

TO PLAY OR NOT TO PLAY:
HOW VIDEO GAMES MOTIVATE GAMERS
IN MALAYSIA TO PLAY

BENEDICT NG BOON YEW

MASTER OF COMMUNICATION

FACULTY OF CREATIVE INDUSTRIES
UNIVERSITI TUNKU ABDUL RAHMAN
JULY 2023

ABSTRACT

TO PLAY OR NOT TO PLAY: HOW VIDEO GAMES MOTIVATE GAMERS IN MALAYSIA TO PLAY

Benedict Ng Boon Yew

Video games have become a worldwide phenomenon despite only being roughly seven decades old, but due to the industry's relative youth, we still have much to learn and understand about gaming as it is a constantly evolving field that is closely linked with the advancement of technology. It was estimated that Malaysia alone had 20.1 million gamers in 2019. With more than half the Malaysian population being gamers, it would be interesting to discover what motivates them to play video games. This study is an attempt to understand video games' strong motivational pull through the analysis of the gaming experience of gamers in Malaysia by utilising Ryan, Rigby and Przybylski's Player Experience of Need Satisfaction (PENS) (2006) model. Three focus groups consisting of a total of 15 gamers in Malaysia were gathered to discuss and share their personal gaming experiences for the purpose of this study. According to the findings, gamers were motivated to play video games because of their innate desire to overcome challenges to become better, to have the opportunities to take actions on their own accord, and to connect and interact with others. And games found with any of the following five attributes, to provide opportunities to mastering challenges; tell a heroic narrative; provide opportunities for action; provide a platform for companionship and social opportunities; or provide competitive play, would often keep the gamers coming back for more.

ACKNOWLEDGEMENT

First and foremost, I would like to express my deepest gratitude to Dr Loo Hong Chuang, my main supervisor, for being with me every step of the way in completing this dissertation. His guidance and patience is invaluable, and I am grateful that he stuck with me to the very end. I am also very thankful to Dr Chong Eu Choong, the co-supervisor for my dissertation; for his practical approach and advice to help push me past the finishing line that I have struggled to cross.

Next, I would like to extend my sincere thanks to the participants who took their time off to be part of the pilot, and main focus group discussions. Because not only did their sharing provide the data that helped drive this dissertation forward, but it also taught me a lot as a game developer, game researcher and a fellow gamer.


I would also like to take this opportunity to thank two of my close friends who have kept their trust in me, and patiently waited for me to complete this dissertation. Now, we could finally start developing games together. Here's to hoping that the knowledge that I have gained in this study, and the new perspectives that I have discovered throughout this academic journey would provide useful insight for us to develop fun and enjoyable games together.

Last but not least, I would like to thank my mom, Mdm. Elly Sim, for always being there.

APPROVAL SHEET

This dissertation/thesis entitled “**TO PLAY OR NOT TO PLAY: HOW VIDEO GAMES MOTIVATE GAMERS IN MALAYSIA TO PLAY**” was prepared by BENEDICT NG BOON YEW and submitted as partial fulfilment of the requirements for the degree of Master of Communication at Universiti Tunku Abdul Rahman.

Approved by:



(Dr. Lo Hong Chuang)
Date: 31 July 2023.....
Supervisor
Department of Media
Faculty of Creative Industries
Universiti Tunku Abdul Rahman



(Dr. Chong Eu Choong)
Date: 31 July 2023.....
Co-supervisor
Department of Media
Faculty of Creative Industries
Universiti Tunku Abdul Rahman

FACULTY OF CREATIVE INDUSTRIES
UNIVERSITI TUNKU ABDUL RAHMAN

Date: 31/7/2023

SUBMISSION OF DISSERTATION

It is hereby certified that ***Benedict Ng Boon Yew*** (ID No: ***16UJM00094***) has completed this dissertation entitled “*To Play Or Not To Play: How Video Games Motivate Gamers In Malaysia To Play*” under the supervision of Dr Loo Hong Chuang (Supervisor) from the Department of Media, Faculty of Creative Industries, and Dr Chong Eu Choong (Co-Supervisor) from the Department of Media, Faculty of Creative Industries.

