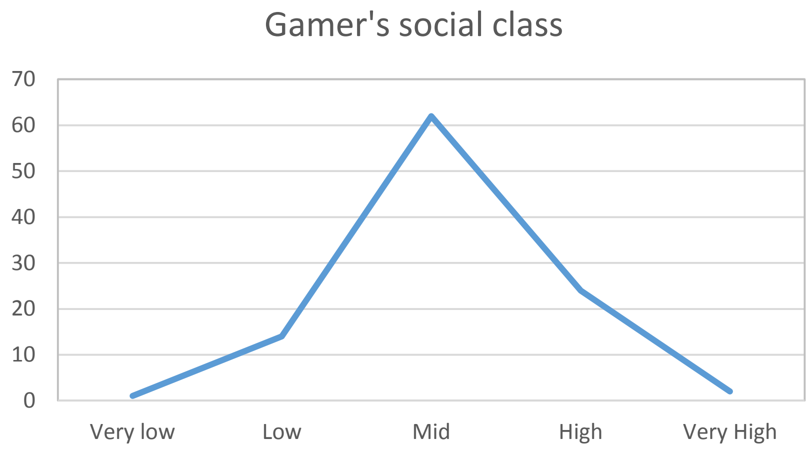



*Figure 39: Social class of gamers*

The social class seems to have a Gaussian curve trend with a slight rise on the higher end. It's pretty much balanced in terms of general population though and doesn't show a significant shift in results.

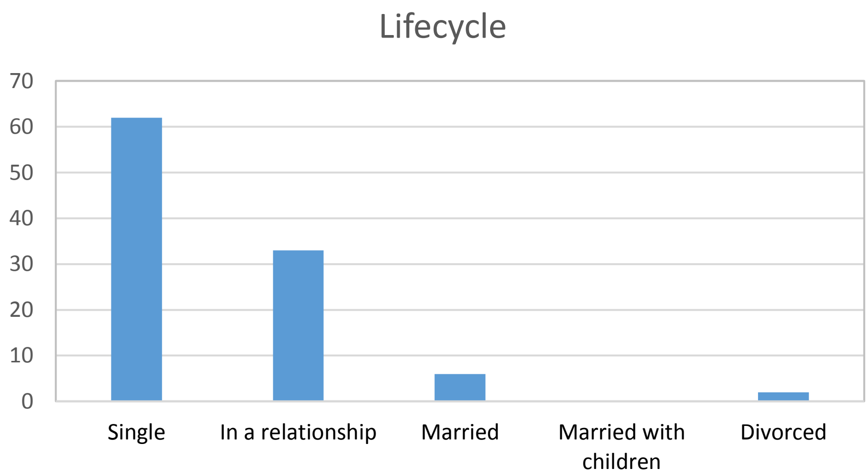



*Figure 40: Gamer's lifecycle point*

On the lifecycle part, we strengthen the single gamer stereotype while married or people in a relationship hold almost 40% of the gaming population. Something interesting is that there was not a single case of a married gamer with Children, even though the questionnaire was distributed online on various internet places. Of course this is not absolute since there are many parents/kids game categories, but it shows how children can affect a gamer's life.

Almost 75% of our sample turned out to be European while the rest was mostly from North America. The Big city/Suburb ratio is almost 1:1, with 65% of the sample living in Sunny places while the rest inhabit in Cloudy and Rainy countries. No important behavioral correlations with climatic and residential results have occurred.

Male contribution exhibits 90% of the sample while only 10% is female, something that will be thoroughly discussed to see if it shows any extremities in gaming and purchasing habits.

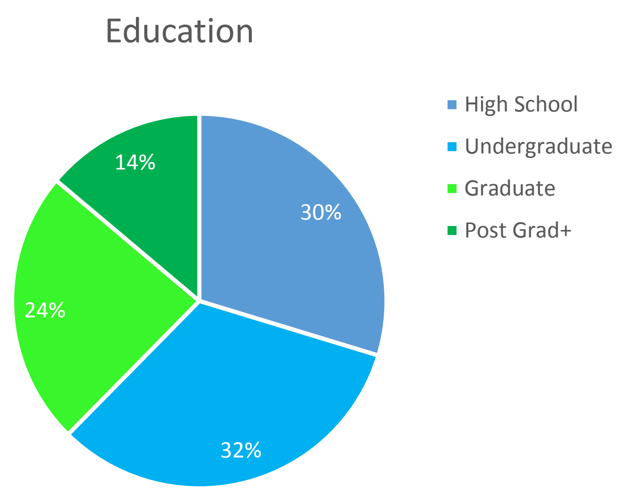



*Figure 41: Gamer's Education chart*

Finally as far as education goes, High School students and Undergrads lead the way with 62% while Grads and Post Grads are coming up next with a total of 38%.

## Psychographics Overview

More than 60% of the population answer Bad/Very bad for the economy and consider their political system to have Lots of issues. It is clear that there is a huge lean towards the negative side of things when gamers are asked about politics and economy.

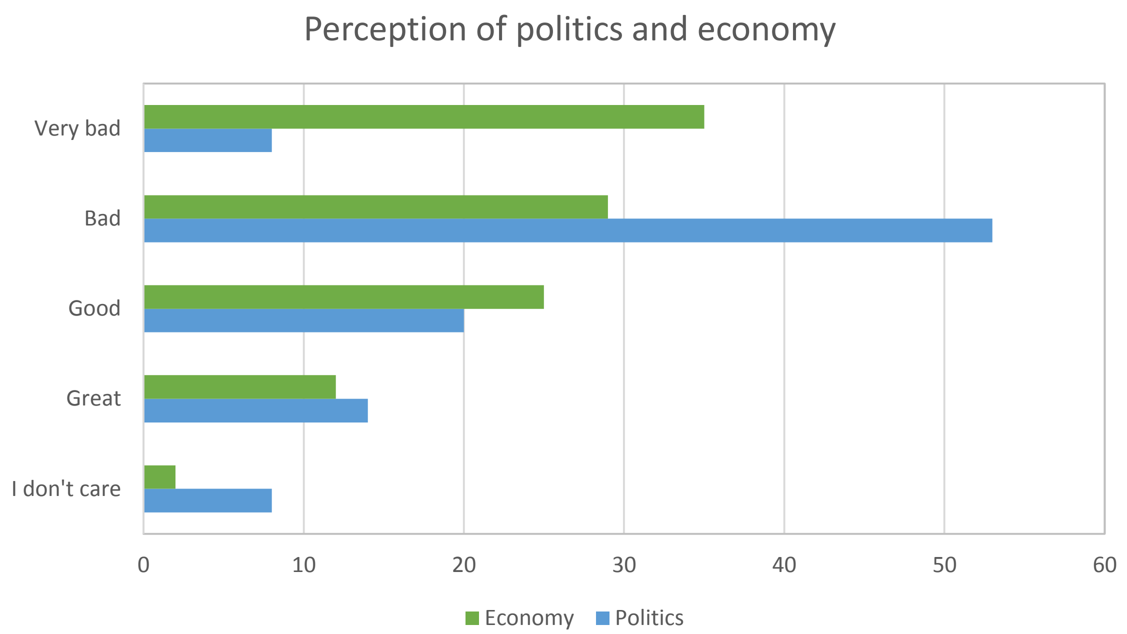



*Figure 42: Perception of politics and economy*

Furthermore, as can be seen in Figures 43 and 44, most gamers seem to be satisfied with their lives and lean towards active lifestyles. This disproves the "lazy gamer" stereotype that goes along the "no life" perception that has been false for so many years now and is contradicted in every step of the way. Only 12% of the sample seems to be dissatisfied by life and about 30% of the total sample does not lead healthy/active lifestyles. This leaves 70% on the relatively active side which is much higher than the European medium.

