CROSS-CULTURE IMPACT ON VIDEO GAME INDUSTRY

Case study: Dota 2's game design and player experience.

Tran An

LAPIN AMK
Lapland University of Applied Sciences

Abstract of Thesis

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Author	An Tran	Year	2017
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The purpose of this thesis was to investigate the culture's impact on online game designs, how the game could attract players internationally with culturally adaptive design and last but not least create its own digital culture among its players.

The main finding of the thesis was the importance of culture in the current online game industry. Since the players were from all around the world, their cultural impacts on the game's design could be greater than ever. Companies who are aiming for the international market should take different cross-cultural factors under consideration while having the game developed. By studying Dota 2's design from basic cross-cultural viewpoints of Hofstede's theory, it was able to explain partly the success of this phenomenon in e-sports, bring out the reasons how an MMORPG can build up its own borderless empire and digital culture. On the other hand, the thesis also suggested solutions to deal with a few current problems the case game's in-game features and its item designs.

Key words   cross-culture, online game, video game, game design, customer experience, multiplayer online battle arena

CONTENTS

SYMBOLS AND ABBREVIATIONS

MMORPG	Massive Multi–player Role-play Game.
MOBA	Multiplayer Online Battle Arena.
Sandbox	A game where a player can move freely through a virtual world and is given considerable freedom in regard to how and when to approach particular objectives.
Nerf	Reduce the desirability or effectiveness of a particular game element.
Buff	Can be the opposite of nerf or describes an effect (usually cast as a spell) that temporarily enhances a player's performance.
Hero	A character in Dota 2 that the players will choose to play as in the beginning of a match.
Gold	Dota 2's in-match currency.
Ward	Units that are summoned by heroes. Their purpose differs drastically, depending on their abilities and capabilities.
Observer Ward	Invisible watchers that give ground vision in a 1600 radius to its owner's team. Each lasts 6 minutes.
Sentry Ward	Invisible watcher that detects invisible enemy units and wards, to any existing allied vision within an 850 radius. Each lasts 4 minutes.
Animal courier	A completely shareable player-controlled unit that can be purchased and has a stock cool down of two minutes. Courier is usually used to deliver and purchase items from shops to the heroes in a team.

Flying Courier	An animal courier can be later on upgraded into flying courier. Once upgraded, it is immune to most spells as well as grants it swift, unobstructed movement.
Creeps	Units which are not a hero, building, ward or courier. There are 3 different types of creep: neutral, fractional, and hero-controlled. These units cannot level up or gain experiences throughout the game. However, some have special abilities and auras.
Treasures	Purchasable bundles that contain one or more cosmetic items. Each can be opened once and the owner receives one or more random items from its content list.
Tokens	An item that gives a specific wager bonus to one's entire team.
Bot	Computer controlled heroes in Dota 2. They can be found in practice matches, lobbies, and co-op bot matches.
Farming	The action undertaken by a player with the goal being the acquisition of gold. It is most commonly used to describe a hero that is killing jungle or lane creeps.

1. INTRODUCTION

1.1   The New Age of Video Games

Video and computer games are more popular and profitable than ever. Unlike those old-fashion offline video games in which the players are limited in a world of their own, online video games offer a virtual open world for their players in different regions and countries. The players can do anything they want in the games, as the games are their personal sandbox and even more, which mainly differs from the online video games and offline games: meet and interact with other real-life players. When being compared with the real world, the reality of online games is getting closer and closer, which greatly helps them to be more interesting.

With all of the time individuals spend playing video games, it is important to understand how individuals may differ in their video gameplay and why the video game designs need to be ready for its international players. However, creating an online video game that can attract a big number of players and earn a remarkable profit is no easy job. There are many things that the game producer/company has to take into consideration in order to make the game a success. In my opinion, culture is one of those factors. The objective of this thesis is to make the very first analysis on the Dota 2 game's design from cross-culture-based aspects with some additional suggestions on the game's development in the future.

Source materials are used as references and these materials were the basis of the research. Information found on official channels of Dota 2, videos, online articles have a major role in the result of the research and the rest was based on official player interviews, personal observations, and social survey.
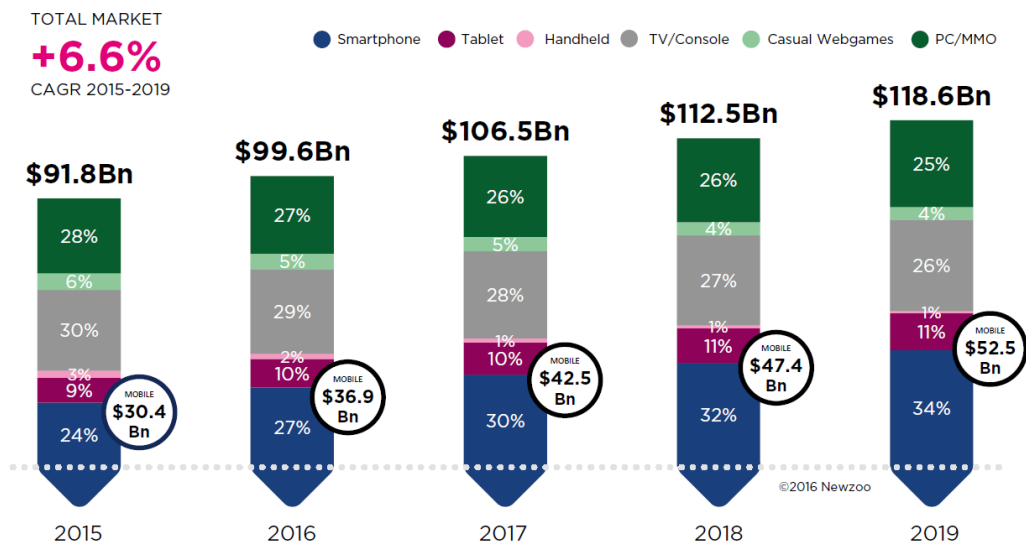
1.2 The Global Video Game Market

A video game is an electronic game that is played on player's computing device, such as a gaming console, personal computer, or mobile phone. Depending on the platform of the video games, they can be sub-categorized into console games and computer games. However, the recent emergence of social networks, tablets, and smartphones introduced new categories such as mobile and social games. Across the history, since the first games emerged in the 1970s, video games have come a long way. Nowadays, modern video games are able to offer simulate reality and photorealistic graphics to a point which is stupendously stunning in many cases. Thanks to the new technologies, video games can now be played on several different devices, each of them offers distinctive experiences and characteristics of the video game. Nevertheless, all of them are strongly growing in terms of gross profit (Figure 1).

Figure 1: The forecast per segment of global games market from 2015 to 2019 by Newzoo.

2015-2019 GLOBAL GAMES MARKET
FORECAST PER SEGMENT TOWARD 2019

TOTAL MARKET
+6.6%
CAGR 2015-2019

● Smartphone ● Tablet ● Handheld ● TV/Console ● Casual Webgames ● PC/MMO

$91.8Bn (2015)
- 28%
- 6%
- 30%
- 3%
- 9%
- 24%
- MOBILE $30.4 Bn

$99.6Bn (2016)
- 27%
- 5%
- 29%
- 2%
- 10%
- 27%
- MOBILE $36.9 Bn

$106.5Bn (2017)
- 26%
- 5%
- 28%
- 1%
- 10%
- 30%
- MOBILE $42.5 Bn

$112.5Bn (2018)
- 26%
- 4%
- 27%
- 1%
- 11%
- 32%
- MOBILE $47.4 Bn

$118.6Bn (2019)
- 25%
- 4%
- 26%
- 1%
- 11%
- 34%
- MOBILE $52.5 Bn

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Source: ©Newzoo | Global Games Market Report Premium
newzoo.com/globalreportpremium/

Video games are a billion-dollar business and have kept its peak for many years. According to NEWZOO, in 2016, the video game market in the United States was valued at 17.68 billion U.S. dollars. On the other hand, U.S. consumers were

reported to spend roughly double the amount of gaming content, hardware and accessories in the same year (Global games market report: An overview of trends & insights, 2016). Not to mention that the first generation of gamers is now grown up, which means they are now with significant spending power. Therefore, despite high penetration rates among young players, video games should no longer be considered solely a childish thing. In fact, video games are found to be gaining more popularity among the senior players' community. Averagely, PC/Mac users spent 5.8 hours on online gaming a week, 85% of purchasers bought more than three-quarters of their games in physical format, while only 5% of purchasers bought three-quarters of their games in digital format (NPD Group, Edge Magazine). Great fun and mental agility are among the main reasons listed by the older gamers to answer the question why they choose this type of entertainment.

One will be able to find a collection of different Online Games easily on the internet, some are free-to-play and some have to be purchased first. There are usually in-game purchases for Online Games and most of the time they are the main revenue for the game companies. Some of these games can be played directly on a web browser, while others require a client to be downloaded and installed. Internet connection is also needed to play these Online Games, as well as sometimes a suitable web browser such as Mozilla Firefox, Google Chrome or Microsoft Explorer and an account for each individual game. Normally one can create an account very quickly and effortlessly on the game developer's website/client and be able to use this account to log in the game, ask for help from the game developers and their various support teams with any questions that may come up while playing the game.

1.3   Case Company

Valve Corporation (commonly referred to as Valve) is an American video game developer and digital distribution company headquartered in Bellevue, Washington. Founded in 1996 as a limited liability company by former Microsoft employees Gabe Newell and Mike Harrington, the company has developed the critically acclaimed Half-Life, Counter-Strike, Portal, Day of Defeat, Team Fortress, and Left 4 Dead video game series, alongside Dota 2. It also developed and maintains Source on which most of its games run, and the software distribution platform Steam, which has led to the Steam Machine, a line of pre-built gaming computers running SteamOS.

Steam is a digital distribution platform developed by Valve Corporation, offering digital rights management (DRM), multiplayer gaming and social networking services. Steam provides the user with installation and automatic updating of games on multiple computers, and community features such as friend lists and groups, cloud saving, and in-game voice and chats functionality (Appendix 1). The software provides a freely available application programming interface (API) called "Steamworks", which developers can use to integrate many of Steam's functions into their products, including networking, micro transactions, in-game achievements, matchmaking, and several other supports for user-created contents through Steam Workshop (Picture 1).

Picture 1. Steam's user interfaces with Steam Workshop
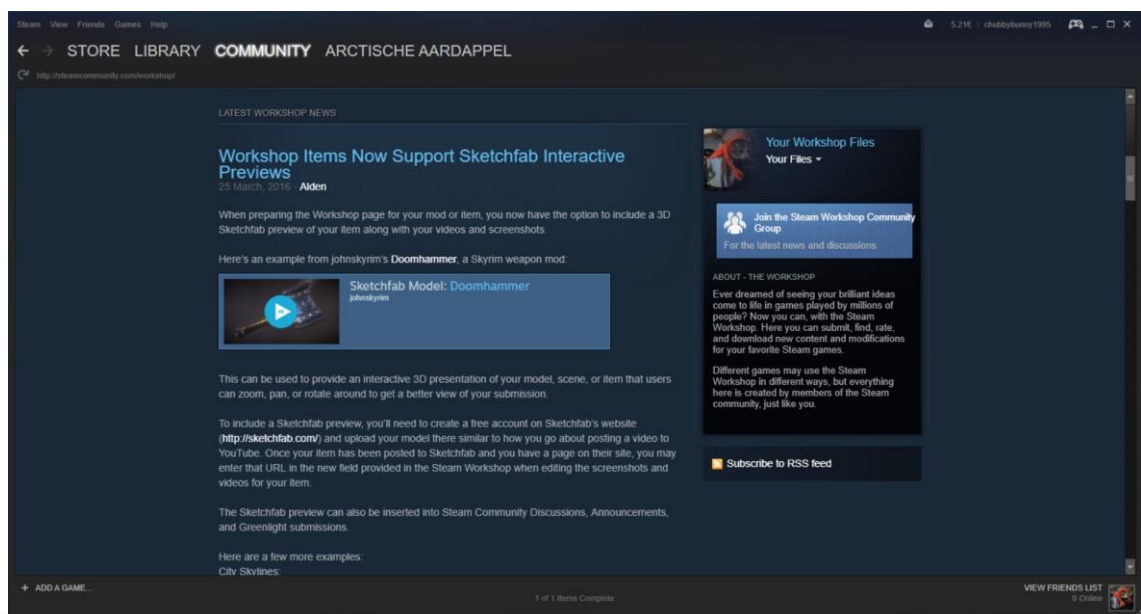
As of September 2015, there are 6,464 Windows games, 2,323 OS X games, and 1,500 Linux games available on Steam. The service has over 125 million registered accounts. Steam has had as many as 12.9 million concurrent users as of July 2017 (steamcharts.com). The Steam platform is considered to be the largest digital distribution platform for PC gaming; in November 2009, Stardock estimated it at 70% and then later, in October 2013, it was estimated by Screen Digest that 75% of games bought online were downloaded through Steam. In 2015, users purchased titles through Steam or through Steam keys from third-party vendors totalling around $3.5 billion representing 15% of the global PC game sales for the year, based on estimations made by the tracking website Steam Spy. The success of the Steam platform has led to the development of a line of Steam Machine micro-consoles and personal computers meeting minimum specifications, and SteamOS, a Linux-based operating system built around the Steam Client Server.

1.4 Case Game

Dota 2 (Picture 2) was developed and published in 2013 by Valve Corporation. By this point, Dota 2 should need no introduction to any game enthusiast. Valve's most popular game now attracts more than 10 million players from different countries every month, to be more precise, 12 175 279 unique players recorded in June 2017 and still growing. Dota 2 is a free-to-play MOBA game that was developed for Microsoft Windows, Linux, and OS X. The game is the stand-alone sequel to Defence of the Ancients (DotA), which was a community-created mod for Warcraft III: Reign of Chaos and its expansion pack, The Frozen Throne.