I understand that University will upload softcopy of my dissertation in PDF format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,



(Benedict Ng Boon Yew)

DECLARATION

I hereby declare that the dissertation is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UTAR or other institutions.

Name: Benedict Ng Boon Yew

Date: 31/7/2023

**TO PLAY OR NOT TO PLAY:
HOW VIDEO GAMES MOTIVATE GAMERS
IN MALAYSIA TO PLAY**

By

BENEDICT NG BOON YEW

A dissertation submitted to the Department of Mass Communication,
Faculty of Creative Industries,
Universiti Tunku Abdul Rahman,
in partial fulfilment of the requirements for the degree of
Master of Communication
July 2023

TABLE OF CONTENTS

	Page
ABSTRACT	ii
ACKNOWLEDGEMENT	iii
APPROVAL SHEET	iv
SUBMISSION SHEET	v
DECLARATION	vi
TABLE OF CONTENTS	viii
CHAPTER	
1.0 INTRODUCTION	1
1.1 Background of the Study	1
1.2 Research Questions	2
2.0 LITERATURE REVIEW	3
2.1 Introduction	3
2.2 A Brief History and Development of Video Games	4
2.2.1 Definition of Concept (Video Game)	4
2.2.2 The Advent of Video Games	5
2.2.3 Video Games in Malaysia	9
2.3 Evolution of Gamers	11
2.3.1 Definition of Concept (Gamers)	11
2.3.2 Evolution of the Concept of Gamers in US	12
2.3.3 Gamers in Malaysia	14
2.3.4 Game Studies	17
2.4 Motivation	19
2.4.1 Definition of Concept (Motivation)	19
2.4.2 Why do people play video games?	19
2.5 Theoretical Framework	21
2.5.1 Player Experience of Need Satisfaction (PENS)	21
2.6 Concluding Remark	28

3.0	METHODOLOGY	30
	3.1 Introduction	30
	3.2 Focus Group and Data Collection Method	30
	3.2.1 Ethical Consideration	32
	3.3 Respondent Recruitment and Selection	32
	3.4 Discussion Process	34
	3.5 Interview Data Presentation	35
	3.6 Data Processing	35
4.0	DATA ANALYSIS	37
	4.1 Introduction	37
	4.2 Competence	38
	4.2.1 Mastering Challenges	39
	4.2.2 Heroic Narrative (Competence)	46
	4.3 Autonomy	51
	4.3.1 Opportunities for Action	52
	4.4 Relatedness	60
	4.4.1 Companionship & Social Opportunities	61
	4.4.2 Competitive Play	66
5.0	CONCLUSION	71
	5.1 Research Limitations	75
	5.2 Recommendations for Future Research	76
	5.3 Research Implications	77
6.0	REFERENCES	78
7.0	APPENDICES	94
	Appendix A	94
	Appendix B	96
	Appendix C	97

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Since the release of *Pong*, one of the most iconic games that was released in 1972 (Barton & Loguidice, 2009), gamers have spent countless hours saving princesses, slaying monsters and crushing candies. But what actually drives gamers to keep returning to these experiences?

Researchers have spent decades measuring video games' effects on our society. And these studies conducted not only talk about the negative effects of gaming such as addiction (King & Delfabbro, 2020; Weinstein, 2010) and aggression (Bushman & Gibson, 2010; Engelhardt, Bartholow, Kerr & Bushman, 2011), but also the positive effects of gaming in strengthening cognitive skill (Green & Bavelier, 2012; Bavelier, Green, Pouget & Schrater, 2012) and enhancing creativity (Jackson, Witt, Games, Fitzgerald, von Eye & Zhao, 2012). However, it was only in the recent decades that the focus in game studies have shifted toward the understanding of why do we even play video games in the first place (Rigby & Ryan, 2011). What drives us to collect those floating coins, fight a giant dragon, or traverse a myriad of fantasy worlds until the wee hours?