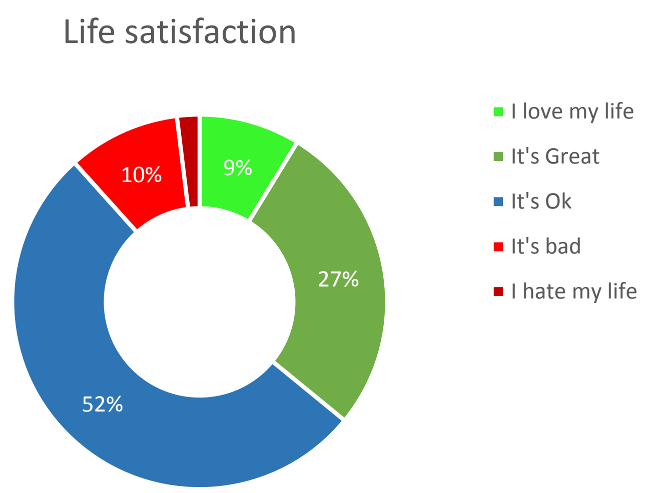



*Figure 43: Life satisfaction*

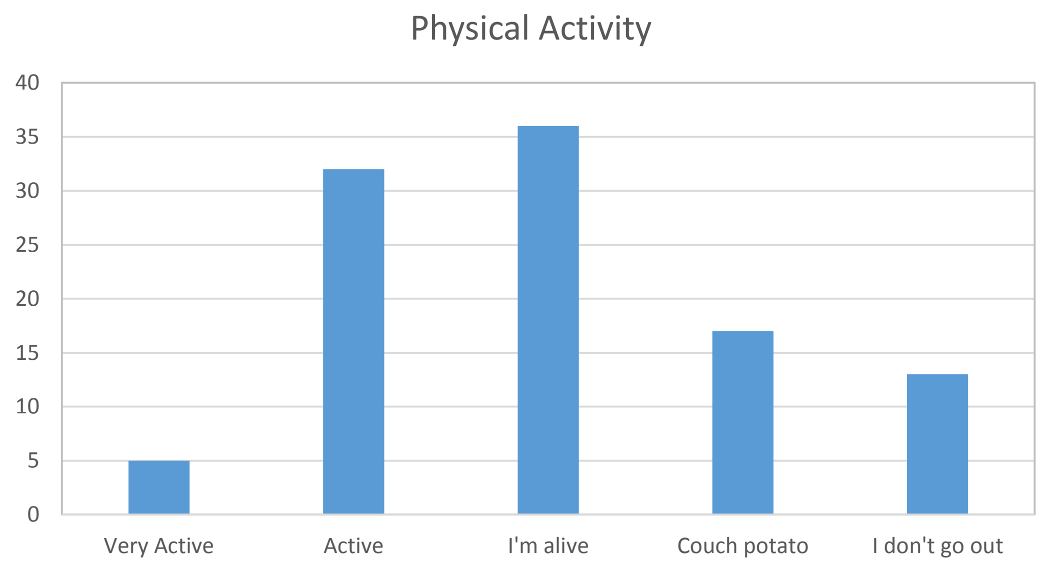



*Figure 44: Physical Activity*

## Behavioristic overview

This part examines the gaming habits of our sample and makes it possible to identify patterns to certain segments and design preferences something that will lead to our final conclusions. We will state a few interesting charts before starting the comparisons and correlations.

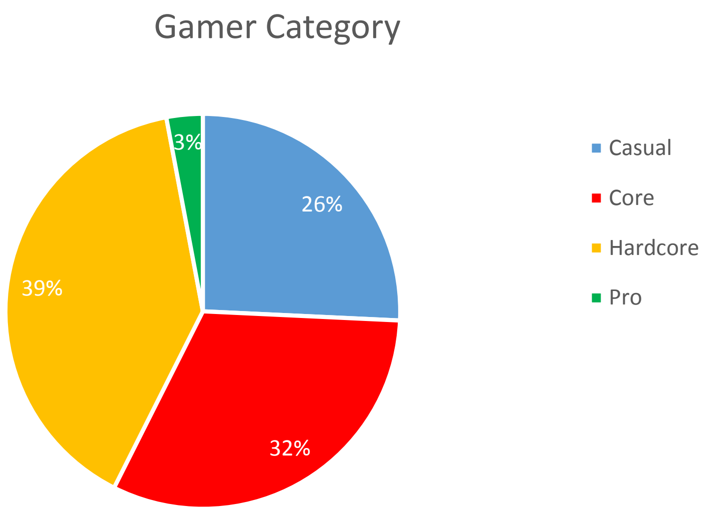



*Figure 45: Gamer Categorization*

Almost 71% of gamers consider themselves core/hardcore while only 26% think they are casuals, as shown in Figure 45. The casual gamers are 24+, mostly married or in a relationship, playing to waste time while preferring mobile and console games in a way larger ratio than their core counterparts. It's interesting that having fun or competing is not in their top priorities while they spend almost nothing on f2p games in general. They have a really low economic contribution which shows that casual players are needed to fill the total player pool but we can't rely on them for monetization.

Even though a small percentage of people prefer to play while travelling, *Home* ended up in the top of the chart with 90%. Either alone or with friends, gamers prefer their home sweet homes to enjoy their games.


*Figure 46: Reason for playing games*

The *fun factor* is the most important aspect of playing a game since 77% plays games mostly to have fun. That's something all game developers must remember when they are creating a game. A proper and fun core loop must be their priority instead of focusing on a boost based game with mediocre gameplay.