Picture 2. The official Dota 2 poster with its logo (source: Valve Corporation)


Dota 2 is an MOBA game, a competitive game of action and strategy, played both professionally and casually by millions of passionate fans worldwide. Players pick from a pool of more than a hundred heroes, forming two teams that consist of five players each, with both teams occupying their own separate base on the map. Each of the ten players independently controls a powerful character, so-called "hero", that feature unique abilities and different styles of play. During a match, a player and their team collect experience points and gold to buy items (through killing creeps, by killing enemy heroes or destroying buildings, along with another amount of gold granted periodically) for their heroes in order to push through the

opposing team's defenses. A team wins by being the first to destroy the large structure located in the opposing team's base, called the "Ancient". Dota 2 has a heavy emphasis on tactics and team coordination, and a huge amount of strategy focused on building up strength as fast as possible, optimal itemization, and selecting what order to upgrade the hero's spells.

A special thing about Dota 2 is that, as an MMORPG, it cannot be fully "completed" or "won". In other words, Dota 2 is a never-ending story as in its latest trailer "Dota 2 – Join the battle", Valve proudly introduced the game with the term "One Battlefield. Infinite Possibilities". Game developers have become adept at prolonging the moment of ecstasy that stretches between initiation and finale. By controlling the character progress, adjusting their abilities and other elements, consistently updating and patching the game to bring in new sights, sounds, and other new items through a steady stream of game patches, the narrative solution is persistently deferred. MOBA games like Dota 2 are no longer just games, they are daily service model, provided indefinitely to highly committed paying players who must be kept happy to stick with their game service provider. The current patch of Dota 2 is 7.06, which means there have been many changes in the game since it was first released. No matter big or small the changes were, they helped Dota 2 to evolve and keep being freshly challenging to its players up until nowadays.

As mentioned above, the hero is an essential element of Dota 2, as the course of the match is dependent on their action. During a match, two opposing teams select ten out of 113 heroes that accumulate experience and gold to grow stronger and gain new abilities in order to kill enemies and destroy the opponent's different buildings, then finally its base called "the Ancient". Most heroes have a distinct role that defines how they affect the battlefield, though many heroes can perform multiple roles. The heroes have a basic damage-dealing attack, in addition to their own unique powerful abilities. Each hero has at least four abilities, which are the primary method of fighting. All heroes have three attributes: strength, intelligence, and agility, which affect health points, mana points, and attack speed, respectively (Picture 3). Each hero has one primary attribute out of the three, which adds to their non-ability basic damage.

Picture 3. The heroes pool of Dota 2- in which all 113 heroes are shown, divided into 3 different groups based on their attributes: Strength, Intelligence, and Agility.
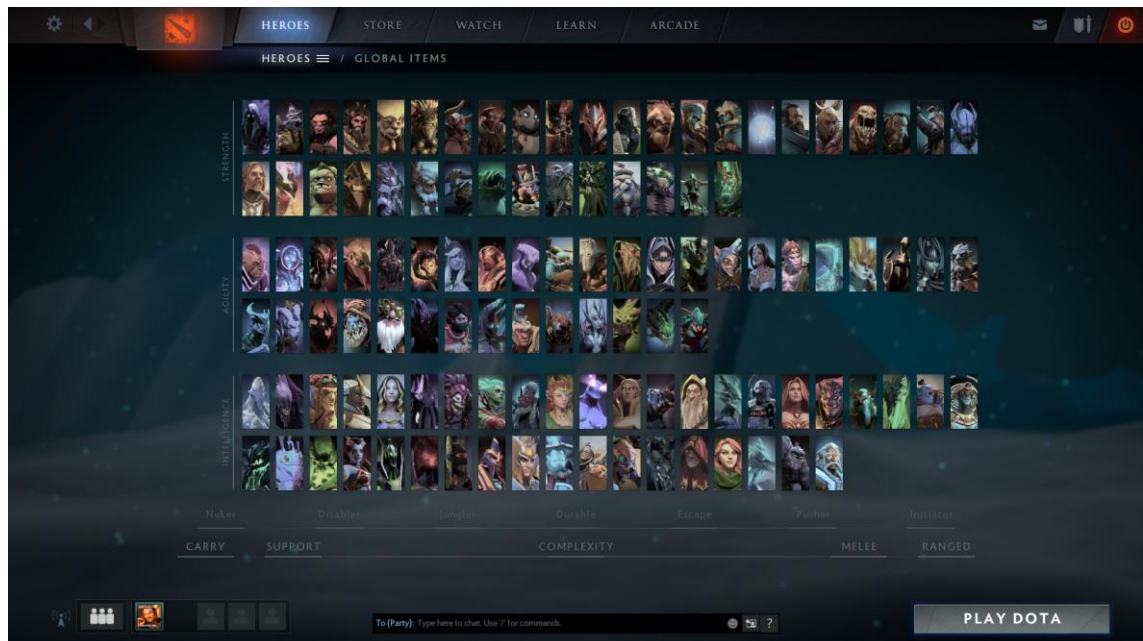
Heroes begin each game with an experience level of one, only having access to one of their abilities, but are able to level up and become more powerful during the course of the game, up to a maximum level of 25. Whenever a hero gains an experience level, the player is able to unlock another of their abilities or improve one already learned. Starting from the patch 7.00, each hero also has a distinctive ability augmentation system known as "Talent Trees", which allows players to make further choices on how to develop their hero by selecting four out of eight talents provided. If a hero runs out of health points and dies, a part of its unreliable gold is lost, and a timer begins to count down until the hero respawns in the base.

1.5 Goal Definition and Research Method

Nowadays game designers are like movie directors, as they outline the vision, define the style in detail and ensure the consistency of the whole game's experiences. They are the visionaries, but they also have to come up with an exciting story that will produce good gameplay. There are scriptwriters who construct compelling scenarios and dialogue for the video game. And last but not least, there are artists and animators who create richly textured elements that the programmers can integrate into the game later on. The role of the artists in game design has been strengthened significantly in the last ten years, or in other words, the artist is the king. It is common to see game programmers being outnumbered by the artist with three to one ratio. Concept artists work as 3D-modelers, animators, and texture artists craft exquisite symphonies of designs in which all elements (characters, items, backgrounds, and scoreboard) blend and work flawlessly together. While having great mechanics and script can be the reason why a game is chosen and widely loved by players, visual elements are the key to make players spending on the game, especially with a F2P MMORPG that barely offers any pay-to-win purchase for its players like Dota 2.

According to David Buckingham, "the fundamental difference between games and other kinds of cultural texts is that games are played" (Buckingham 2006, 6). And that is what makes Dota 2 and the endlessly creative world, to both players and game designers. While many games that focus on the differences between real life and the in-game world, Dota 2 challenges that traditional concept of the Modern Age's digital magic circle in many ways, both in connection with what happens in once the game is running- by all cross-culture dimensions the players' community bring into the gameplay, and what carries on when the game is off- for instance, traders, casters, designers and many more who have their careers based and acquire real-life profits by playing Dota 2. Therefore, it is incomplete if Dota 2 is studied as just a game solely. The game should also be studied as a culture site requiring multiple analytical tools, methods, and concepts so that this phenomenon can be fully comprehended.

In this thesis, the focus is on the game's design and try to view the game under basic dimensions of culture, most of them are according to Geert Hofstede's

theories about different cross-culture dimensions in the gaming world. Through an online survey which was created, publicized, processed and analysed statistically, Dota 2 players' consuming habit was somehow revealed. In order to keep it objective and true to the cross-culture purpose of this thesis, the survey was exclusive for all Dota 2 players world-wide, no matter their ages, genders or locations. In the end, 72 participants from all servers of Dota 2 across the world took part in the survey and wrote down their experiences with the game as well as giving different opinions on what Valve can do to improve the game in the future. Along with qualitative methods like social survey or personal observations, quantitative method was also applied as several statistical analyses from different sources were put into use to demonstrate and clarify points in this thesis.

Through this, the thesis is expected to set a basic analysis in order to explain how Valve's decisions upon Dota 2's visual and mechanical designs can make the game internationally interesting and engaging.

2   CULTURE AS A KEY FACTOR IN DESIGNING VIDEO GAMES

2.1   Video Games' Digital Culture

Historically, games have been seriously under-theorized. Originally, game study was born as fundamental curriculum, where scholars mostly focused on defining the essential properties of the medium. Even when scholars started their studies about games, there was an old cultural premise that work and play were two inherently divisions. When video games were mentioned, they were easily framed as pure entertainment. However, it has come to an age that video games are made to be so surreal with high complexities and the mind-blowing amount of work the players put into games has gone from mostly unnoticed to being foreground slowly and taken more seriously. Games require time, affect our moods, our behavior, communicate ideas and values as well as take part in shaping our mind. Games have proved that they can be more than just simply entertainment, as activities occur in games may have concrete effects in real life. For instance, objects that players acquired in games can be sold for real money on several online markets (more of this will be mentioned shortly in the next part of this thesis). "Video games play important roles in the increasingly blurred intersections of our social, economic, and political spheres, and articulating those blurred boundaries in the microcosm of video games reveals larger trends in our digitally mediated world". (Nick Yee 2006, 68-71)

Lately, the world has witnessed a turn when player-oriented questions, for examples, their genders, identities, and activities, in MMORPGs and cultural contexts have been more emphasized and become more fascinating. Games can be seen as reflections of culture. Multiplayer games offer enormous potential for shared experiences and collaborative activities. With the communicative features enhanced, for example, in-game voice chat or third-party communicating application, the players would be able to express themselves as well as share their thoughts conveniently, not to mention more flexible interaction forms and creative set of actions. Marshall McLuhan, a Canadian media theorist, shortly defines games in his book "Understanding Media": "Games are popular art, collective social reactions to the main drive or action of any culture. Games, like institutions, are extensions of social man and of the body politic, as technologies

are extensions of the animal organism. Both games and technologies are counter-irritants or ways of adjusting to the stress that occurs in any social group. [...] Games are dramatic models of our psychological lives providing release of particular tensions." (McLuhan 1964)

Games can be considered cultural forces nowadays. They are everything from a body of knowledge that is influenced by the culture surrounding it (media and trends), to an apparatus that influences culture. The interaction is sure complex, but it would remain incomplete if we do not acknowledge the culture of those "consumers" who really make the gaming industry profitably possible: the gamers. Men and women, old and young, rich and poor- players do not simply play the games, they emerge many different cultures and subcultures, each with particular values, norms, interests, and languages. In other words, players of different games, genres, or even other bigger phenomenon of gaming put themselves together in different groups and behave in different ways. Consequently, new in-game cultures, and communities are born from this enthusiasm. Though the core of those gaming cultures and communities are still the game themselves, chances are that their talks will stray into widely divergent topics. Games have given birth to much bigger worlds beyond their original ones, which are called "player culture". In the book "Understanding video games", players culture can be split into two forms: game communities (within the game) and metaculture (around and beyond the game). It is the players who form game communities, and through their actions, game communities characterize meta-culture around a game. (S. Egenfelft-Nielsen 2008, J. H. Smith 2008, S. P. Tosca 2008)

Dota 2 has received a lot of attention from both international gaming community and the press, making it one of the biggest names in the MMORPG chart and an importantly casual topic for everyday life of over and above its group of 12.5 million players (April 2017). Despite occasional skepticism, the game has been recognized by not only a casual fun within its diverse gaming communities but also by its enormous leading metaculture.

2.2   Players' Experience and Satisfaction Evaluation

Talking about the central irony of MMORPGs, Nick Yee state that the online games are advertised as worlds to escape to after coming home from work. However, they make us work and burn out in the end. He later finds out that MMORPG players pay game companies on a frequent basis to work and get burnt out. This also unsurprisingly applies to Dota 2's case. Considered one of the most-played games on Steam, Dota 2 ranked 5th place in "2016 Top Free-to-play (F2P) game PC titles" (SuperData Research 2016), being free for all does not mean it is not bringing home tons of money. According to SuperData Research's Year in review, December 2016, Dota 2 made 0.26 billion dollars from January to November 2016. The fact that Dota 2 is able to make around 18 million dollars a month and the number are still rising every month proves that not only Valve's top-tier game is a growing force but also the company knows how to keep the cash flowing into the game from its players.

As an online game, Dota 2 finds its way to create strong interactions with its players from different parts of the world through an engaging and thrilling gameplay experience, not without some stunning visual beauty. Unlike arcade games that bear the mission to deliver a quick dose of adrenaline to players, make the next level to be progressively more challenging with faster missiles, bigger monsters, and more frequent bombs until the players died and their wills of revenge urge them to feed the machine another quarter, computer-based games like Dota 2 are designed to aim differently. Dota 2 is listed with the tag "Free-to-Play" on Steam, which is its first attempt to convince the players that this famous game is a good and easy choice to make for all, even the ones with a limited budget. There is no extra charge, no monthly or annual subscription needed to enter the world of Dota 2. Following the successful capitalistic fairy tale of World of Warcraft, in Dota 2, any player who works hard and strives enough can win the game with their skills and rise to higher ranks as well as be able to unlock new achievements. The idea is to hook the players, making them addicted to the world of chaos and the eternity battles between Radiant and Dire while slowly make the in-game community their home.

Many would question how the game can bring home such an enormous amount of money annually even though being F2P. The answer is having a smart game design, offering several purchasable bonus items as well as game modes and access to special campaigns. Despite the fact that in-game purchases are claimed to gain almost no competitive advantages for the players, they allow access to those hidden unique-looking items, game modes and quests galore, as well as improve the in-game experiences in many ways. Being irresistibly colorful on the surface, every Dota 2 hero has an array of skills and abilities that combine with the skills of their allies in unexpected ways, to ensure that no game is ever remotely alike. Valve mainly makes its money from the sale of these in-game cosmetic items - colloquially referred to "hats" or "skins" by the community. For example, a hero's appearance can be modified with equipment and much more bought from the community market. These items are designed to significantly improve the looks of everything. The majority of these alternate skins are created by independent creators or teams who submit their designs via Steam's Workshop feature, which lets community members sell game content for titles that support it. Personally speaking, this is a smart way not only to save efforts and resources on coming up with new skins but also a way to engage the players and their original cultures. Altogether, Dota 2 looks like a place where all cultures are embraced and appreciated. This is one of the reasons that the Dota phenomenon has continued to grow. Take the hero Storm Spirit as an example, there are many different in-game purchasable full sets for him, not to mention plenty of single items available aside (Picture 4). The players can choose to have his or her Storm Spirit dresses in a Spanish-inspired matador costume, rose in the mouth with the set "Corridan Maestro", or turn him into a Chinese-mythology-based thunder God by equipping "Heavenly General" set and much more. Among other things, these cosmetic items give heroes completely new appearances and strongly spice up the whole gaming experience.