Simply put, what makes video games so compelling that we would want to keep playing them? To answer this, Ryan, Rigby and Przybylski (2006) developed the Player Experience of Need Satisfaction (PENS), and discovered that video games are very good at satisfying our competence, autonomy and relatedness needs. When these basic but very important intrinsic needs are satisfied, we would become motivated to engage in activities that satisfy us. Playing video games is one such activity.

Utilising the PENS model as a theoretical foundation, this study aims to discover the motivation of gamers in Malaysia to play, and in some cases, to not play video games.

1.2 Research Questions

1. What motivates gamers in Malaysia to play video games?
2. How do video games motivate and captivate gamers in Malaysia to keep playing?

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Since its birth in the late 1950s as a technological oddity at a science fair (Brookhaven National Laboratory, n.d.), video games have boomed into one of the most profitable entertainment industries in the world today (Kamenetz, 2013). The global game market is forecasted to generate revenues of US\$196.8 billion in 2022 and will continue growing in the following years, possibly generating revenues exceeding US\$225.7 billion at the end of 2025 (Wijman, 2022).

Video games have also become a worldwide phenomenon despite only being roughly seven decades old, but due to the industry's relative youth, we still have much to learn and understand about gaming as it is a constantly evolving field that is closely linked with the advancement of technology (Rigby & Ryan, 2011). There have been studies on the adverse effects of gaming in terms of promoting aggressive behaviour (Anderson, Shibuya, Ihori, Swing, Bushman, Sakamoto, Rothstein & Saleem, 2010) and violent video games affecting adolescents' attitudes and behaviours negatively (Fraser, Padilla-Walker, Coyne, Nelson & Stockdale, 2012; DeLisi, Vaughn, Gentile, Anderson & Shook, 2012; Gabbiadini, Riva, Andrighetto, Volpato & Bushman, 2013; Siyez & Baran, 2017); and also studies which associate video

games with beneficial effects such as improved cognitive functions, for example, quick decision making (Green, Pouget & Bavelier, 2010; Bavelier, Achtman, Mani & Föcker, 2012) and cognitive flexibility (Colzato, van Leeuwen, van den Wildenberg & Hommel, 2010). It was relatively recent that game researchers started to fill the gap of meaningful conversation on video games' incredible motivational pull (Rigby & Ryan, 2011).

It is undeniable that video games are here to stay and it is clear that people's fondness towards video games will not change, as gaming continues to grow and more people start to play and keep playing. It is then essential to understand the deeper psychology of games, and there is no better place to begin than the strong motivation they provide (Rigby & Ryan, 2011).

2.2 A Brief History and Development of Video Games

2.2.1 Definition of Concept (Video Game)

A video game is designed as an interactive media that allows the players to experience its digital world, and to determine their stories within the world at their own pace. Unlike a book or a movie, the character's fate is in the player's hands, not the author's. They are played via a personal computer (PC) or a game console (such as the PlayStation, Nintendo Switch or Xbox) that is connected to a video display such as a monitor or television, arcade machines, or a mobile device (a smartphone or tablet). The main input device is a controller. It can be a keyboard, mouse, gamepad, joystick, or any other device designed for gaming that can receive input. Specially designed devices

such as virtual reality (VR) headset for VR games, steering wheels for driving games, or a plastic guitar for music games may also be used (Sardone, Devlin-Scherer & Martinelli, 2008).

Video games can be played in either single player or multiplayer mode. Multiplayer mode can be played offline (with friends gathered around a single console with multiple connected input devices) or online (with friends or other players connected to an online game session through the internet), and is designed to be played either cooperatively or competitively.

The term ‘console game’, ‘PC game’, ‘computer game’, ‘mobile game’, ‘digital game’ and/or any games that are played using an electronic device would collectively be referred to as ‘video game’ or ‘game’ in this study, as gamers do not actively distinguish the platforms they play on but the games they are playing. ‘Video game’ and ‘game’ will also be used interchangeably throughout this study, as it is common to use ‘game’ as a shorthand for ‘video game’.