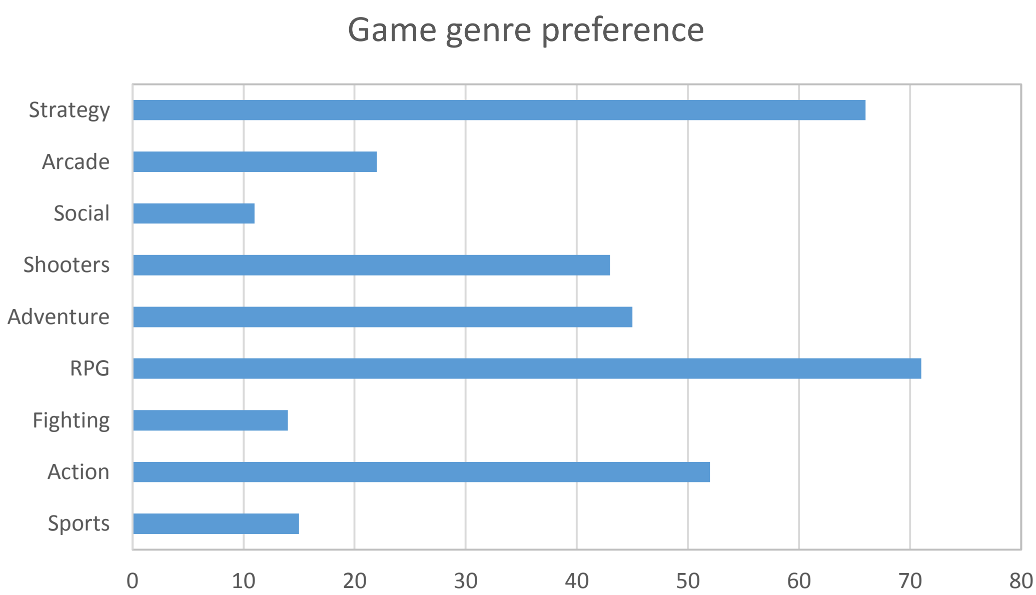



*Figure 47: Game genre preference*

The most popular *game genres* seem to be Action, Strategy and RPG with Adventure and Shooters coming second. RPG's being on the top of the chart is something worth mentioning since Action/Strategy are the usual contenders for such spots. Social games are at the bottom of the table, a fact that briefly explains the fragile and not really long lasting nature of this game genre.

The research shows that 54% of the sample appreciates *Gameplay* when playing game, only 10% cares about *Rewards*, while 36% of the sample is interested in both. This shows that rewards are indeed valued but the gameplay is king when it comes to gaming and the first thing that one should focus on in order to create a successful game.

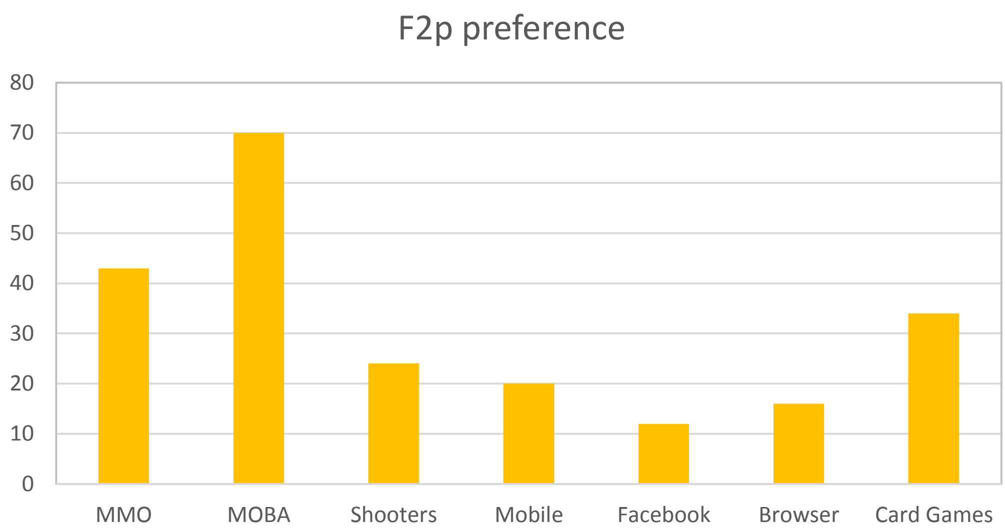



*Figure 48: F2p genre preference*

As far as f2p games go, MOBA is the most popular f2p genre while MMO and card games fall second. It's interesting to point out that there are no mainstream retail MOBA games right now and this has a lot to do with the successful free to play model of the genre which doesn't really leave any options available for retail choices.

Another aspect that is examined is whether or not a person cares about *Achievements*. As can be seen in Figure 49, 62% of the sample doesn't really strive for in game achievements and doesn't care about collectibles as well. The 38% who are achievement hunters are MMO/MOBA/Card game players that value graphics and content. They mostly play games to waste time and achieve progress, as one would have expected. One interesting thing about achievement hunters is that they don't spend much on f2p games, something that probably emerges from their intense attention to one game at a time and their ability to maximize the playtime of one game through collectibles and achievement hunting.

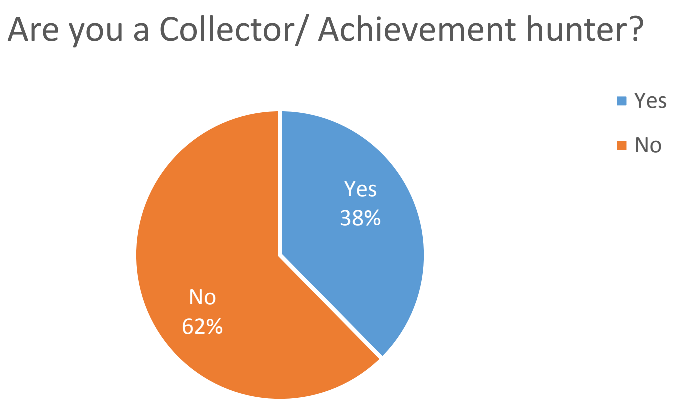



*Figure 49: Achievements/ Collectibles*

Figure 50 displays the tendency to watch gaming streams and the majority of the sample is indeed watching gaming streams. It is an interesting past time that seems to be a pretty handy promotional tool since 49% of those that watch gaming streams were influenced in their purchases by streamers. Those that are influenced are mostly undergraduate, mid class people that play games to prove their skills. They do buy quite a lot of stuff on sales, mostly aesthetics, even though they do not overspend. This is an advertising segment that seems to emerge from this research.


*Figure 50: Gaming stream*

# Monetization overview

In this part of the survey, the sample's spending habits and their preferences regarding gaming purchases, are analyzed.