Picture 4. The hero load-out of Storm Spirit with his original skin, purchasable skins, and other cosmetic items are shown below.
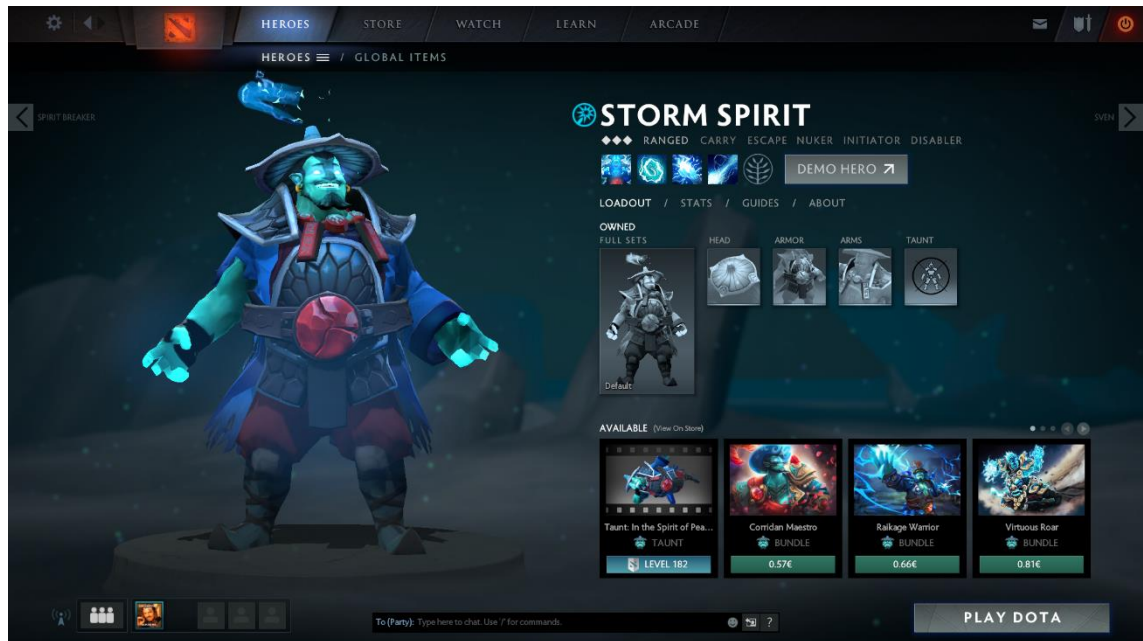
In the survey, the participants were asked how long they have played Dota 2 and what their reasons for spending time and money on this F2P online game were. As most of the participants said they had played Dota 2 for more than one year and at least 51 participants had been with the game more than 3 years (Appendix 3), Valve's highly competitive game clearly has a huge loyal player community while attracting a huge amount of new players every month. There are plenty of reasons why Dota 2 players love this game: its mechanics and contents, visual design, huge international player community, non-stop-evolving updates and patches, etc. (Appendix 5).

When it comes to spending on F2P online games, some will find it hard to believe that many people end up spending much more on these than they regularly spend on normal full-priced games on Steam. Take Ubisoft Entertainment's Assassin's Creed® Black Flag as an example, the game currently costs 19,99€ for the Digital Standard edition and 29,99€ for the Digital Deluxe edition. Once purchased, the player can obtain the full potential to explore the game contents and equipment, which usually require being unlocked by some specific in-game achievements, but no hidden costs will appear later. With the Digital Deluxe edition, there are a few more added values such as additional quests and legendary equipment available, but again, there is a limit set and after the upgrade, the player cannot

make any further payment in-game. However, in Dota 2, the sky is the limit. The game is truly free-to-play as advertised, and once downloaded then run, the player can start playing with no restriction of heroes or abilities. But that is just the beginning, as some of the game's special campaigns and modes like Battle Cup or Siltbreaker can only be played if the player owns a Battle Pass, a seasonal pass released several times a year before every annual tournament named "Major Championship" (Dota 2's Valve-sponsored championship series announced by Valve in 2015 as a part of their plan to improve the competitive landscape).

As versatile as it may seem, Valve tries its best to make Dota 2 an openly adaptive playground for all, where not only everyone can be likely able to find something they prefer, but also have their voices heard by voting for the next cosmetic items to be released or submit their own designs on the community workshop. But here is the tricky part: "skins" can only be obtained from the Dota 2 Store, the Community Market or participating in some specific events. There is also a small chance that items will be dropped randomly after a match, but it hardly ever happens. The game's cosmetic items were designed to be so uniquely attractive, it seems to be almost inevitable that the players will end up spending money on what is otherwise a free-to-play game. Many players have spent much more money than they might have ended up spending on a full-priced game, given the sheer number of things players can buy in Dota 2 (Appendix 6).

The reason for this craving can be explained as people play, it feels like a million tiny things have come together to push them over the edge onto a guiltily pleasant compulsion. Once one has spent countless hours enjoying and falling in love with Dota 2, it would not actually be hard to throw some money at Valve, or the folks making content for this F2P game, as it is a good way to support the game. But there are other less noble reasons, too. It is hard not to notice, for example, that the main menu was designed to have the "Store" button appearing intentionally before the "Play" button, where a daily "spotlight sale" is put on every day as well as many other treasures and items being displayed beautifully next to each other. Last but not least, Valve occasionally offers many good deals for Dota 2 players who are willing to spend a little extra for a bigger bundle of a limited time, with

countdown clock running beside, hitting it hard to those who want to go for a big upgrade at a fair price.

According to the survey's result, the most popular purchased items are usually the Compendium (Battle Pass for Majors) and heroes' cosmetic items (Appendix 7). Now the price for those items varies, starting from €0.03 for each cosmetic item and €9.99 for one basic Compendium. It may sound very little at first, but when a closer look is taken and a simple calculation is made, 113 heroes with at least 3 item slots to equip items and multiple sets available for each, not to mention other items like terrain (to change how the in-game map's look) or couriers, all come with different rarities and gem inscribed, there is truly no guarantee how much one would end up spending on this game. In fact, 47 over 72 participants admitted that they had spent over €10, and 23 had spent more than €100 (a lot more than one deluxe digital version of a famous game on Steam would usually cost) on the game by buying different items and passes. Dota 2 secured its place in the ranks of titles where in-game items have sold for exorbitant real-life sums when an "Ethereal Flame Pink War Dog" sold for $38,000 (Dota 2 Trade subReddit). There are only four other known pink ethereal flame war dogs, as pink is not one of the 10 set colors Valve created originally, and soon after it was found out to be a bug associated with black couriers. There can be several reasons why one would spend so much money on such small digital details, mostly because of the special looks they put on the heroes and the in-game background (Appendix 8).

However, Dota 2 players are reportedly getting less and less satisfied with new cosmetic items and the quality of them from Valve. The skins used to be sold directly from Dota 2 Store. However, new cosmetic items are now often released together through treasures and chests. Many are even listed as untradeable or unmarketable, which was a smart move from Valve to prevent those items to be sold on the Community Market as well as make purchasing treasures the only way to get those new skins. Opening treasures mean the players are no longer able to choose which skins they receive but wish for the best. One cannot get duplicate items when open several same treasures until all listed items are received, but still, it makes the players feel being ripped off due to the fact that it

may cost a lot more than it used to be to get their favorite items with this releasing system.

2.3   Geert Hofstede's Cultural Dimensions

Power Distance Index (PDI): This dimension expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. How a society handles inequalities among people is issued in this fundamental. People in societies exhibiting a large degree of Power Distance accept a hierarchical order in which everybody has a place and which needs no further justification. In contrary, societies with low Power Distance distributes the power fairly between all people and demand justification for inequalities of power.

Collectivism versus Individualism: Individualism is defined as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate relatives. In contrary, collectivism represents a highly-bonded framework in the society in which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty. A society's position on this dimension is reflected in whether people's self-image is defined in terms of "I" or "we."

Masculinity versus Femininity (MAS): The Masculinity side represents a preference in society for heroism, achievement, material rewards for success, and assertiveness. Society at large is more competitive. In contrary, femininity, stands for a preference for modesty, cooperation, modesty, caring and quality of life.

Uncertainty Avoidance (UAI): This dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. Weak UAI means maintaining a more relaxed attitude in which practice counts more than principles. Strong UAI maintains rigid codes of belief and behavior and is intolerant of unorthodox behavior and ideas.

Long-Term Orientation Vs Short-Term Normative Orientation (LTO): Societies who score low on this dimension, for example, prefer to maintain time-honoured traditions and norms while viewing societal change with suspicion. Those with a

culture which scores high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future.

Indulgence versus Restraint (IND): A society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun is referred to indulgence. In contrary, restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms.

3   CASE GAME'S DESIGN ANALYSIS

3.1   Dota 2 Heroes' Lore

It is a deficiency to talk about how culture influences Dota 2's game design without mentioning its heroes' amazing biographies. All the heroes have their own tailored stories that somehow link them together in the universe of Dota 2, many of which also explain their characteristics, name and sometimes, rivalry or love story between some of the heroes. Though comics are the main source of Dota 2 lore other than the game itself, the lore of Dota 2 is vast, mysterious yet somehow realistic, since the design team also adopted different famous myths into the game. Many mythology-inspired heroes can be internationally recognized not only by the players but also non-players. People from all around the world who are new to Dota 2 can easily find such heroes like Zeus and Medusa from Ancient Greek mythology, or Monkey King (also referred as "Sun Wukong") from Chinese mythology familiar. The background story also partly determines a hero's appearance. However, unlike the myths and comics that have endings, the majority of the lore is intentionally left open ended for the reader, as mentioned above that Dota 2 is a game with an open ending.

Figure 2. The Onion Diagram (source: the Hofstede centre)
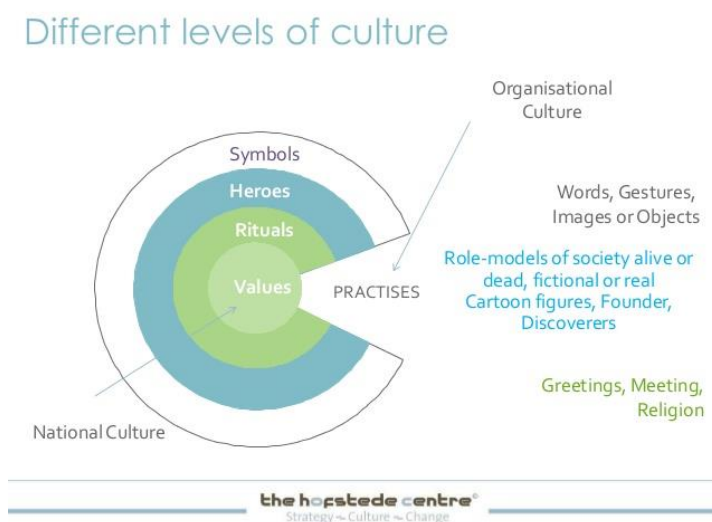
As seen from Figure 2, Hofstede's Culture Model (often known as the "Onion Diagram"), using such creatively adapted fictional figures is one way for Dota 2 to reach its worldwide players' personal thoughts, beliefs, and values. By

recreating mythology through the game, giving them new endings and adding more stories adopted from different sources, Valve managed to make Dota 2 heroes more interesting and help the game penetrating to new player societies through innovative storytelling.

3.2   Language Availability

The versatility of languages offered by a game can greatly tell if it is meant to international audiences and players or not. At the moment, Dota 2 is available in 4 languages: English, simplified Chinese, Russian, and Korean. All the items, heroes and their lines are officially translated along with full audio support. Consequently, people will question why Valve is missing out other popular languages, for instances, Spanish, Portuguese and German. The answer is since Dota 2 is a huge and complex game, a full translation of it will cost a lot of time and efforts, not to mention audio support can be extremely costly and hassling. Because of those reasons, Valve has been relying on its fan around the world on other language partial translations.

Dota 2, like most other Valve's games, is translated by the community around the Steam Translation Server. Players are able to sign up, enter a reqiuired translation for their target languages and after being accepted they can access the translation system. For example, thanks to volunteer translators, Brazilian Portuguese is now available with the whole main client, skills' names, heroes' lore, game modes, structures, non-hero units, etc. Though it is still far from being fully translated, as cosmetic items, heroes' and items' names are still in English, this still greatly helps many players to get used to the game faster and more comfortably.

This user engagement in terms of translation results in a widespread language availability for the most important parts of the game. At the same time, it helps Dota 2 to be localized quickly whenever it reaches a new country or new-language-spoken community. The game has been translated into most languages, but there is no different voiceover due to the reasons stated above. Moreover, the name of heroes, their abilities, and items are not translated often is intentional in order to make it easier to communicate in a team in case the players are from different countries and speak different languages.

3.3   Power Distance Index (PDI)

Despite being a game that strongly emphasizes teamwork, the Power Distance in Dota 2 among five team members is rather high. Since Dota 2 emphasizes on strategy and cooperation, this helps to make the roles and responsibilities of the players in a team clear and reduce the chance of having any misunderstanding, even though they may not speak the same language or have difficulties in communication.

Due to the fact that there are three lanes in the game map (as marked with light white lines in picture 5), three out of five team members will play as core heroes, mainly spend their early game in one lane (usually referred to safe-lane carry, mid carry, and off-lane carry), giving the support roles to the last two, who can stay in one lane or move between all of those three. Players widely use the word "position" then add a number from 1 to 5 after to indicate which role they prefer to play. The rough sketch for the line-up can be explained in this way:

Picture 5. Mini-map in a pub game.