2.2.2 The Advent of Video Games

Since its birth in the late 1950s as a technological oddity at a science fair (Brookhaven National Laboratory, n.d.), video games have boomed into one of the most profitable entertainment industries in the world today (Kamenetz, 2013). The global game market is forecasted to generate revenues of US\$196.8 billion in 2022 and will continue growing in the following years,

possibly generating revenues exceeding US\$225.7 billion at the end of 2025 (Wijman, 2022).

The first of many video games were borne upon mighty post-World War II mainframes, which were designed for rapid code breaking and the calculation of ballistic trajectories. In 1958, William Higinbotham developed the earliest example of a video game, *Tennis for Two*, a simple electronic tennis game that could be played by two players with separate controllers connected to an analog computer, and utilising an oscilloscope for a screen (Brookhaven National Laboratory, n.d.). As computers made their way into academic institutions, programming experimentations brought to life the very first computer-based video game in the form of *Spacewar!* in 1962 (Brandom, 2013). By the 1970s, commercial applications were released in the form of arcade games. *Pong* is the most iconic game that was released during this era and became the first commercially successful game (Barton & Loguidice, 2009). In 1985, *Super Mario Bros* (Whitehead, 2015) was released with the Nintendo Entertainment System (NES) (Cunningham, 2013), a hugely influential side-scrolling platformer game that would go on to set sales records (Ahoy, 2013).

As technology improved, home computers started to have much more processing power, opening doors to a new level of gaming, with more complex and less linear games being developed. In the 1990s with the ever improving computer technology, cult classics such as *Super Mario 64* (Nintendo, 1996), *Pokémon* (1997), and *Half-Life* (Valve, 1998) were

released. In the new millennium, *Deus Ex* (Ion Storm, 2000), a critically acclaimed video game notable for its open-ended approach to the game character's goal, permitted the player to navigate their own way through a dystopian conspiracy. The controversial *Grand Theft Auto* franchise (Rockstar Games, 2001) made a return in 2001, with an ambitious 3D open world where the player could freely explore in (Ahoy, 2013). The development of critically acclaimed games definitely did not stop there as new games that push the boundaries of player imagination were released yearly such as *Metal Gear Solid 2* (Konami, 2001), *Half-Life 2* (Valve, 2004), *Wii Sports* (Nintendo, 2006), *Portal* (Valve, 2007), *Bioshock* (Irrational Games, 2007), *Mass Effect* (BioWare, 2007), *The Witcher* (CD Projekt RED, 2007), *The Last of Us* (Naughty Dog, 2013), *Horizon Zero Dawn* (Guerilla Games, 2017), *God of War* (Santa Monica Studio, 2018), *Sekiro: Shadows Die Twice* (From Software, 2019) and many more.

Not only did the advancement of technology make home computers more powerful and the possible development of deeper and believable game worlds and experiences, it made mobile computing technology possible as well. Today's smartphones are faster than the mid-80s' Cray-2 Supercomputer, faster than the computer onboard the Orion spaceship NASA is currently testing to go to Mars and most significantly, faster than the laptops most of us have right now (Nunez, 2020). And not only does a smartphone allow us to make and receive phone calls and text messages, accessing and browsing the Web, downloading files, viewing, editing and sharing documents, taking photos, and recording videos (Lenovo, 2020), its most

pertinent feature for this study is that it allows us to play games without the need of having a dedicated computer or game console. Smartphones are also becoming more affordable, and the fact that consumers are already using them for various aspects of their daily life such as social, business, and other leisure activities (Fernandes, 2019), it has enabled mobile gaming to provide a very low barrier of entry (resulting in a low barrier of exit as well) for anyone who is interested to try out gaming. Compounded by the fact that there are many mobile titles that is available to play for free such as *Clash Royale* (Supercell, 2016), *Angry Birds 2* (Rovio Entertainment, 2015), *Candy Crush Saga* (King, 2012), *Among Us* (InnerSloth, 2018), *Mobile Legends* (Moonton, 2016), *Pokémon GO* (Niantic, 2016) and *PUBG Mobile* (PUBG Corporation, 2018). The low barrier of entry would make it less intimidating for people who are new to gaming as they are not required to invest substantially on a separate hardware such as a computer or game console solely for gaming. Putting things into perspective, a budget PC for gaming (not inclusive of a display monitor) would cost US\$500 to US\$1000 (PC Gamer, 2020), and the latest PlayStation 5 Physical Edition and Xbox Series X would cost US\$499 each (Ryan, 2020; Spencer, 2020). And with mobile gaming's low barrier of exit, if a person finds gaming to be unenjoyable, he or she could easily uninstall the game from their smartphone.