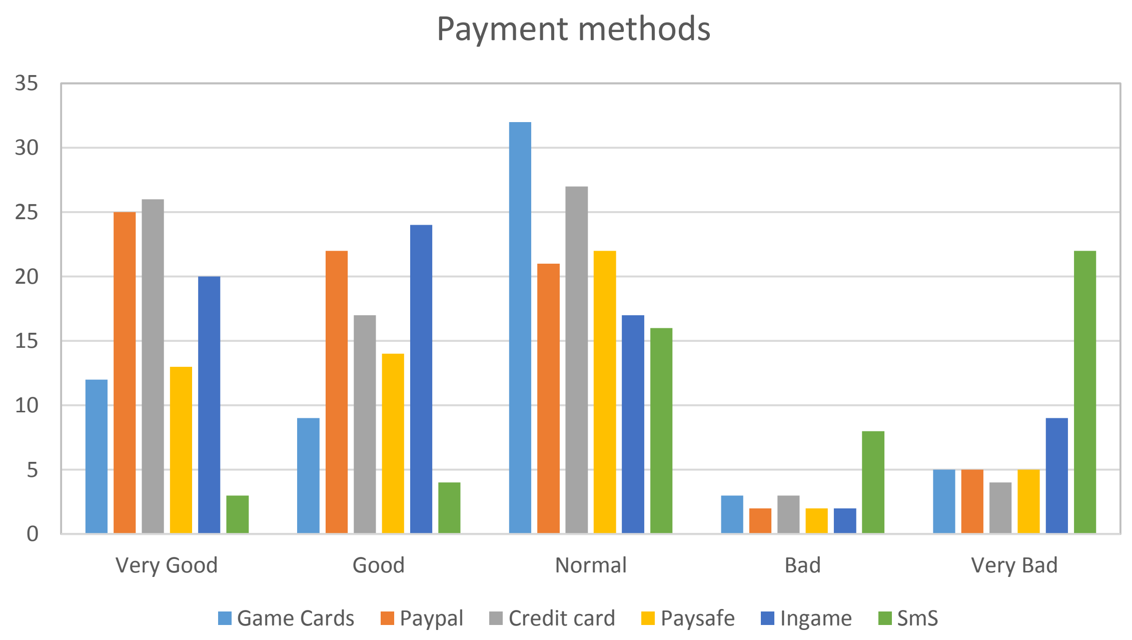



*Figure 51: Payment method preference*

Figure 51 displays the preference towards the payment methods. It seems that PayPal and Credit cards are strongly favored while the rest of the methods have normal acceptance. What is interesting is that most of the SmS payment ratings are Bad/Very bad something that must be taken into account when creating a financing plan.

It seems that people do not just want to create large libraries as happens with steam lately and they actually play most of the games that they buy. Additionally cheating and pirating play a large role in a gamer's reality since almost 40% of the sample has admitted to sometimes cheat or pirate games with PC being the main cheating/pirating platform. 24+, mid class people in a relationship that mostly play on pc to prove their skills and are really low spenders, is the profile of those who usually pirate/cheat games.

A very positive thing is that 76% of the people, regardless of segment, have made purchases on f2p games as shown in Figure 52. So people are not just freeloaders but do indeed pay when they think a game is worth it. Additionally, they have been asked to specify the amount spent during the last month. Such a short time period of time was selected in order to see if purchases were recurrent.

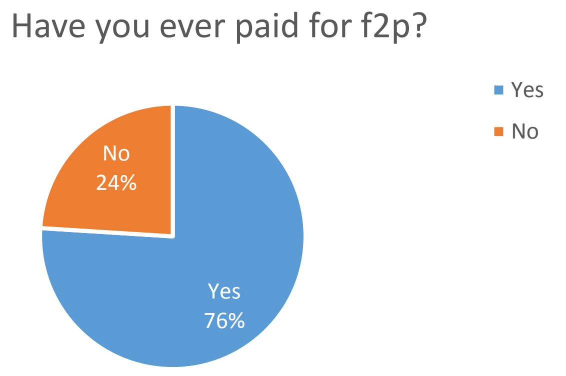



*Figure 52: Have you ever paid for f2p?*

It turns out that 40% of those who paid for f2p sometime in the past, have not bought stuff during the last month, as shown in Figure 53. This makes the sustainability of games a bit harsh. This 40% corresponds mostly to high school/undergraduates that consider themselves hardcore gamers. They are not confined in one game genre and value achievements and more game content.

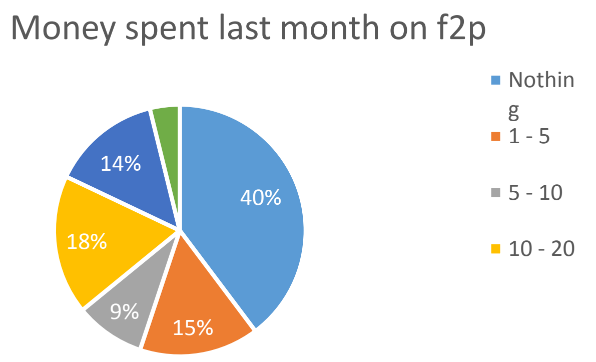



*Figure 53: Money spent on f2p*

People that spend money on f2p are asked about the kind of stuff that they buy. Aesthetics top the charts with 32% while heroes, boosts and gifts share 10% each creating smaller potential market segments.

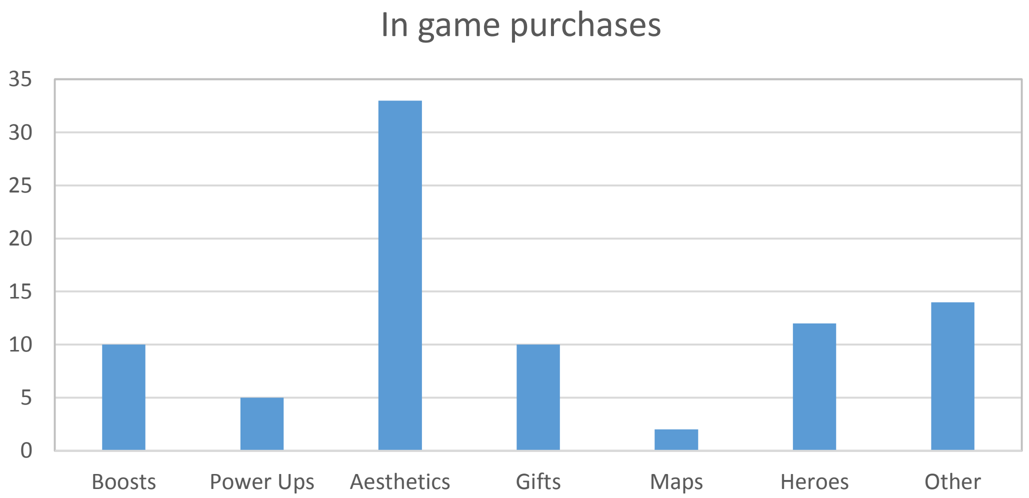



*Figure 54: In game purchase preference*

Heroes are obviously a MOBA side effect and gifts are universal. Boosts and power up buyers are big spenders who fall into the 20-50 spending range that buys games on sale. They tend to play more card games than anyone else, playing for fun and not for competition but for the feeling of progression. They do watch gaming streams but they are rarely influenced by streamers for their purchases.