Position 1: The player with highest farming priority, usually is the team's hard-core carry playing in safe lane (Radiant's bottom lane or Dire's top lane) or can also be the solo-mid in specific circumstances.

Position 2: This is usually the solo mid-lane player. This player should have the most farm in the first 5-6 minutes in order to earn an efficient amount of experience and gold for items, then start going to the other two lanes to put more pressure on the opponent team and find kills.

Position 3: This position can either be an off-lane carry or "jungler" (a core hero which stays inside the jungle, kills neutral creeps and collects runes for experience and gold). There is no specific demarcation but depends on the team's play style and choices.

Position 4: Though a roaming support is usually preferred, this position can be a support transitioning into a core by farming in the jungle or a core dedicates most of the time in the beginning of the match in the jungle (called "jungler") who aims to rush for a specific item/level or both. Usually played by a hero who doesn't need many items to get up and going.

Position 5: The hard support. This player is usually expected to buy and upgrade courier, wards, other consumable items, stacking and pulling neutral creeps for other positions and babysitting the core heroes. As a matter of fact, this is often the player with lowest net-worth and level in the team with high vulnerability.

However, this is a rough sketch of the layout. Position 1, 2 and 3 are usually the cores while position 4 and 5 are the supports. There are various play styles, considering Dota 2 is a game full of flexibility and situational adaptations. For example, sometimes duo mid lane or trio off-lane (also referred to the concept "offensive tri-lane") is needed if the team find it hard to compete in the normal line-up. While drafting a team, there should ideally be one mid carry, one hard carry, one off-laner, one jungler or roaming support, and one hard support. The key difference between a support and a core is that the former sacrifices their potential to earn gold and experience in order to create spaces for the latter. This helps the team to make the max utilization of its own part of the map, while 3 cores make the most out of their lanes and the jungle. The jungler and supports will team up to roam and find kills when needed. The support will get farm by filling in gaps. The jungler can transition into a core if the hero gets enough farming.

As explained before, each hero in a team plays an individual role which all matter to the whole team from the first second of the game until the end of it. In picture 6, two team's net worth are displayed in different colors: red stands for Dire and green stands for Radiant. It is easy to notice that there are drastic differences between the gold earnings of the core players and the supports. For example, Night Stalker (the least earned hero on the Radiant side) is almost sixteen thousand gold behind Invoker, the team's carry, so is Pugna, playing as position

4 on Radiant side. Huge net worth gaps lead to big differences in items that those heroes own, which results in high power distance in both teams. Playing the role of supports also leads to the fact that those are accepted to usually have lower voices and be less game-changing, which means they cannot win the game competently by just rely on themselves and their skills while the core players are bad. Sadly, on the opposite side, good core players can carry the team to victory way easier in case there are bad supports in the team. They might struggle in the early game but once the good core players are loaded with the items they need; victory can be achieved with less struggle.

Picture 6. Net worth by team in a match.

3.4 Individualism vs Collectivism (IDV)

Dota 2 is a video game where team work and cooperation are highly valued. Jeese "JerAx" Vainiki, a Finnish professional Dota 2 player, stated during his interview before the Boston Major 2016: "This game (Dota 2), it is a lot about personalities and how to come together as a team" (JerAx profiles - The Boston Major 2016, OG Dota 2). Therefore, its collectivism characteristic is greatly shown as it requires all team members to work hard together throughout the game, being selfless when needed to succeed in protecting each other, roaming, getting kills, taking down towers, and archive final victory. Despite the fact that experience points and some auras are the most usual things that are shared between allies, not gold, the game gives many chances to other players in the team to earn gold together. For instance, when an enemy tower is taken down (destroyed or denied), all heroes of the team are rewarded with a fixed amount of gold while the one who directly destroyed it will earn a little bit extra. Similarly, when an enemy hero or Roshan is killed, the slayer will get the main bounty while all of his/her allies receive small amounts of gold for their assistances. These pros encourage the players to take care and back each other up, especially the supports of the team, as they do not just gain experiences and golds for themselves but also profit from their strong core heroes later in the match.

Dota 2, like other RTS games, has its own ranking and matchmaking system based on "MMR" (Match-making rating). In general, players with similar MMRs will be matched with each other with the goal of creating teams that are both made up of players with roughly equal skills and have a fair chance of winning. The system will extend queue times over sacrificing accuracy, which is why an outstanding player may face much longer queue times than an average one. By taking part in at least 10 ranked and unranked matches, one is assigned a number that reflects the skill level which is determined by the outcomes of his/her latest games. With this matchmaking rating, the system will attempt to assemble two teams as fairly as possible to create a game wherein both teams have an equal chance of winning. Five MMR values are tracked independently: solo rating (normal games), party rating (normal games), solo rating (ranked games), party rating (ranked games), team rating (ranked games) though only ranked solo MMR and party MMR are visible. Winning or losing a ranked game results in a

small change of one's MMR (Picture 7). Therefore, Dota 2 players usually refer to that MMR number to tell if the others are highly-skilled or not, especially when they just meet. While having high MMR, for example, over 7000 MMR can usually earn respect and fear from other players (professional players often get 7000-10000 MMR, and can be distinguished easily), players with low MMR (2000 MMR or less) can unfortunately lose their teammates' respect, being looked down on, and are not usually expected to perform well.

Picture 7. An example of a MMR scoreboard of a player.

Date/Time	Hero	MMR	Duration	Type
11/23/2015 9:31 AM	Shadow Fiend	4,876 (+25)	18:38	Ranked
11/23/2015 8:40 AM	Queen of Pain	4,851 (-25)	42:37	Ranked
11/23/2015 7:58 AM	Outworld Devourer	4,876 (+25)	34:44	Ranked
11/23/2015 7:14 AM	Queen of Pain	4,851 (+25)	33:38	Ranked
11/23/2015 6:09 AM	Templar Assassin	4,826 (+22)	53:49	Ranked
11/23/2015 4:59 AM	Slardar	4,804 (+25)	57:00	Ranked
11/23/2015 3:59 AM	Lina	4,779 (+25)	49:40	Ranked
11/23/2015 3:27 AM	Alchemist	4,754 (-24)	22:03	Ranked
11/23/2015 3:03 AM	Shadow Fiend	4,778 (+25)	14:23	Ranked
11/23/2015 1:46 AM	Alchemist	4,753 (+24)	44:14	Ranked
11/23/2015 12:49 AM	Earthshaker	4,729 (+25)	45:40	Ranked
11/23/2015 12:13 AM	Drow Ranger	4,704 (+26)	24:45	Ranked
11/22/2015 11:32 PM	Lina	4,678 (+25)	30:28	Ranked
11/22/2015 10:34 PM	Gyrocopter	4,653 (+22)	43:42	Ranked

The MMR number adjusts based on the team's result. If one's team wins, he/she will gain points; if his/her team loses, he/she will lose points. Whether that player is in the game at the end is irrelevant to this outcome, which means the player cannot simply leave the game early to avoid losing MMR. He/she does, however,

incur other penalties for leaving. This is because various other options to account for people leaving end up being exploitable or can otherwise cause undesirable effects on the system and other players. Thus, this somehow influences the players to try much harder, play more seriously, cooperate better with the others in order to achieve victory, not just try to avoid death and get kills. In conclusion, Dota 2 was designed to be a highly cooperative MMORPG game, focusing on making the game fairer and less toxic for all of its players, heading to a digital collectivism-based culture.

3.5   Masculinity vs Femininity (MAS)

It is important in game business to understand how men and women interact differently with the gaming world. When it comes to games, MAS does not simply work for its original purpose but also can relate to gendered gaming, game designers also need to consider differences between gender behavior in order to actively pursuing new opportunities and create the experiences that resonate with as much of their audience as possible. Therefore, I would like to approach to gender and video games, in this case, Dota 2, through its hero designs and other relevant in-game contents. It can be said that masculinity has a strong impact on the design of the game, or at least on the mind set of those who created it in the first place. Among gamers who consider themselves to be core, seventy percent are men. Core gamers are defined as those who take gaming an important part of their life, and spend a significant amount of their free time on playing games, and enjoy playing against or with others.

While there are more male than female core gamers, their behavior is remarkably similar. When examining the share of core gamers that play a game on a platform more than five days a week, marginally more women than men fit that definition on mobile. At most, men had a five percentage point lead over women on console and PC. Rather than developing games only for young males, we must reach out to different audiences, this era, for both male and female players at young and middle age.

One of the artefacts of the game being designed by a heavily-influenced-masculinity team is in its presentation. Dota 2 has 113 heroes. And even though each hero owns a unique set of abilities and skills, which made the hero pool distinctively equally important to be picked by players in the game, there are still much more male heroes than female heroes presented. While with other online games, choosing female or male characters does not change anything much but the player's avatar while being in-game, choosing a hero to pick in Dota 2 may be drastically different. Different heroes mean different abilities, skill set, roles, and team strategy. To make it clear, banning/picking a hero in Dota 2, which is considered a vital decision for a team, is an act one should do carefully based on the heroes' difficulty, class roles, and silhouettes, not the sexuality of the heroes.

In fact, female heroes are available in different roles from "support" to "carry", and are picked frequently in Dota 2 games, stating that they are obviously not any less powerful than male heroes. However, when looking at the hero pool of Dota 2, there is clearly no balance in the heroes' gender (Figure 3).

Figure 3. Dota 2 heroes repartition by gender per side.
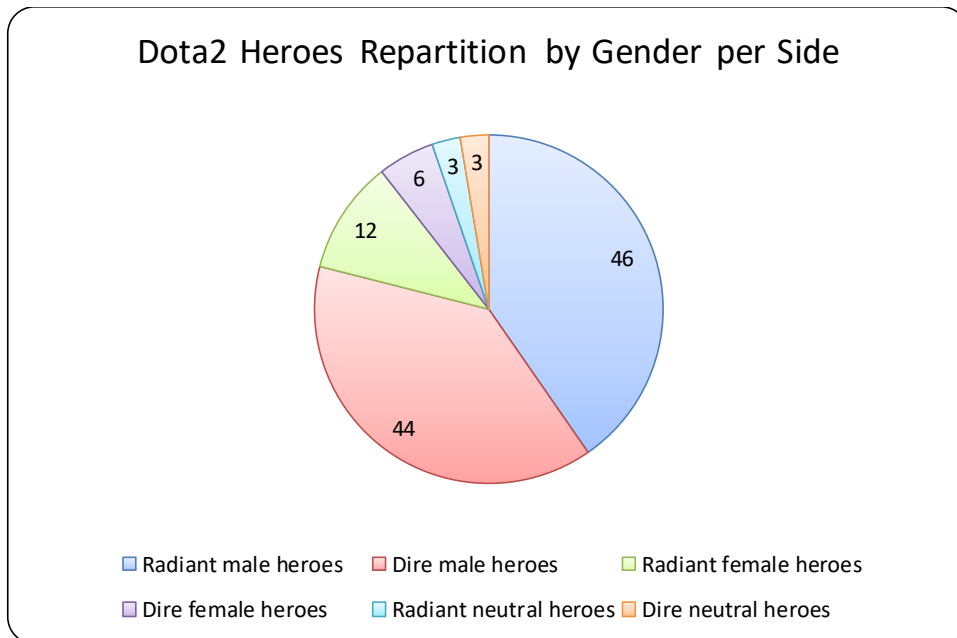
The reason for this unbalance can be explained by looking back at the hero pool for DotA. Since Dota 2 takes all heroes of its from DotA (also called Dota 1) and many elements of DotA, or "Defence of the Ancients", were borrowed from World of Warcraft (WoW) III: The Frozen Throne, as a custom map created for the Blizzard Entertainment. Dota 2 is a complete game created by Valve on the Source Engine, however, its heroes were essentially porting over the heroes' models from WoW III: The Frozen Throne. According to this fact, the idea of Dota 2's hero pool can be traced back to more than a decade ago.

Picture 8. The hero model of Archmage-Jaina Proudmoore and Crystal Maiden-Rylai Crestfall.

A part from Monkey King, a new hero which was independently developed by IceFrog itself and released much later in the beginning of 2017, other 112 heroes had their original model taken from WoW III. Now almost no hero was exactly the same as the WoW III heroes now, but in the beginning that was how it started. Along with that, some WoW III heroes' skills were split up into multiple ones, though many were made brand new to fit in the character's lore and role in the game. Back in Dota All-Stars, the designers were basically running out of WoW III's models they could use to make new heroes, hence a lot of them were created using basically the same hero. For example, in picture 8, the Dota 2 - DotA hero Crystal Maiden-Rylai Crestfall (right) is put next to its original model Archmage-Jaina Proudmoore (left) from WoW III. A few similarities can be spotted in a blink of an eye but one can also definitely tell how the graphic revolution has done its job after years as well.

Many would question the reason why one of the most popular MMORPG game with huge subscriptions chose to have such imbalanced heroes' gender ratio. Video games have long been known as a male-dominated media, including in the terms of market audience, player base, and character representation in the game. Back in time, people have regarded female gamers as a minority. Even studies from the early- and mid-90s suggested that a large percentage of female reported playing computer games, for approximately 1-2 hours a week, boys and male adolescents still appeared as regular gamers in self-report investigations. Later on, a contemporary research reported by Interactive Digital Software Association (IDSA) in the United States by that time suggested that 43% of US gamers were also female. Findings for gender representation in video games generally support past findings in that males are significantly more represented than females (Williams et al., 2009; Robinson et al., 2008; Miller & Summers, 2007; Burgess et al., 2007; Ivory, 2006). Given such figures, why are boys, violence, and a masculine culture continuously being aligned with societal attitudes and academic research on computer games? The male-dominating characteristic deeply impacts the gaming world. It is difficult for female professional gamers, streamers, reporters, organizers, and designers to be taken seriously for their careers. The gaming industry has continued to market their games towards a stereotyped demographic and has largely ignored considering women in their

designs. This is especially evident in the lack of female characters in games, the sexualisation of them when they are present, and the particular, aggressive marketing techniques of many big-budget games. Of those female characters that appear, many are stereotypical in their appearance, being overly sexy and have exceptional revealing clothes, or in their actions and roles, as being in need of rescue or playing a minor role in the game. Those that do break out from such roles are few and far between and are often non-human or hybrid.