Starting with a dot bouncing back and forth on the screen of an analog computer, video games have evolved rapidly in the past seven decades. With the continuous advancement of technology, besides allowing game developers to create deep and rich digital worlds for gamers to dive in, it has also made

games easily accessible to anyone with the introduction of smartphones. Newzoo (Wijman, 2022) estimated that there will be 2.6 billion mobile gamers in 2022, in comparison there are 6.5 billion smartphone users in the world today (Statista, 2022).

2.2.3 Video Games in Malaysia

Cited as one of the emerging markets around the world, the Southeast Asia's (SEA) game market generated US\$4.4 billion game revenues in 2019 alone (Weustink, 2020), and links to this impressive growth is the region's rapidly increasing online population, a byproduct of SEA's increasing number of smartphone users. The SEA mobile game revenues accounted for 70% (US\$3.1 billion) of the region's overall game revenues, dwarfing the combined revenues of PC and console gaming. Due to this, companies in both the local SEA region and overseas are vying for a piece of this high-potential growth region (Fernandes, 2019).

With the Malaysia game market estimated to be worth US\$673 million in 2019 with 20.1 million gamers (Elliot, 2020), the Malaysian Digital Economy Corporation (MDEC), a government agency established in 1996 to drive the local digital economy growth, has taken multiple steps to ensure the continued growth of the local game industry and to push Malaysia as a hub for games development in the South East Asia region. For example, Level UP KL is a gaming conference hosted by MDEC annually, since 2015, to bring together prominent international and local players in the gaming industry to

interact, educate and share knowledge. Industry guests that have attended and provided talks for the conference included Hong Ly of Riot Games, Swen Vincke of Larian Studios, Danny Koo of Marvel Entertainment, Jan Willem Nijman of Vlambeer and Wan Hazmer of Metronomik (Level UP KL, 2020).

In their effort to support local talents, MDEC provides funding through their Digital Content Creators Challenge - DC3 (formerly known as IPCC/DICE) platform to help accelerate the development and commercialization of the aspiring developers' concepts. On top of the grant money that is awarded up to RM50,000 (approx. US\$11,924) for Micro Indie Games and up to RM10,000 (approx. US\$2,385) for Small Indie Games, DC3 winners would also receive consultancy from experienced industry players to help with their development process (Digital Content Creators Challenge [DC3], 2020).

The Malaysian government is also making efforts to encourage international game companies to set up their studios in Malaysia. In 2019, during the 5th edition of the Level UP KL conference, it was announced that Japanese gaming giant Sony Interactive Entertainment Worldwide Studios (SIE WWS) would be setting up a studio in Malaysia, and its participation in the local game industry would be incentivized by the government (The Star, 2019). Shuhei Yoshida from SIE also attended the announcement. The founder of Larian Studios, Swen Vincke, made a similar announcement while delivering the keynote during the conference stating that they would be opening their fifth studio in Malaysia (The Star, 2019).

Despite the growing number of international game companies setting up in Malaysia, the pedigree of the local game studios is also worth noting. With the likes of Metronomik (headed by Wan Hazmer, a former lead game designer in Square Enix), and Passion Republic (developers of *GigaBash* that won the Grand Jury Award and the Audience Choice Award during the 2019 SEA Games Awards) leading the local industry (Tan, 2019) to leave a mark in video game history.

It is undeniable that video games are becoming a mainstream industry throughout the world as it is gaining prominence in the SEA region, and even in Malaysia. The video game industry is recognized by the government as a key economic segment that is worth growing and investing in, on top of it being a form of entertainment that is easily accessible to the masses through smartphones. From an academic standpoint, this would also mean that there are ample opportunities for the study of video game related topics through a local lens as it was estimated that Malaysia alone has 20.1 million gamers in 2019 (Elliot, 2020).