According to the results, people who do not spend money on f2p games are mostly employed, graduate, 24+ males with normal/active lifestyles. They consider themselves casual gamers and are quick to judge a game in a few minutes. Something really interesting is that 100% of the 18-24 range that do not pay for f2p games are in a relationship.

Figure 55 illustrates the time period in which gamers make their first purchase. For a f2p game, this can take weeks, months or even years to become reality. This clashes with the time needed to evaluate a game which ranges from a few minutes to a few hours. The game has to be alluring right from the start and make the user come back again and again for weeks and months in a row in order to convert him into a paying customer. This puts a lot of weight on designer's shoulders since the game has to be extremely well designed from start to finish in order to be successful.

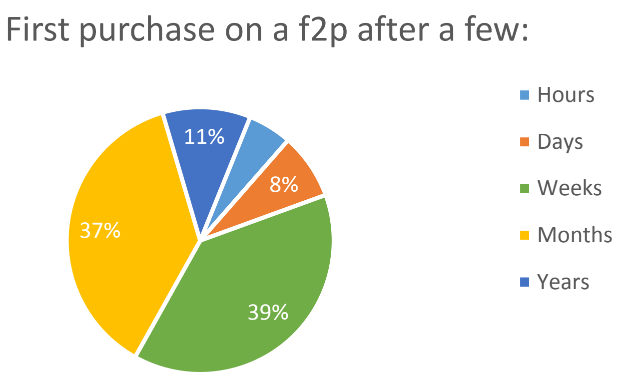



*Figure 55: First purchase on f2p*

A unique mix of core and compulsion loops along with retention attributes is obvious from the aforementioned results in order to maintain a healthy economy and a steady flow of players for your game. There has to be a universal flow that leads players from casual play, to compulsion login and finally to purchases. That differs from game to game and from genre to genre though.

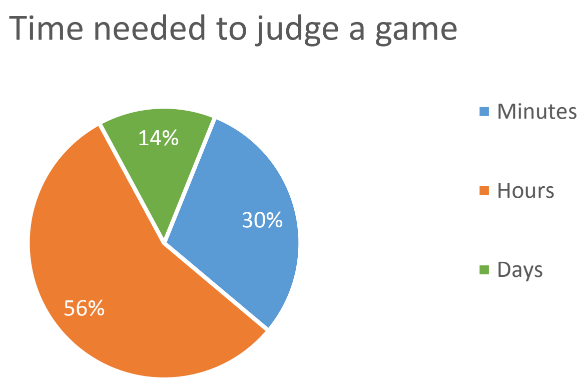



*Figure 56: Time needed to judge a game*

Meanwhile, game developers can boost their game registrations by offering cloud save, online leaderboards and registration rewards. All of those options ranked pretty well, as shown in Figure 57, as registration incentives for free to play games and can be a good start for any retention strategy.

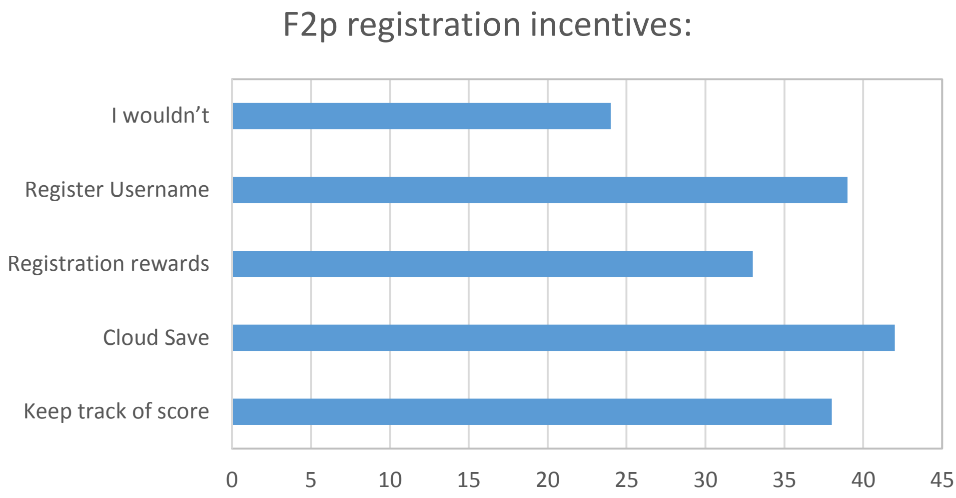



*Figure 57: Registration incentives*

Sales are the preferred purchase period for most of the sample, but there are some people that prefer to buy stuff right when they are available at the store. These are mostly high class people that consider themselves hardcore gamers. An interesting disparity concluded by the research is that 23% of the North American sample buys at launch while only 11% of the European sample prefers this period for their purchases.

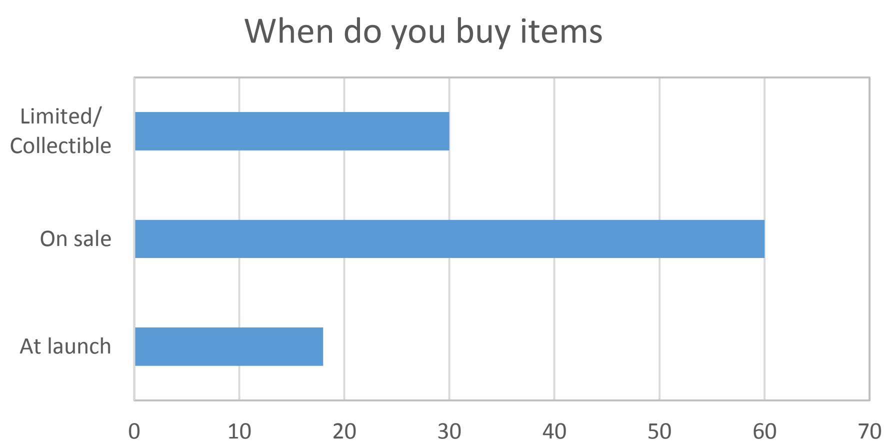



*Figure 58: Period of purchases*

## Planned and impulsive purchases

One of the most important parts of the results that traces back to the elaboration likelihood model is whether the sample buys impulsively or plans the purchases. Figure 59 shows two almost equal segments that we tried to examine and identify demographic and behavioral trends. Marketing strategies like flash sales or impromptu daily sale events should take all of the following into account when choosing their audience and communication.

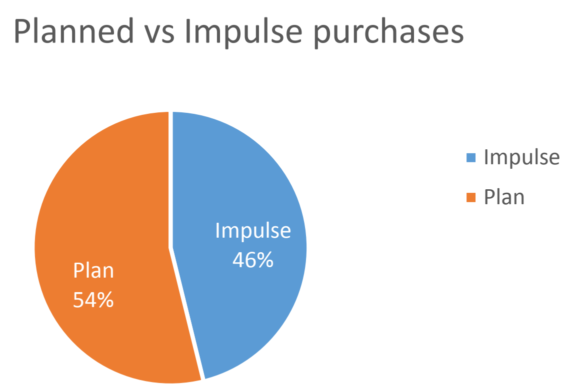



*Figure 59: Planned vs Impulse purchases*

Figures 60 and 61 represent the differences between Planned and Impulse purchases among various demographic segments. The main results concluded are discussed below.