In my opinion, the male-dominant designer team of DotaAllStar might be the reason why there are only a few female characters in the game. Many studies have observed that most computer programmers and digital game designers are men and that this has an important influence on game design. According to Cassell and Jenkins, video games offer a prime site to analyze the social construction of gender (From Barbie to Mortal Kombat: Gender and Computer Games, MIT Press, Cambridge: Mass, 1998, 18, 25-26). They investigate female representation; in terms of characters in game culturally and in games companies proportionally. They state that it is important that women are represented in these two domains and not excluded from gaining access to technology fields and technology use. However, work by McQuail suggests that increasing the number of female game designers might not be enough. Indeed, there are many forms of masculinity, especially in a male production culture. Wajcman seems to agree, saying "as with science, the very language of technology, its symbolism, is masculine. It is not simply a question of acquiring skills because these skills are embedded in a culture of masculinity that is largely coterminous with the culture of technology. Both in school and in the workplace this culture is incompatible with femininity. Therefore, to enter this world, to learn its language, women have first to forsake their femininity". In an environment where crude language and curt manners prevail in the e-sport arena just as much as they do on the sports field, women often struggle to find their place in which is overrun with testosterone-fuelled machismo.

In contrast, many game developers have stated that the lack of women in their casts is not deliberate but due to lack of funding and planning. Ubisoft blamed their lack of female characters in Assassin's Creed Unity on the "reality of production" in 2014, as creative director Alex Amancio explained to Polygon that

female characters would take "double the animations, it's double the voices, all that stuff, and double the visual assets" (Farokhmanesh). However, the damage is still being done and their (misogynistic) excuses are not always legitimate. Jonathan Cooper, a Naughty Dog animator who worked on Assassin's Creed III and Mass Effect 2, called Ubisoft on their misogynistic, poor excuses, as he explained a skeleton for a female assassin would only take a day or two of work, rather than what Amancio claimed. Shortly after Ubisoft spread the news about the absence of women in Unity, it made, even more, excuses for Far Cry 4. The game's director, Alex Hutchinson, stated that developers were incredibly close to allowing players to choose between a man or woman as their co-op buddy, but the team lacked a "female reader for the character" and did not have "the animations in place" (LeJacq). Cooper, among many outraged tweeters, triumphed the hashtag #WomenAreTooHardToAnimate, calling Ubisoft out on their flimsy logic and poor excuses for leaving female characters out of their games. Before that, Ubisoft had come out with games with strong female protagonists and characters such as Child of Light and Beyond Good & Evil, so their explanations totally failed to convince audiences. With sexism rampant in the community, game designers should be even more responsible and aware in their development and planning of their games in order to be better advocates for all their players.

Symbolism also plays an important role operating at the level of the object, at the level of the content or through associated marketing materials. While the number of female characters in games has increased, or given equal importance to male characters, the majority of these characters are still largely sexist and racist which acts to exclude female users. These design decisions of many mainstream, e-sports-oriented games often portray women with traditional gender roles, sexual objectification, and negative stereotypes that harm women and cause sexism in the game space and e-sports community. In the case of Dota 2, the way Valve distributes the heroes can tell us how symbolism affects the mind-set of the design team. For example, there are 37 "Strength" heroes, noted with high durability. Considering there is only one female Strength hero, Legion Commander, it is ironic that even in the borderless fictional world, only men are expected to be muscle bound human tanks. Most of Agility heroes are a carry,

with 29 Heroes sharing this role out of 35. This is the category in which there are the most female heroes, up to 9, almost all of them are given the role of carrying the team or at least have the potential to. On Intelligence heroes, the rest 7 female heroes are here. Even though Dota 2 heroes consist of a lot of different races and backgrounds, Valve did not truly push it to the limit making its hero pool a diverse crowd.

Generally, in my opinion, Valve has done a fairly outstanding job with the design of Dota 2's female heroes. Unlike certain rival games out there, for example, League of Legends, their female heroes aren't ridiculously sexualized. That being said, sexualisation does exist in Dota 2. Aside from some female heroes that have backgrounds from mythology like Medusa, Enchantress, Winter Wyvern, Spectre, Naga Siren and Brood Mother, other Dota 2's human-like female heroes all have attractively make-up, V-shaped faces, and miraculously perfect figures (Picture 9, 10, and 11). Many of the armor designs are a bit gratuitous too, such as Mirana's extremely low cut blouse, Vengeful Spirit's skin-tight armor that barely can hide a thing, or those seductively torn black stockings and bikini-like garments on Queen of Pain. Last but not least, they are all young and trendily skinny while the men cover a much wider range of ages, body shapes, and attractiveness. The male heroes have been designed to be "badass" rather than dreamy heartthrobs. Most of the male heroes are nicely fit and have the chiselled physique. However, their faces make them seem like action figures rather than lady boners; i.e. Beast Master, Phantom Lancer. Putting both on the scale, there is clearly much more sexualisation in female characters than male ones. Physical appearance is not the only way to look at it though. The voice acting and personalities are just as important. In that aspect, I feel Valve have muted all criticism. The female heroes, along with their male counterparts, have strong personalities. For instance, Queen of Pain, a hero who is blatantly sexualized is portrayed as threatening with a hint of seduction, be all tongue in cheek with innuendos, rather than the other way round which I am sure it will be different if she was made to be a male character.

Picture 9-10-11. Some human-form female heroes from Dota 2 (from left to right, upper to lower): Lina, Wind Ranger, Luna, Queen of Pain, Vengeful Spirit, Templar Assassin, Crystal Maiden, Drow Ranger, Mirana.

It is clear that Valve knows their target demographic. The majority of the players are male and usually quite mature due to the nature of the game. Males generally

enjoy looking at attractive female characters, but the true thing that separates a sexually attractive character from a sexual object would be the personality and voice. Keeping in mind that most of the heroes in Dota 2 are based on male models or simple monsters from WoW as mentioned before, one can tell that Dota 2 designer team has tried their very best making the game more variable in terms of genders, Valve's core concerns when it comes to character design should be how well the character fits the universe and how robust a character they create. Regardless the fact they still could not totally get over the shadow of sex symbolism in game design, it is refreshingly deniable that some female heroes like Legion Commander and Phantom Assassin got bold designs, and many female characters are given important roles as core heroes. The beauty of Dota 2 which Valve created is that no single hero is stronger than others at all points of time or in any situation. By having a respectively amount of powerful female heroes, giving each character reasonable depth and exceptional back story that most MMORPG games do not even mind to do, I believe Valve did pretty well as the game designer team stroked a decent balance: make Dota 2 appealing to the mostly young male demographic, keep it true to the spirit of Dota 2 and its lore, then last but not least make the game friendlier to female players.

3.6   Uncertainty Avoidance (UAI)

The fundamental issue in Dota 2 here is how a player deals with the fact that the game can usually be unpredictable in many ways: should the team try to control the game, making plans or just let it happen and hope for the best?

It is usually the player that has the biggest impact on the UAI as they are the ones that play the game in the way they find it fun and comfortable. UAI mostly depends on the culture of the players, as one research of team performance between Chinese Dota 2 teams and American Dota 2 teams pointed out (Wang H., Xia B., Chen Z. (2015) Cultural Difference on Team Performance Between Chinese and Americans in Multiplayer Online Battle Arena Games). Through 37 game replays, researchers used their observation to acquire 7 groups of paired data, which were analyzed with different methods. From the tests' results, they found out that the Chinese and American teams were significantly different in many scales, especially in the cross-culture dimension of UA. In order to spot invisible enemies and reduce the risk of sudden attacks from the opponents, Chinese teams used sentry wards and activated runes more frequently than the American teams as they showed lower UAI in-game.

Interestingly, the drastic different UAI from players around the world was foreseen by Ice Frog and consequently resulted in Dota 2's design. Dota 2 heroes' skill set is a nicely balanced mixture of point-target spells and unit-target spells. To make it clear, the unit-target spell has a guaranteed effect on the enemy once it is cast, while point-target spell can only be aimed at one or more specific directions or spots and only take effect if it hits the enemy within the given hitbox. For example, let's have a comparison between 2 skills from 2 different heroes: Mirana's "Sacred Arrow" and Vengeful Spirit's "Magic Missile". They may function similarly as both stun the enemies but they are applied in very different ways. While Magic Missile is a unit-target spell that requires a valid target to cast on within its range, Sacred Arrow is a perfect example of point-target spell that Mirana first chooses a direction and fires a long-range arrow that stuns or kills whatever it hits first, in case it does not hit anything within the cast range, then the arrow will vanish. Obviously, the player needs to be more skillful and experienced to use Sacred Arrow efficiently, but can start stunning enemies by Magic Missile pretty well from

the very first time. However, it's also natural for a skill that has a lower chance of landing to be more rewarding to land, as Sacred Arrow has the maximum stun duration of 5 seconds, dealing up to 460 damage, while Magic Missile only has 1.8 seconds stun duration along with 325 damage when upgraded to the maximum level. A few other point-target skills also offer fantastic long-range damage or exceptional-range no-target stun that few other abilities can match. To name a few: Windranger's Power Shot, Elder Titan's Echo Stomp, and Earthshaker's Fissure. Those skills can be landed easily but the effects can vary, as they all require good movement predictions from the players. Some can even be used both as great fighting tools and as a way to save allies (Pudge's "Meat Hook"). Compared to many other similar games, those skill-required abilities appear much more frequently in Dota 2. Moreover, some heroes have the abilities to avoid the attack from the others or being seen (Phantom Assassin's Blurs or Invoker's Ghost Walk), passive skills to decrease the received damage and deal extra damage once stacked on enemies (Bristleback's Bristleback and Quill Spray or Monkey King's Jingu Mastery) or even the ability to deny itself while dealing extra damage to enemies around (Purge's Rot or Techies' Blast Off). There are items which help to avoid or cause casted projectiles to fully lose track of their targets, making it even harder to disable one successfully, even though the spells used are unit-target. The technique of "disjointing" or "dodging" a spell by using the heroes' abilities or purchased items is considered one of the hardest one in Dota 2 as it requires incredibly fast reaction and perfect timing. Take the case of Anti-Mage using Manta Style to disjoint Alchemist's incoming stun Unstable Concoction Throw (the golden flying object in the picture). Since the user is invulnerable, hidden and spell immune during the 0.1 second split time of Manta Style, Anti-Mage has the chance to avoid being disabled by Alchemist (Picture 12). However, 0.1 seconds might not be an easy time for all to react fast enough, which only practice can make it perfect. Last but not least, there are many skills whose damages and accuracies are not fixed or passive skills which give heroes chances to deal extra critical damage, all calculated by percentage. For instance, Phantom Assassin's ultimate passive skill "Coupe De Grace" offers 15% chance of dealing extra 450% damage applied to all attack of this hero.

Picture 12. How Anti-Mage dodge the stun from Alchemist by using Manta Style.

On the other hand, Dota 2's playing field, or usually preferred as "map", is undoubtedly large and complex (even when being compared with similar games like League of Legends or Heroes of the Storm) with several teleport-able points on each side and many blind points, which make it even harder to control the whole game situation. The map's history was quite fascinating itself, by firstly being ultimately derived from the game Starcraft's custom map "Aeon of Strife" in 2002, which also featured multiple lanes and a final objective to destroy. The map's current diagonal format was created for Defense of the Ancients (DotA), Warcraft 3's custom map upon which Dota 2 is based. Through those years, the design team, which consisted of However, it is not the point to conclude Dota 2 is designed to be a game with weak UAI and there is nothing the players can do but hope for the best and improve their personal skills. There are many items in the game that can make it easier to deal with those annoying passives and

deathly skills from the opponent. As mentioned earlier, the Dota 2 Chinese teams used wards and sentry wards to improve team's sight and detect invisible enemies. Items like "Dust of Appearance" or "Gem of True Sight" can also help players with revealing invisible units conveniently. Monkey King Bar (MKB) can be used to prevent one's attack from missing while facing heroes like Phantom Assassin or Windranger while granting each attack a chance to deal bonus damage and deal a mini-stun. Rod of Atos gives the ability to root a single target for 2 seconds with 16 seconds cool down, which might be very helpful with heroes that want to ensure their point-target skills hit the spots and make the most out of them.

All of those factors which were mentioned above make Dota 2 a heavily skill-based game with high uncertainty levels regarding combating, farming, and map controlling. Consequently, Dota 2 players have to be experienced and skillful to face the enemies, ensure kills and victory in the game. Its complexity and skill-requiring characteristic have always been the magnets to keep the players around since they make the game respectively more challenging compared to most of the other similar MMORPG.

3.7 Long-Term Orientation vs Short-Term Normative Orientation (LTO)

The dimension was created based on the fact that every society has to maintain some links with its own past while dealing with the challenges of the present and the future. Similarly, players and their teams have to face the same challenge in games. Different teams and players prioritize these two existential goals differently. Although in the gaming world, this mostly relates to the mechanic of the game they are playing, it can vary between individuals as well, since some prefer to be less sensible than the others. Scoring low on this dimension means the game and its players prefer to maintain time-honored traditions and norms while viewing societal change with suspicion. Those with a high score, on the other hand, means the game takes a more pragmatic approach: they encourage thrift and efforts in early gameplay, plan further and accept trade-offs as a way to prepare for the future to win the game in the very end.

Dota 2 was designed to be much harder and more complex even in casual games than other MMORPGs, especially on the item builds and enormous in-game map. Especially for new players, it is somehow a nightmare to find their way getting more familiar with the items, heroes, and map in the first hours of playing Dota 2. Even for other fellow MMORPG players who supposed to have the mind-set for this type of strategy-based games, Dota 2 can be pretty much daunting. For example, Sean Plott (widely known as Day[9]), a well-known award-winning StarCraft: Brood War and StarCraft II player and commentator, once confessed about his frustration trying out Dota 2 as in his first three games he had found the shops had been "incredibly hard to navigate" and would have spent too much time buying items then just die. He also stated that the depth of Dota 2 was about its hero choices and item possibilities. He felt so excited playing the game as anything could happen, the game could become ridiculously imbalance at one point when one team was far beyond the other in terms of total net worth (Day9TV 2016). Anyone who wants an easy-going game with victory can be achieved effortlessly should never try Dota 2, since the game requires a respectively large input of practice, along with memorizing in-game stats and information.