2.3 Evolution of Gamers

2.3.1 Definition of Concept (Gamers)

Gamers or players, in general, are people who play games. In this study, gamers would refer to people who play video games, computer games, digital games or mobile games.

Some specific terms may be utilised as well throughout the studies. For example, a gamer that plays video games mainly on a game console would be referred to as a console gamer, one that plays mainly on their personal computer or laptop would be referred to as a PC gamer and a person that plays mainly on their mobile devices (such as a phone or tablet) would be referred to as a mobile gamer.

This study would also take an inclusive approach with the term gamer. Meaning that the opinion of all gamers regardless of the amount of time spent playing video games, the frequency of playing video games, or the type of games played, is equally important and will not be disregarded.

2.3.2 Evolution of the Concept of Gamers in US

There is a stereotype that adolescent boys are the only ones who play video games in part due to the aggressive marketing towards the demographic by big video game publishers. But the video game industry has expanded in recent years to include diverse audiences, by producing games aimed at children, older adults, and niche interest groups who play games. And with the rise of smartphones, the gaming demographic has shifted significantly (Cassie, n.d.) with more than 40% of gamers made up of women (Jayanth, 2014; Lofgren, 2017). While the interests in video games have always been there, it is with the introduction of smartphones that the idea of gaming became more widely accepted. According to the Entertainment Software Association's (ESA) *2019 Essential Facts About the Computer and Video Game Industry*

report (2019) , 65% of American adults play video games with 46% of them being female gamers. The report also reveals that the most common device used for video game play is smartphones. The growth in the number of female gamers could also be due to the wide variety of game genres available that could appeal to various demographics, with the report indicating that the Casual (71%) genre being the most popular genre, ahead of genres such as Action (53%) and Shooter (47%).

The demographic for older gamers has also increased due to the fact that many people who grew up in the 1980s continue to play video games. This is evident as the average age of gamer is around the age of 33 (ESA, 2019) and they have been playing for 14 years on average. But in general, older gamers would reduce their time playing video games as their responsibilities increase and interests change (Cassie, n.d.). This notion could also explain why the male and female Gen X Gamers most often play games on their smartphone (62% and 70% respectively) and the Casual games genre being their most often played games (70% and 81% respectively).

It is also worth noting that as gaming becomes more acceptable by society, gamers below the age of 18 would increase. This is particularly true as gamers get older and have children of their own. In the same report (ESA, 2019), it was discovered that 70% of families have a child who plays video games, 57% of parents would play games with their child at least weekly and a whopping 74% of parents believe video games are educational. And as technology becomes more accessible, schools are adopting the usage of video

games in the classroom (Cassie, n.d.). A study by Takeuchi and Vaala (2014) indicated that 74 percent of American elementary-middle school teachers were using digital games for educational purposes. It is reported that this form of teaching has helped improve the reading skills, coordination and fine motor skills of children while also boosting their focus and concentration. It would not come as a surprise as 79% of gamers say games provide mental stimulation and another 78% say that games provide relaxation and stress relief, providing a positive impact in their lives.

2.3.3 Gamers in Malaysia

Malaysia, a former British colony, is one of eleven countries located in the Southeast Asian region. Malaysia is separated by the South China Sea into two regions; Peninsular Malaysia and East Malaysia, where Sabah and Sarawak is located. With an estimated population size of 32.66 million, it is the 6th largest country in Southeast Asia by population. In 2020, the Malaysian urban population stood at 75.1% of the total population (Azman, 2022), and the percentage of the population aged 15-64 years (working age) is at 69.5% in 2022 (Department of Statistics Malaysia, 2022). The country's GDP was valued at RM1.55 trillion (approx. US\$348 billion) in 2021 (Department of Statistics Malaysia, 2022).