High class people tend to buy way more impulsively and are more prominent to buy something right when it is available on store. On the other hand mid class people plan their purchases beforehand and buy stuff when they are on sale. On the lifecycle side the only major difference is that single gamers are a bit more planners that impulse buyers.

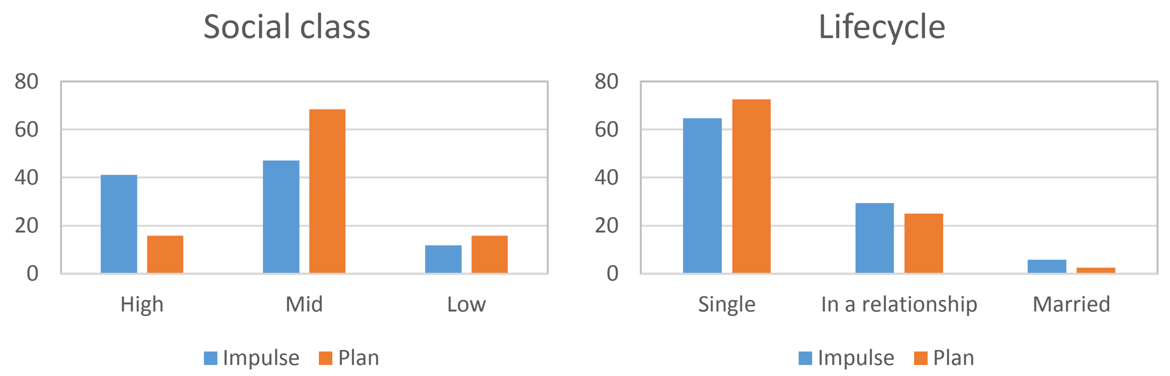



*Figure 60: Planned & impulse purchases related to Social Class and Lifecycle*

On the activity attribute, active people are buying way more impulsively while normal and lazy guys plan for what they want to buy. Finally the 20-100 range is buying stuff a bit more impulsively something that explains their larger contribution to the f2p industry. Peripheral processing route takes action in their case. 60% of the people that plan their purchases, haven't bought anything during the last month. This confirms that they don't get out of their way for flash sales or offers and only buy what they need.

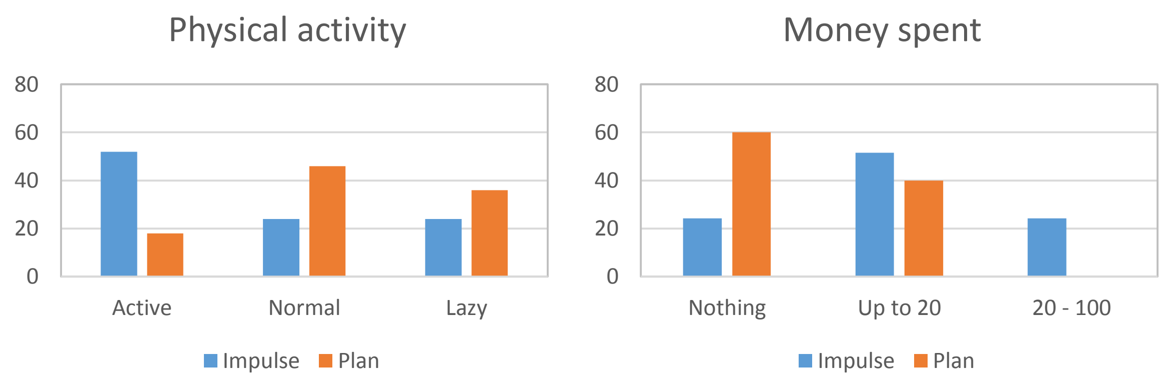



*Figure 61: Planned & impulse purchases related to Physical activity and Money spent*

## Donations, Pwyw and p2w

Regarding alternative forms of monetization we wanted to know the sample's opinion about donation and pay what you want (Pwyw) methods. As we can see in Figure 62, Pwyw prevails with a 60% "Yes" vote which reaches the 85% if we include the maybe segment. It seems to be a very well received form of monetization since it gives users the ability to avoid piracy and give whatever they think the game is worth. Pirates would download the game anyway so actually getting even 1$ from those possibly lost sales is a profit for any gaming company. It is mutual honesty and a way to boost initial sales and word of mouth for new gaming companies and indie developers. Additionally there is a high possibility for the 38% that consider themselves collector's to pay a small fee for the "original" game even if they don't need it.

The quality of Pwyw is not considered lower by the majority of the sample and only 14% would consider their quality definitely worse.

On the other hand donations have way lower acceptance with 25% that does reach ~70% when those that voted *Maybe* are included. They are both alternative and relatively new form of monetization that are used for many indie titles and have their fair share in the music industry as well.

The 25% that considers donations to be a good idea prefers Action, RPG and has a tendency for Adventure and Shooters. The 24-35 age group that is living on villages/small cities is leaning more towards donations than their 18-24 counterpart.

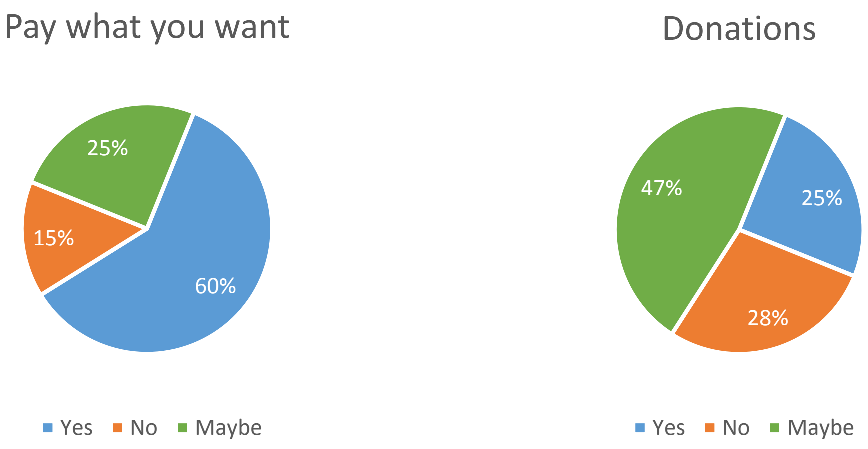



*Figure 62: Pay what you want and donation preference*

Regarding pay 2 win (p2w) games, the majority of the sample hates this form of monetization since 87% of the sample finds them annoying. That's once again a clear indication about the future of game design. Some f2p games may rely on "whale" customers and skimming but this is not a healthy since it is desirable to keep the f2p genre high in the gamer's preferences. The need for healthy game design, which is a win – win for gamers and developers alike, is more important than ever.