As a public Dota 2 game usually lasts around 45 to 60 minutes, it is considered one of those MMORPGs with longest average game length at the moment. When

being compared to League of Legends' (LoL) 30-minute average game length or Heroes of the Storm's (HotS) average game length of 20 minutes, Dota 2 has respectably longer game length in general, mostly due to its mechanic and current meta. This obviously has an effect on the players' mind set because the feeling of losing a one-hour-length game is definitely more bitter than losing a fifteen-minute-length one, not to speak of other side effects like losing MMR or tokens and wagers (when being a Compendium owner, one can add tokens and wagers to earn extra points, level up his/her Battle Pass).

With its distinctive matchmaking system which takes into consideration many factors, Dota 2 was designed to be as balanced as possible to all players, and even though the speed of the game depends mostly on the pick of both teams, there is no way of giving up. Of course, the player can choose to disconnect and abandon the game at any time he or she wishes, but it will result in the penalty of being set to low-priority mode if too many matches were left. Disconnecting from the match for more than 5 minutes also leads to the same consequence. If one of the players leaves the match before the first kill, it will be safe-to-leave to avoid the situation of one team has to play with less player(s) than the other, as remained players can disconnect from the game and continue finding a new fair match. Exclusively, in lobby matches, a phrase "Good game, well played" (or "GGWP"/"GG") can be used as a surrender from one of the two teams by any member to end the game. Once "GG" is called, the relinquishing team has 10 seconds to decide if they want to take it back or not. This was added to this game mode in order to save time for all players as practice lobby matches' results are not counted or officially recorded.

Not having a concede option sets Dota 2 apart from other MMORPGs as it makes players not only to stick on the found match but also try their best and play responsibly, for example, by having a good plan with the suitable line-up. As explained before in the chapter of IDV, there are necessary sacrifices in one team that the supports will use their early-game advantages (disable skills and roaming ability) to babysit other core players since they can be quite vulnerable in early games without their core items as well as efficient levels to unlock and upgrade all skills. Even when one's team is having a bad start, there are still chances to win the game as long the whole team is determined to fight until the end together,

and that is what sets Dota 2 different from LoL or Heroes of Newerth (HoN). From this smart move in game design, the players are drawn into the game knowing that the others typically take it more serious with their choices and plays compared to the situation in LoL, HoN or HotS. In the end, the game managed to build its reputation well among the gaming community partly thanks to this mechanic choice.

3.8   Indulgence vs Restraint (IND)

As a game, Dota 2 was born for the sake of entertainment originally and it has always been the player who decides whether the game would be taken seriously or not. The game itself was designed to qualify both purposes: it can be genuinely just a game to relax with friends, and at the same time taken to the professional competitive e-sports level.

According to David Rabinovitch and Sasha Erfanian on theScore esports, there is a way to tell if the national distribution of casual players reflects the distribution of pro players. Using one hundred most popular players on DOTABUFF as a sample and other statistics from Steam Spy, a third-party website that automatically gathers data from Steam user profiles then analyzed it, David and Sasha was able to pull off an infographic chart comparing the percent of casual players against professional ones in different countries (Appendix 12). Personally speaking, Dota 2 seems to be an impressively capable MOBA game that it can satisfy all of its players, no matter what is their intentions coming to this game.

4   DISCUSSION

Playing Dota 2 can be like having a love-hate relationship in many ways. It demands a lot of time as well as both personal and emotional investments. And since it is an MMORPG, it is not NPCs but other players (including those friends who play along, those randomly met teammates and opponents in each and every game, etc.,) that affect Dota 2 gameplay the most and make it a unique personal experience that no other can repeat the same. It can be an incredible satisfaction at one point but also an unbearable agony at another. In the survey, the participants were asked if they had ever thought about quitting playing Dota 2, and unsurprisingly, more than 43% of them (50 out of 116) admitted they had had that thought for at least once since they started playing the game. Several reasons were given, but there were two most popular ones which were repeatedly mentioned by the participants.

The first one was about having bad teammates who performed poorly and did not behave well in public matches. According to the surveys, many participants have had this unpleasant experience. The community is widely considered the worst thing about Dota 2. Players speaking their native languages in English-speaking servers, leaving matches in rage after dying several times, intentionally feeding (dying on purpose and allowing enemies to get an advantage in gold and XP), refusing to communicate (it is a team based game after all), randomising their characters instead of playing a role that is needed, or just simply having really low skills, etc. Plus, since the players could not quit the match when they wanted to without facing several rough consequences, the game somehow forced them to feel all the pain which they obviously did not intend to endure. Even though most of the players in that situation will try their best to play well with their roles and hope to make a change or impact on the match, most of the time it does not work that way, especially with support players as they cannot solely replace the whole team. Therefore, once the matchmaking system paired those kinds of players with the participants, they felt there was no more joy playing Dota 2. Many became tilted, stressed, frustrated, and once that keeps happening for a while, it is easy to understand why some have come to the point of uninstalling Dota 2.

Secondly, how time-consuming playing Dota 2 felt to the majority of its player was another big reason for Dota 2 players to give up the game. The truth is everyone has to make sure he/she has at least thirty or forty-five minutes to spend on a normal match once he/she decides to play (Arcade mode and Practice Lobby modes are not counted here because they are unofficially scored matches). As already explained earlier in this thesis, a Dota 2's match typically lasts longer than other MMORPGs', which leads to the fact that players will have to spend much more time in Dota 2 than other similar game titles with the same amount of matches played, while being obligated to stay active until the end of the game unless they want to be labelled as "abandoned" and receive low priority punishments later on. When it comes to Dota 2's main target group at the age sixteen to twenty-five, most of its players are busy students and working young adults, which strikes them even harder once the an-hour-long game is lost. Playing Dota 2 feels so good yet hurts so bad when losing, that many Dota 2 players somehow started to feel restless and/or deeply addicted to the game, so much that they realized somehow their real lives were heavily affected and they tried to fix it by avoiding the game. In other words, every match is so time-consuming it feels like one is making a huge investment and losing the match just means it did not pay off well, not to mention other negative side effects to the players' mentality when their teammates abused them in terms of communication or ability as mentioned earlier.

Unfortunately, Valve cannot do much to help with those two community-based and mechanic-based problems but gives the players report tickets to submit when they find someone who is misbehaving as well as giving constant feedbacks to each player after every 25 matches, and keeps improving the matchmaking system. New and harder punishments for those who misbehave in the game should be considered as well. On the other hand, guiding new comers to know their heroes well enough before heading to a public match is also a sustainably practical solution.

To help new players to get used to Dota 2 quickly and efficiently, Valve has adopted a new in-game guiding system which offers several guides on how to build items for each hero differently, depends on one's chosen role and playing styles. The guides are created based on community's and professional players'

votes, and of course, can be adjusted by each player in the game. On July 28th, 2017, Valve also announced two new features to be added into the game to help new players "face as few barriers as possible to enjoying Dota" (blog.Dota 2.com, July 2017). The first feature is a change to the hero selection system. For any newbie's first twenty-five games, the hero selection is now restricted to a curated group of twenty heroes. This introductory group consists of heroes that Valve believes to be very successful in helping new players see intricate strategies take shape in the battles around them and be familiar with the map and/or items faster while still enjoying their early stages of learning the game. The second feature matches new players against players with consistently high behavior scores. After years, Valve seems to finally admit that it is important for a player to have a good social in-game experience, especially with new players while they are first trying to learn the game. According to Valve, the matchmaking system now ensures that new players will play with and against appropriately-skilled players that also have a track record of good behavior.

Along with unofficial fan-made tutorials and third-party guides on the worldwide web, a few weeks away from The International 7 event, Valve introduced the "Newcomer Stream", a special broadcast enhanced with contextual overlays where Dota 2 fans can hook up their new-to-Dota 2 friends. The Newcomer Stream is aimed at easing people into "understanding the expansive world of Dota during the most exciting event of the competitive year" and through this, Valve hopes to attract new players as well as make it less painful for them to get into the game in the early stage.

There is also practice games with bots in different difficulty levels for players, who are not confident enough with playing against a human, to train themselves and be familiar with any hero they wish before heading public matches. However, upon my observations and experience, not so many players use this way to try out new heroes, because there are several bugs that make the bots' performances not as good as expected. Despite new patches being released frequently to keep the game growing and balanced, they do not seem to affect the way bots behave in practice matches: they have small hero pool, would go for pretty much the same items, stick to the same old strategies and sometimes be too laid-back compared to proactive players in real life. Though Valve did

make a move by currently let the players to choose the bot scripts: instead of the default bots mentioned above, one can search for other unique community-made bot scripts from the Dota 2 Workshop, those community-scripted versions are not officially qualified and bug-free with several limitations, for examples, available for only some certain heroes or playing style. I personally understand how resource-intensive it must be to bring this artificial intelligence (AI) to life for the huge number of heroes in this game, not to mention the number of spells and item interactions alone, yet considering millions of players' experience, this is surely something Valve should put more efforts into in the near future. One way in which Valve makes money from Dota 2 is through selling cosmetic items. However, players are likely not going to buy cosmetic items if they do not play those heroes, whether against humans or bots. If bot matches could provide such incentive for customers to boot up Dota 2, no matter how few their numbers are, then it is still worth it to make that experience pleasurable.

Last but not least, it would be great if Valve starts releasing more heroes whose designs are more versatile in terms of forms and break out of normal sexual symbolism. On the other hand, heroes' skins should be sold on the Dota 2 Store again instead of including them exclusively in treasures. Perhaps Valve can set a few restrictions on those items to prevent them from losing their values quickly or just make a stronger push towards marketing them. Regarding the artists who are shouldering all of the financial burden and risks when submitting their new designs to be voted for releasing later, Valve can make the process harder yet more rewarding: the designs will be strictly voted not only by the community but also the professionals, but then the artists get higher shares from their published works. This will encourage more talented artists to put their hearts and souls into designing Dota 2 cosmetic items as well as make the design selection more transparent to all.

With some extra efforts on marketing, as well as on the game design by adding new languages and improving guides for new players I strongly believe Dota 2 can reach out even further, penetrating new markets more efficiently where the game still remains unknown or with the little fan base. Having its international community back the game up, a little more efforts on improving the game design will surely go a long way, in this case with Valve on Dota 2.

5   CONCLUSIONS

This project on analysing Dota 2's game design from the cultural point of view was the first of its kind. It managed to lay the first stone of examining Dota 2's game design from a new perspective, exploring the cultural and social implications of the proliferation of ever more complex digital game worlds. I have immersed myself in the universe of Dota 2, spending thousands of hours as a player, conducting surveys, consulting people, and studying the game design – as created by Valve, and also as modified by player-created user interfaces.

During this project, the biggest problem occurred within the project was the lack of official information from Valve on Dota 2. Despite putting a lot of efforts on the game itself, Valve seemed be off-guard when it came to introducing, explaining and marketing the game to both Dota 2 players and non-players as a new-comer would hardly be able to find those posts on Dota 2' official blog informative or useful enough to get himself/herself familiarized to the game. Third-parties' wiki pages, in contrast, provided plenty of insights, definitions, and explanations for the game. However, some of them were not updated and could be incorrect, resulted in undesired false advertisements and/or misunderstandings, causing unpleasant confusions for players and possibly other related parties. On the other hand, the Dota 2 community had been extremely helpful to me. A lot of advice, comments and suggestions were received from my fellow players, many of them have been playing Dota 2 for a long time and currently run their own fan-made channels about the game, Itamar Blauer from "Dota Academy" Youtube channel for example. Thanks to them, the thesis survey reached its most important goal that the participants pool had to be from all around the world, with diverse backgrounds and cultures.

Further studies can be done to strengthen the point of culture is one of the most important forces that influences and shapes game design on Dota 2. More dimensions can be also studied and it can be even carried on to how culture matters to the marketing strategy of this game in the near future. Dota 2 has always been a great game, and Valve can make it even better by carefully

consider culture forces into their game design process and marketing, listening more to the players, having more reasonable changes and restrictions so that the cash can keep flowing in while still ensuring Dota 2 players feel comfortable and happy with their spending and supports on the game.

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7 APPENDICES

Appendix 1. Steam user interface in Store, Picture.
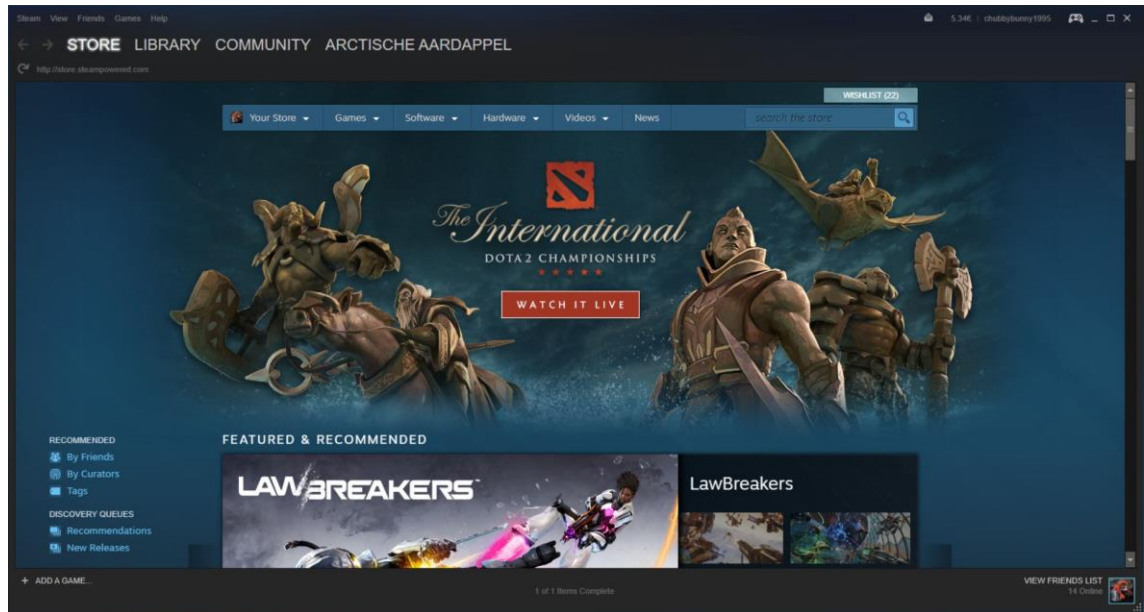
Appendix 2. Dota2 Game Experience and Marketing Survey, Question 1. Where do you live? (city/country)

Number of respondents: 72

London, England.

Eindhoven, the Netherlands

Ho Chi Minh City, Vietnam

Finland

Enschede, the Netherlands

Berlin, Germany

Ho Chi Minh City, Vietnam

Rovaniemi, Finland

Chicago, USA.

Turku, Finland

Appendix 2 2(4)

Melbourne, Australia

Paris, France

Marburg, Germany

California, United States of America.

Paris, France

Leipzig, Germany

Chemnitz, Germany

Helsinki, Finland

Leipzig, Germany

Vietnam

Lahti, Finland

Finland

Bien Hoa, Vietnam.

Vietnam

Melbourne, Australia

Vietnam

Paris, France

Ho Chi Minh city, Vietnam

Japan

Vancouver, Canada

Hamilton, Canada

Appendix 2 3(4)

Rovaniemi, Finland

Helsinki, Finland

Helsinki, Finland

Helsinki, Finland

cs

Helsinki Finland

Tula, Russia

Rovaniemi, Finland

London, England

Leeuwarden, the Netherlands

Enschede, the Netherlands

Melbourne, Australia

Sydney, Australia

Ho Chi Minh city, Vietnam

Cambridge, United Kingdom

Hồ Chí Minh city/ Việt Nam

Ho Chi Minh city, Vietnam

Ho Chi Minh City - Vietnam

Düsseldorf, Germany

Ho Chi Minh city, Vietnam

Suwon, South Korea

Appendix 2 4(4)

Ho Chi Minh city, Vietnam

Ho Chi Minh City, Vietnam

Rouen, France

Worcester, USA

California, USA

Tula, Russia

Amsterdam, Netherlands

Moscow, Russia

Ho Chi Minh city, Viet Nam

Suwon, Korea

Ho Chi Minh city, Vietnam

Palu, Indonesia

Surabaya, Indonesia

Surabaya, Indonesia

Medan, Indonesia

Tebing Tinggi, Indonesia

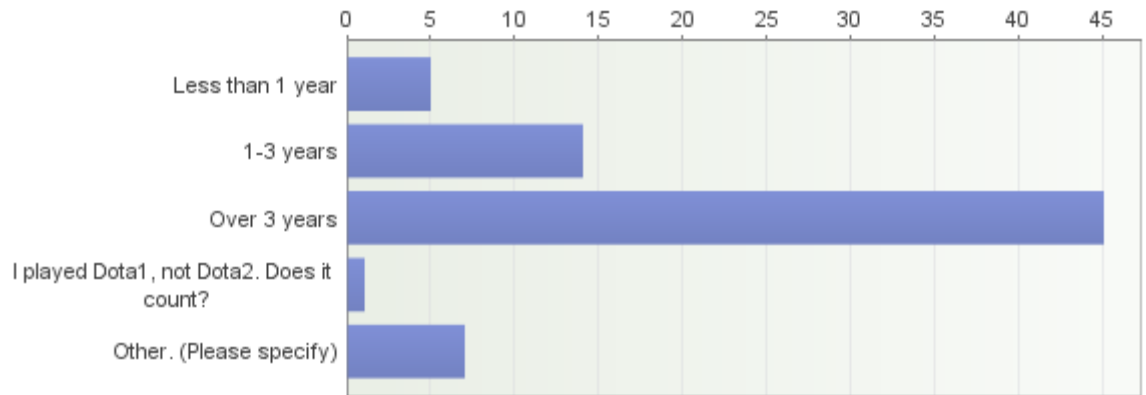Surabaya, Indonesia

Tolitoli, Indonesia

Ho Chi Minh, Vietnam

Surabaya, Indonesia

Appendix 3.   Dota2 Game Experience and Marketing Survey,
                   Question 2. How long have you played Dota2?

Number of respondents: 72

Open text answers: Other. (Please specify)

Played dota 1 since 2007, played dota 2 for a few months then switch to LoL

6 years

7 years, since Dota 1.

7 Years
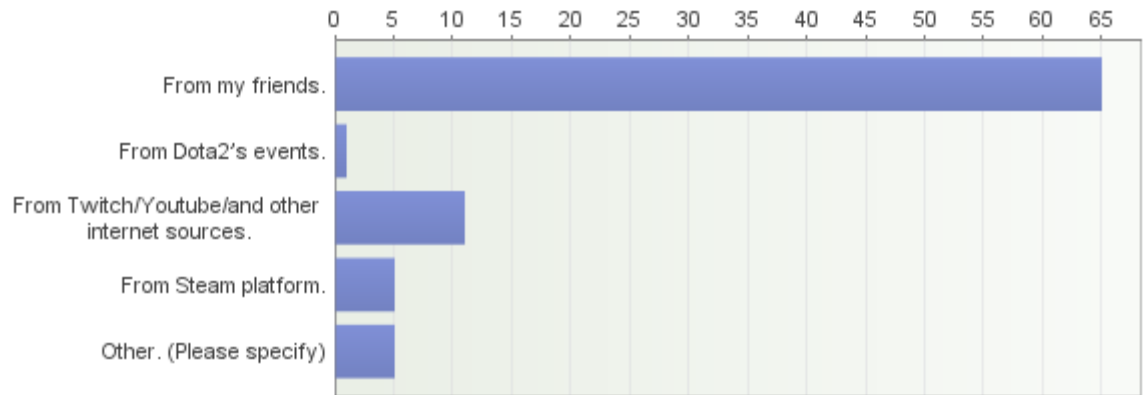
Play dota1 then switch to dota2

Doto 1 + 2

5-6 years

Appendix 4.   Dota2 Game Experience and Marketing Survey,
                               Question 3. How did you know this game?

Number of respondents: 72

Open text answers: Other. (Please specify)

-From Dota 1.

-From my love.
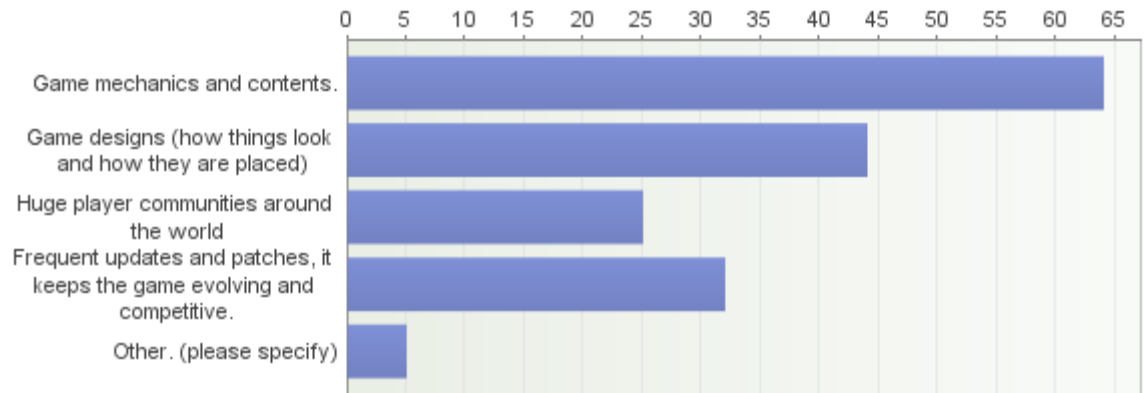
-Eurobattle.

-my Dota clan.

-From World of Warcraft 3.

Appendix 5.   Dota2 Game Experience and Marketing Survey,
                               Question 4. What do you like about the game?

Number of respondents: 72

Open text answers: Other. (please specify)

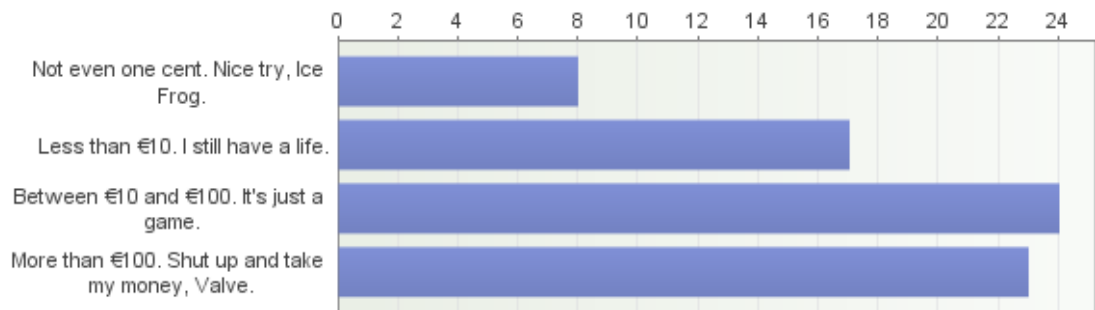-Play with my friends.

-Cosmetic items.

-It's better than LoL.

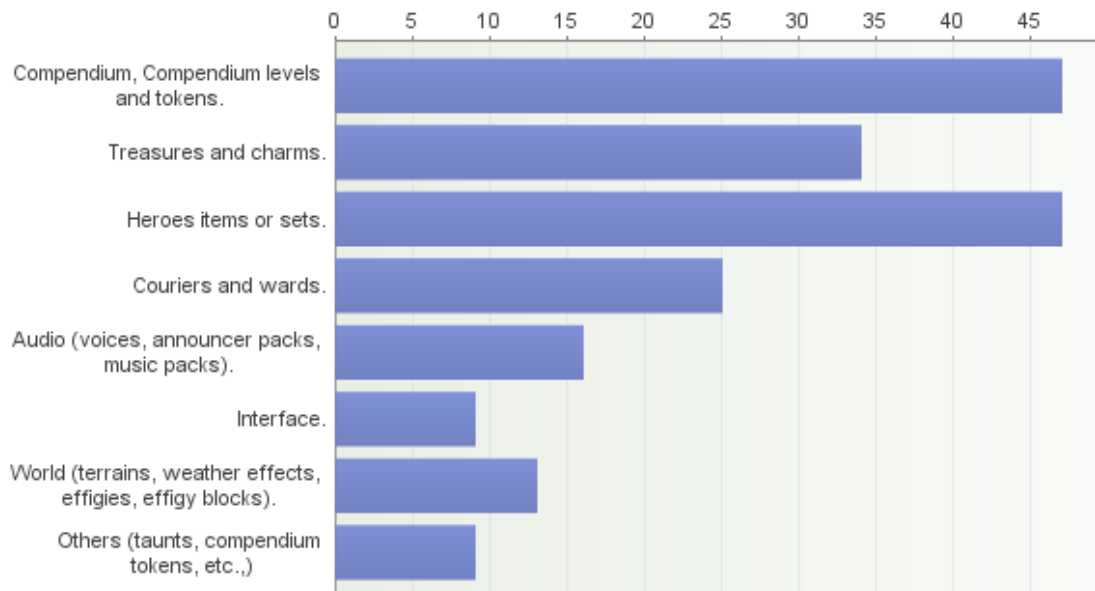-Pinoy, Rushki.

-Having fun with friends.

Appendix 6. Dota2 Game Experience and Marketing Survey, Question 5. How much have you spent on the game and its tournaments?
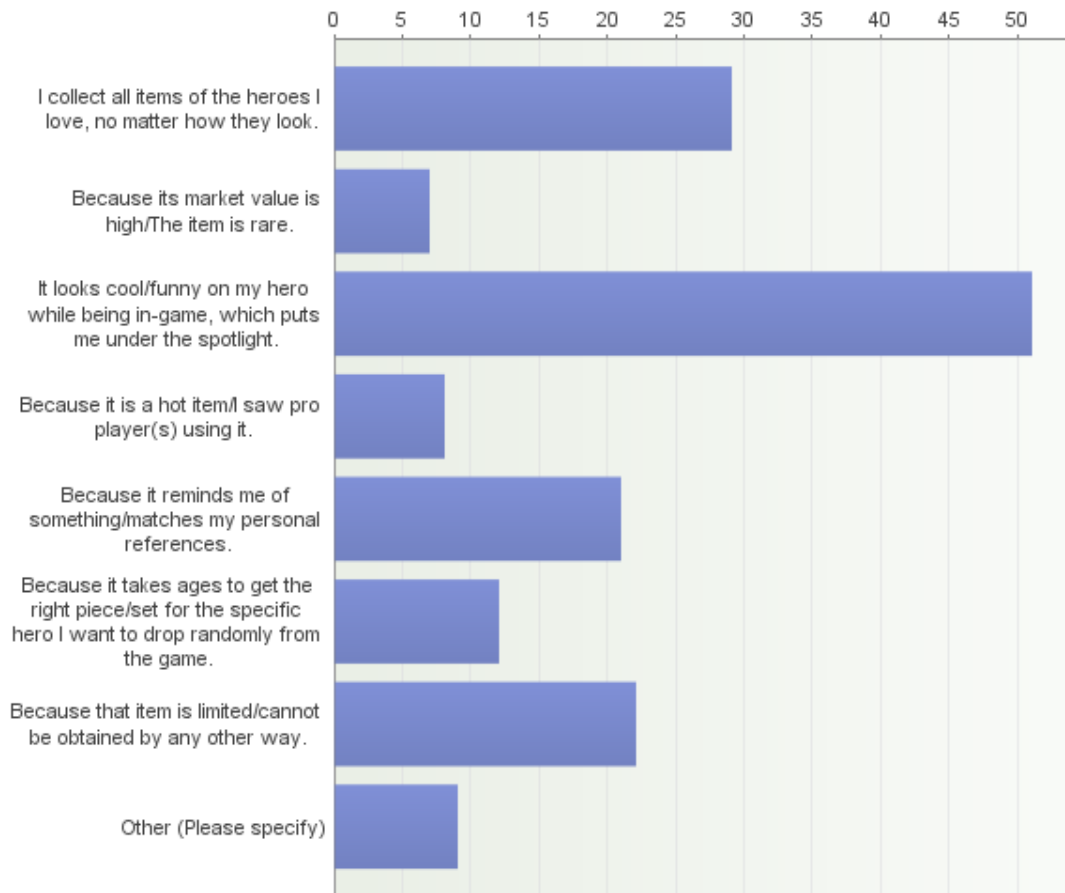
Number of respondents: 72

Appendix 7. Dota2 Game Experience and Marketing Survey, Question 6. What have you purchased so far?