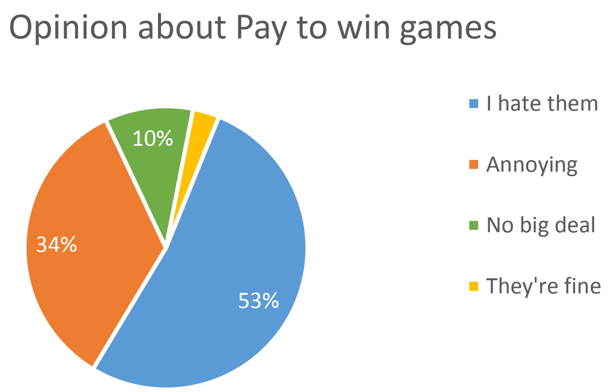



*Figure 63: Opinion about Pay to win games*

# Promotional methods

Currently spam as forced electronic word of mouth is one of the main things that comes to mind when someone hears about f2p games. The research is focused on how gamers use this "method" and their belief about it.

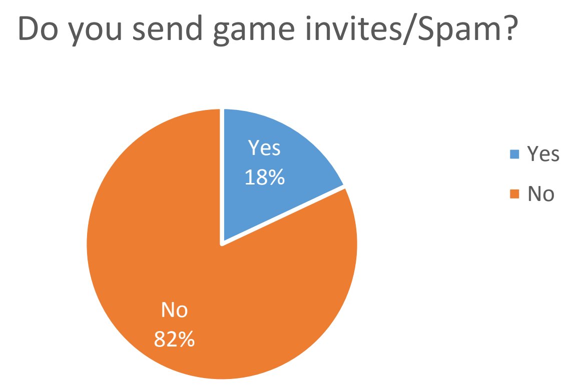



*Figure 64: Do you send game invites?*

As can be seen in Figure 64, spam is not the "future" of f2p games. 82% of the sample is against sending game invites while a whopping majority finds spam annoying. Actually 95% of the sample has an overall negative opinion about sending game invites which is huge and should be seriously taken into account.

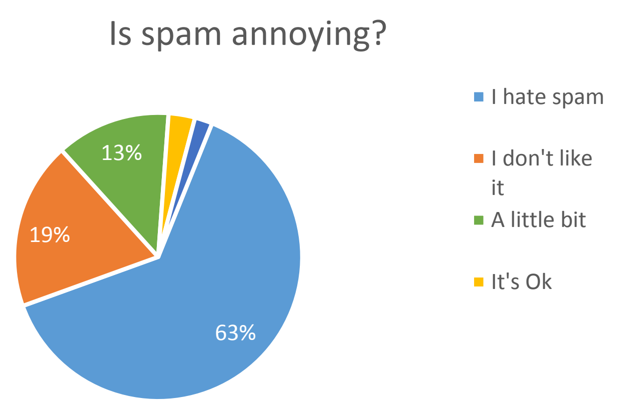



*Figure 65: Opinion about spam*

Advertisements in games don't get a lot of friction since 80% hates them/finds them annoying. It has to be highlighted that disruptive ads had to be divided from background advertisements to find out any different opinions. There are not many games that use non-intrusive advertisements so almost all of the sample thought the question was referring to that kind of ads. Future research should try to divide those and see if there are any meaningful differences.

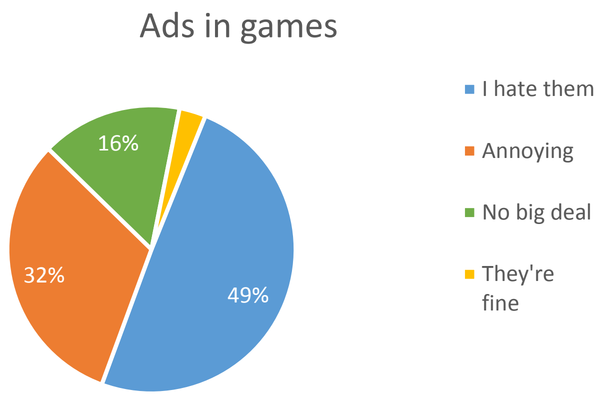



*Figure 66: Ads in games*

Word of mouth (WOM) seems to be extremely popular since 92% of the sample has suggested a game through word of mouth, mostly because "the game was awesome" something that strengthens Hansen & Lee's (2013) notion for sincere and self driven WOM, while socialization was the second most important reason for WOM suggestions. Reference rewards are rated as low as 9%.

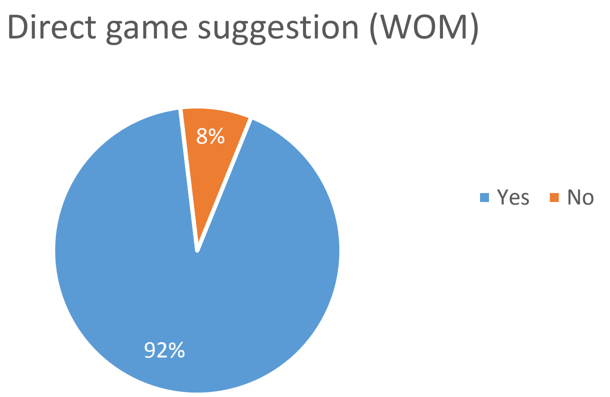



*Figure 67: Direct game suggestion (WOM)*

# 5. Summary

Most of the research results indicate certain guidelines for the three main game types. In this chapter these guidelines are stated in order to create a game type driven starting point for f2p design.

## Guidelines that apply to all game types

To begin with, people mostly play for fun whilst having a very negative opinion about spam. These are the two main universal truths that will guide us through the rest of our assumptions. Word of mouth is the best way to get a game known and people are more than willing to promote the game if they enjoy it, since 92% of the sample use WOM for games that are “awesome”.

Additionally, pay to win is unanimously frowned upon and it should not be the main focus of any game type. The majority of the sample that likes pay 2 win games are mostly browser/Facebook gamers.

Ads are also considered as a universal outlier since the majority of the sample finds them annoying. However, 18% of the sample is not annoyed by advertisements, and this corresponds mostly to single player gamers, planners that buy aesthetics on sales.

Core loops are the heart of every game. Never ever start designing a game before identifying a fun and appealing core loop. All f2p games have to be completely free in order to maximize initiation motives and user acquisition and then retention design techniques should be used to increase conversion.

Flow must go hand in hand with the core loop and compliment it in the best possible way. It should engage the player for the first few sessions of the game without any disruption and make sure that he has reasons to continue playing and come back. The game has to provide immediate satisfaction for a long period of time and make sure that the player understands everything through a simple user interface without being overly disruptive and condescending.

Finally payment methods apply to all the categories. PayPal and Credit Card are the most favored methods while SmS payments are perceived extremely negative. On the other hand the increase in payment methods can increase the conversion rate as well so the aforementioned overview should be taken into account only if choices are limited due to interface or other implications.

Following up, the main differentiating points of each game type will be pointed out in relation to ten segment categories that can directly affect game design. The three game types of Single player, Social multiplayer and hardcore multiplayer as indicated by Fortugno (2014) are being used.

## Single player

Genre: Action, Adventure, Arcade, Puzzlers

Gamer category: Sample is almost perfectly balanced between casual, core and hardcore gamers without an important differentiation anywhere.

Reason to play: The majority plays to waste time and to achieve progress

Retention: High score keeping, enough Levels and Simple progression mechanics are the main things to look for. Also leaderboards can make single experiences a bit more social and provide indirect competition motives.

Target group profile: 66% of single player gamers are married or in a relationship while 70% are employed and in the 24+ age group. There is a tendency for high class people with mediocre physical activity to play this type.

Monetization: Our segment is leaning towards planned purchases since only 33% buys impulsively. That's why there is a need to create an engaging game that will get revenue over time and not rely on forced impulse buying. The solitary nature of these games and the lack of recurrent financing makes PWYW and bundles a potential financing method.

Items: Boosts and power enchantments have their fair share and should be implemented without making the game a pay to win. Aesthetics are always a good idea but the lack of demonstration to others makes them less viable.

Achievements: 62% of Single player gamers don't really care about achievements. It's a nice complimentary way to increase compulsion and create open loops but not a priority. 38% though is really close to the general population medium and a significant negative/positive trend is not observed.

Stream influence: Only 38% of the single player sample watches streams. Popular streamers can be a mean of promotion for our game though, especially if it's a pc based game.

Focus points: Single player games should provide enough content and have a tendency for narrative. Lack of content will make the players bored and it is important to provide regular new experiences. User created content can help a lot in this case so a level editor is a must in order to give the players reason to get involved with the game and create even more content for fellow players.

## Social Multiplayer

Genre: Strategy holds a large part on the genre preference and Action, RPG are up next following the general population trend.

Gamer category: Once again we have an almost perfect distribution between casual, core and hardcore players.

Reason to play: Almost half of the sample plays to achieve progress, something that goes well with the nature of those games, while the rest play to prove their skills which indicates the need for self-esteem.

Retention: Gradual progression and levelling up are the two main retention factors. Achievements and leaderboards are complimenting retention really well since the nature of those multiplayer games is based on leaderboards and makes them competitive for advanced players.

Target group profile: 40% of the players fall into High class, a number that is really high related to the general trends. 22% of the social multiplayer players are female. 60% is 24+ and married or in a relationship something that is close to the single player category and is drifting away from the general population trend.

Monetization: These players are planners and medium/good spenders. They spend relatively more than the single player gamers. Alternative forms of monetization are hard to implement so we have to mostly rely on the in-game store and a high ARPU.

Items: There is a high tendency for Aesthetics and Boosts. Power ups are preferred by a small amount of people but they don't really thrive since increase availability would make a game pay to win and make competitive players abandon it.

Achievements: 33% of the social gamers care about achievements, something that shows that they are a nice added feature but not crucial.

Stream influence: 40% watch streams and a large majority are influenced by streamers. Highly rated players can demonstrate their grinding strategies on stream and they can be quite helpful with the game's promotion. Direct streaming through any device could be a very wise feature in order to increase game recognition and acquisition.

Focus points: Gradual progression with a smooth curve for both new and experienced players. Content must be readily available for higher tiers and players should be given legitimate reasons to come back in order to perform their core loop and get relatively better rewards as they progress in the game.

## Hardcore multiplayer

Genre: Role playing games and strategy games are the most preferred genres

Gamer category: Self-proclaimed hardcore gamers are 48% and stand up for the category title with casual and core gamers occupying the rest.

Reason to play: Achieving progress is the main reason that draws people into these games while wasting time and proving skills are also main points of interest.

Retention: Levelling up, leaderboards and competition are the main retention techniques that should be used.

Target group profile: Single gamers thrive in this category with 64%. Age categories have an almost perfect balance while 91% of the North American sample falls under the hardcore multiplayer category.

Monetization: Planned and impulse purchases are perfectly balanced while 50% of those that pay for the game are actually big spenders and represent the highest paying tiers of our general sample. 70% of our sample prefers to buy stuff on sale while 27% buy stuff at launch. Sales are a major part of the game's finance.

Items: Aesthetics are the most important aspect of this game type while heroes and gifts come second best.

Achievements: Hardcore multiplayer sample is split 50/50 about achievements. They appreciate them way more than the general sample. Achievements should be used as a compulsion open loop.

Stream influence: 75% of the hardcore multiplayer sample watches streams but only 46% of it states that is affected on its purchases by streamers. Still streams are a great promotional medium for hardcore multiplayer games and their competitive nature makes them very popular between gaming communities.

Focus points: There has to be a gradual game progression that smoothly leads to a competitive end. The nature of the game assists the compulsive nature of the genre that leaves an open loop due to leaderboards and progressive skill increase. There is currently huge market saturation in certain genres so developers have to focus on differentiation.

## Future points

Research has obvious limitations due to the required size of the dissertation and the inability to thoroughly discuss and analyze all the upcoming issues and correlations.

The open ends that are left suggest the following areas for further research and analysis:

- Same research targeted solely on specific platforms. The prevalence of PC gaming did not allow meaningful data for mobile and console games.
- Same research targeted on female gamers. Probably through different means of distribution a larger female sample will be available and more indicative of the genres gaming preferences.
- Even though a North American sample was apparent in the metrics, it is suggested to identify region specific gaming habits and preferences.
- There was a miscommunication in the advertisement part of the survey. Different views for background advertisements and intrusive advertisements should be assessed.
- More game type specific surveys should be held and linked with the preferred core and compulsion loops.

## Conclusions

The worldwide spread of the internet and digital distribution along with the trends of streaming and e-sports have created new types of entertainment. All of the above have allowed free to play games to become mainstream and start expanding into mobile and console games.

There was not enough scientific research regarding f2p game design and monetization so this made necessary the need for research in order to better understand this developing market. This paper achieved its goal to create a solid starting academic point for marketers and developers. Market segmentation and consumer behavior were linked with free to play design and monetization theories in order to improve free to play applications in current game types.

We successfully identified and linked market segments and behaviors. Current demonstrated results indicate strong correlations between game type preference and gaming habits in various demographic and behavioristic segments something that should be further researched by taking into account market saturation, the upcoming f2p console era, new markets and more focused segment research.

The main outcome of this work is that games should be fun and rewarding. "Users must find emotional values into their purchases" as Williams (2013) suggests. As Cheng (2013) said, "Don't make people pay for entertainment. Entertain them so that they will gladly pay for your game". Customer satisfaction is the most important driving factor that will lead to acquisition, conversion and consequently a financially successful game that will be appreciated by developers and consumers as well.

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## Appendix