Number of respondents: 72

Appendix 8.　　　　　　Dota2 Game Experience and Marketing Survey, Question 7. What do you think are the biggest reasons that you purchase an item in Dota2?

Number of respondents: 72

Open text answers: Other (Please specify)

-I purchased TI4 compendium only so no reason.

-It must be reasonable in that situation.

-To pay back all the free-to-play hours.

-I want to participate for The International Prize Pool, I don't buy skins.

-I just want it.

-Buying compedium can support the players I like.

Appendix 9. Dota2 Game Experience and Marketing Survey, Question 8. What is your favorite purchase from Dota2 of all time?

Number of respondents: 64

Ursa s' Alpine Stalker

Arcana PA

Dark Artistry

TI4 conpendium

I play PA quite a lot, so of course I like PA Arcana the most. The immortal weapon from Sladar is so cool too, I like it because it's my best hero

Set item and compendium/battle pass

arcanas

Compendium

The golden Radiance and golden midas immortals for Alchemist

Battlefury on Void

Serrakura

Inscribed Thirst of Eztzhok Blade

Annoucer Ricky and morty

compendium

Battle pass + battle cup ticket

Lava baby roshan

Scythe of Ice - Nature's Prophet

Arcana of Phantom Assasine

Appendix 9 2(4)

Sniper

Aghanim   scepter.
Because i've played Invoker so much.

Bristleback Audio

The compendium.

I have bought all of my favorite items ' v '

Dark artistry - Invoker

Battle Pass

Phantom Assassin Arcana

Dc hook

Focal Resonance

Compendium. I like the quests, the fantasy challenge and I guess subconsciously the reward based system.

Daemon Prince set for Doom.

Compendium

n/a

Compendium

Arcana Phantom

Lina's fireflight scion set

Can't recall, but I would love the Dark Artistry set for Invoker.

Compendium

Appendix 9 3(4)

Arnabus the Fairy Rabbit

Rekindled of ashes - ember spirit

Stanley Parable Announcer Pack

PA Arcana

Rain weather effect, Invoker's sets

PA arcana

All rubick set <3

not purchased but found: jin and Yin Fox Spirits

Na`Vi's courier

Compendium for TI4

Enigma BH bracer

couriers, support items

Zeus Arcana

Probably the ticket to TI 6 last year? If that doesn't count, I'll take the treasure instead. Most of the great items come out from it.

Terrorblade arcana))

Compendium 2013

Invoker's Magus Apex

Couriers

Compendiums and arcanas. Cuz I've never had it....

2017 Winter Battle Pass

Appendix 9 4(4)

The International 2017 battle pass

Compedium,battle pass

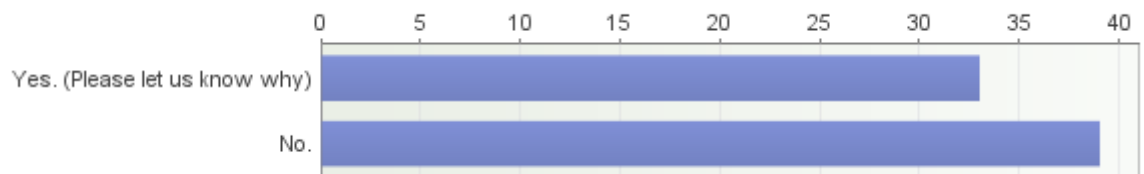ANTIMAGE SET

Shadow Fiend Acrana

Imortal

Shadow Fiend Arcana Demon Eater

Compendium

Appendix 10.   Dota2 Game Experience and Marketing Survey, Question 9. Have you ever thought about quitting/uninstalling Dota2?

Number of respondents: 72

Open text answers: Yes. (Please let us know why)

Tried to put more time and effort in academic learning. Failed miserably.

rage quit

Studying of course. And sometimes it's waisting time. I will wuit it when I'm too busy. It's just a way to relax.

Community is getting toxic.

It takes too much time, affects study.

The game is stalling lately after the 7.00 patch so I thought I would quit.

Appendix 10 2(3)Phí thời gian.

Take too much free time.

Spend some time try out others online games (LoL, Csgo, HotS, OW).

The game wastes my time.

I want to go to sleep early.

Just quitting because of my noob teammates.

Focus on other things more important in life.

Best way of wasting time.

It took lots of my time, but it will also take lots of my time to reinstall it.

Long matches, need time and good team.

Game is hard and ruthless.

Maybe better as paid game (community).

Recently quit because I don't have time. Still watch competitive scene sometimes.

Too much addiction.

Already quit, I only play arcade mode in Dota 2 for fun lately.

SEA cancer.

I actually did on several occasions, due to the game taking too much time (about 30 minutes minimum even in casual matchmaking. Most of the reasons why I reinstall it is because a friend or an acquaintance is a dota player and I use it as a bonding means, rather than self-entertainment.

Retards everywhere.

Try to get a life.

Unstable performances from all members.

Appendix 10 3(3)

Dead game.

Time consuming/ want to spend more time on something else.

I gave up on gaming entirely.

Busy.

Taking too much time.

Too busy with internship and university final thesis.

Time-consuming.

Appendix 11.   Dota2 Game Experience and Marketing Survey, Question 10. What do you think Valve could do to improve the game itself and Dota2 community?

Number of respondents: 58

Don't match high dota profile level players with smurf accounts. Reduce the amount of mmr loss a little bit when players lose a ranked game (-20 +20 sounds good?) Don't match players with big different MMR in the same team. For example, a 5k5 mmr player is matched with 4 teammates with 4k mmr bracket, which is annoying and inconvenient for that 5k5 player. In short, make the game more balance. The game is good though.

Don't let Russians play Dota.

More new hero. More set items.

Listen to community more and more!!!

More offline event (like LOL)

Develop the advertising, update the dota2 website, bring back DireTide or NewMoon

Appendix 11 2(4)

Valve should make more events and should focus more on Unprofessional teams to make the community even bigger.

Keep Ice Frog.

Try communicating with the community

Stop nerf my ES please.

No more the infused items chest. And limit the searching range of some region that do not generally speak English.

Give me 4000MMR more.

No need. The game and the community are just fine.

Valve's the best, they are the best. I'm happy with what I have.

They don't have to improve. Just don't create a game called Dota 3.

Have some other updates.

Better matchmaking.

Need more bet pages.

Some way to filters toxic players, ruiners out of the game. Fix bug, balance the heroes, listen to the community.

Not really.

New idea will be good.

Keep doing like this, they have done absolutely perfect

Valve is working A LOT on this game, compared to other games such as CS:GO. I believe that they're doing the best they can and have done a great job so far. I believe in them and can just hope that they'll continue what they've done so far.

Would disclose for money :)

Appendix 11 3(4)

Personal preference; come up with more original content for their "universe". Perhaps too late for that though.

I don't like skins. They should add an option that allows me to use the vanilla skins for heroes. Only the skills should matter.

Thinking about more objectives in game play to reduce stable unattractive time in early game.

Rebalance hero like Bristleback.

Make the game less heavy and improve match-making system. Also more acceptable prices for items and other stuffs.

Make it more beginner friendly.

Newbie friendly environment, reduce toxicity, reduce scammage, etc.

Please gif ember fury back. I miss divine on ember. Also pinoys should just stay in a hole with themselves.

The balancing issue. It's normal to have balancing issues when the heroes roster is so big, but sometimes it would be better to have a test server to try out balancing changes (like Overwatch's Public Test Region) before actually implementing them. As for the community, it's beyond fixing. It's only fun (in my opinion) when you play with your friends.

-ꃤ ◕_◕ꃤ Give DIRETIDE

Remove Techies, more tournaments, increase client performances

I think Valve should put more item in Battle Pass

More battle cups!

Found some more sub-regions

Need more ranking lists and challenges for pub players

Appendix 11 4(4)

Remove Phantom Assassin.

More offline tournament so I can go watch

Maybe some advertising to attract more new users, more events

1 thing I like about the game is that buying stuff is optional. You do not need items to get stronger. You can always enjoy the game without buying anything. So I am just happy the way it is for now. Nothing needstobe improved at the moment.

Listen to Reddit members

Keep going

No comment. Everything is very good so far. Maybe more performance patches?

make more event

Nothing to think. Just login and have fun with the homiez :))

Nay, its good

Do some local tournament for noobs and newbies pro wannabe (ex. like blizzard event called Fireside Gathering)
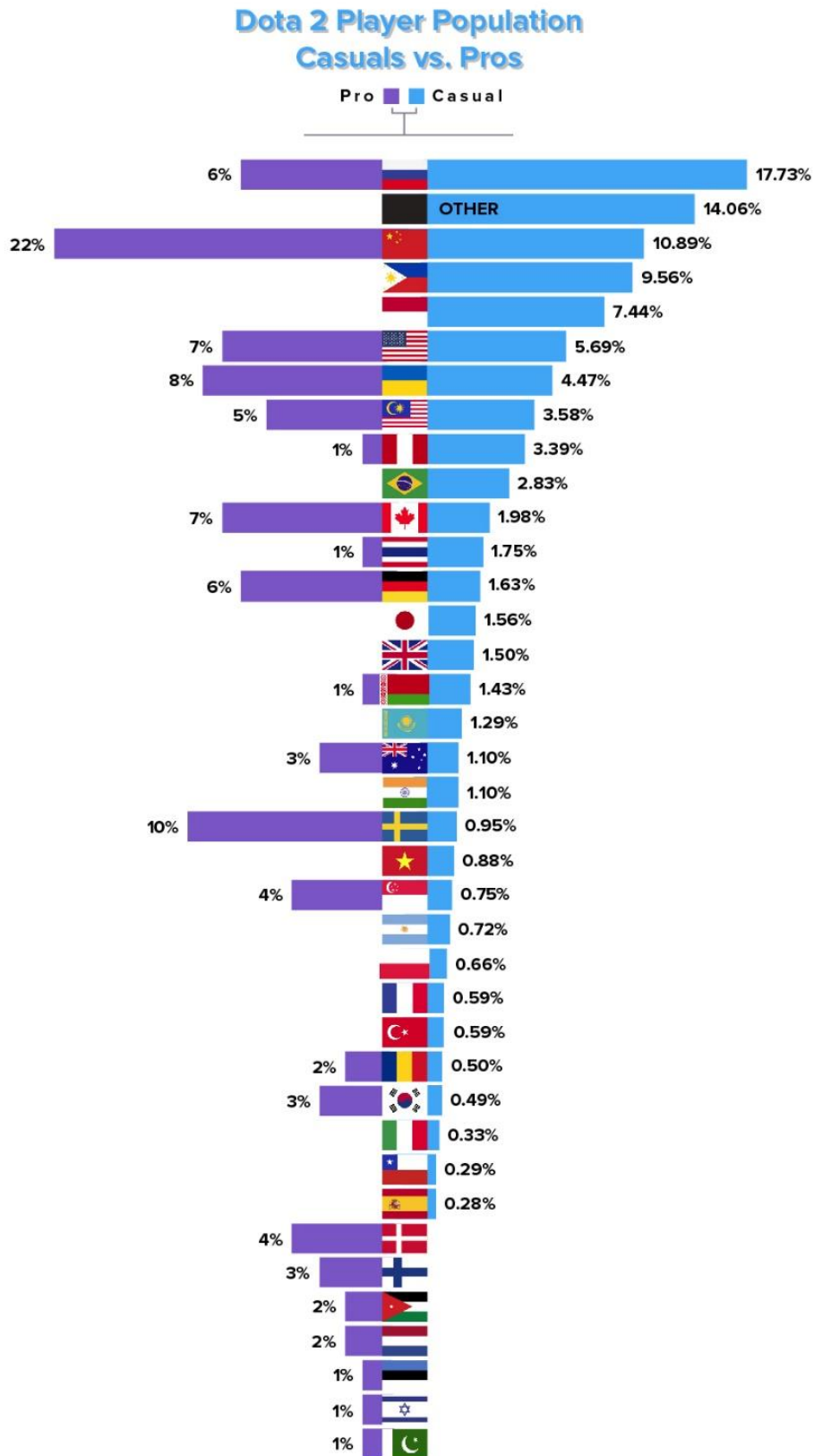
Make io great again

Free arcana for pay user

Go 10 vs 10. or event just like darkmoon

Better server support, reward experienced players

In-game frame rate and performance should be better, I have spent more than $1000 to make sure everything is smooth but it is still wtf performance

Appendix 12. esports, Dota 2 Players: Casual vs. Professional, Chart.

Dota 2 Player Population
Casuals vs. Pros

Pro ■ Casual ■

6%		17.73%
	OTHER	14.06%
22%		10.89%
		9.56%
		7.44%
7%		5.69%
8%		4.47%
5%		3.58%
1%		3.39%
		2.83%
7%		1.98%
1%		1.75%
6%		1.63%
		1.56%
		1.50%
1%		1.43%
		1.29%
3%		1.10%
		1.10%
10%		0.95%
		0.88%
4%		0.75%
		0.72%
		0.66%
		0.59%
		0.59%
2%		0.50%
3%		0.49%
		0.33%
		0.29%
		0.28%
4%		
3%		
2%		
2%		
1%		
1%		
1%		

Data courtesy of Dota 2 Liquipedia and DOTABUFF   ⑤ | e S P O R T S