Locally, a survey conducted in March 2020 by Rakuten Insight of online gaming shows that Malaysians between the ages of 16 to 55+ years old are quite aware and have played online games (Hirschmann, 2020). Though not a large number compared to the younger generation, 37% of the respondents who were aged between 45 to 54 years old and 28% of those who were aged 55+ years old revealed that they have played online games. Respondents aged between 16 to 24 years were the largest consumers of online games at 73%, followed closely by the 25 to 34 years age group at 64%, and 35 to 44 years age group at 50%. In a separate study to investigate the possibilities of adapting computer games for learning, Latif (2007) found that more than 90% of local male and female primary and secondary school students have played some kind of computer games and that most Malaysian teenagers are familiar with many genres of digital games.

It is estimated that Malaysia has 20.1 million gamers that play games on mobile, console and PC and spent an impressive US\$673 million on games in 2019 (Elliot, 2020). It was also reported that 42% of gamers in Malaysia are female (Newzoo, 2017). The Newzoo survey (Elliot, 2020) also discovered that 75% of Malaysian gamers play on their mobile phones, with PC and console following close behind at 66% and 55% respectively. It is worth noting that the number of women playing games in Malaysia is impressive as 70% of the female urban online population play games on mobile, 58% play on PC and 45% play on a game console. And even though the percentage of male gamers is higher in comparison across all three platforms, the gender gap is becoming smaller.

Majority of Malaysian paying gamers also tend to spend on in-game items or virtual goods, as 87% of the respondents admitting to having spent real money purchasing in-game items, with power-ups being the most commonly bought item. These purchasable in-game items or virtual goods tend to be a mainstay of free to play (F2P) or freemium games that dominate the mobile gaming market. Games that utilise this model have a zero-entry fee to access but require real money to unlock certain features. These features can include anything from customization options to large amounts of in-game currency and also power-ups (Ho, 2017). Some of the local market's top-played games are freemium games such as *Candy Crush Saga* and *Mobile Legends: Bang Bang*, which 46% and 35% of Malaysia's online urban population played respectively (Elliot, 2020). To note, 61% of Malaysia's urban online population watch gaming video content. Interestingly, 7% of those who watch gaming content regularly have been reported to play games less than once per month.

With more than half the Malaysian population being gamers who have played or are still playing games, it would be interesting to discover what motivates and drives gamers in Malaysia to play video games. Or even what that might prompt them to stop playing video games altogether.

2.3.4 Game Studies

Game studies is a field of learning dedicated to understanding both game, game design and players, and their dynamic relationships in the practices and processes of game cultures (Mäyrä, 2008). But for nearly three decades, social scientific studies on video games focused on the negative effects of video games relative to violence. In these studies, video games with violent content were thought to cause increased aggression and create the potential for violence in players (Anderson & Ford, 1986; Anderson & Dill, 2001; Hartmann & Vorderer, 2010; Anderson & Bushman, 2011). However, to understand the impact of video games, a more balanced perspective is needed to consider not only the possible negative effects but also the benefits of playing video games. As the nature of video games have changed dramatically, becoming increasingly complex, diverse, realistic and social in nature (Ferguson & Olson, 2013), a significant body of research began to emerge documenting the potential benefits of playing video games in terms of cognitive benefits (Green & Bavelier, 2012; Adachi & Willoughby, 2013), motivational benefits (Sweetser & Wyeth, 2005; Ventura, Shute & Zhao, 2013; McGonigal, 2011), emotional benefits (Ryan et al, 2006; Sherry, 2004), and social benefits (Ewoldsen, Eno, Okdie, Velez, Guadagno & DeCoster, 2012; Ferguson & Garza, 2011).

At present, according to Mäyrä (2008), there are at least three main areas of research. The first aims to study games and their structures, the second focuses on understanding players and their play habits, and the third involves in the research of game design and development. Studies done on each of these research areas are also rooted in specific methodologies. For studies that involve analyses of individual games or cultural interpretations are rooted in a methodology that is distinctive for the humanities, such as semiotic analysis, textual analysis and discourse analysis; as for play and player related studies, they are generally informed by social sciences methodologies in the form of interview, survey, and laboratory research. Studies in game design research would instead draw from a variety of methodologies ranging from art and design studies to those of technical and computer sciences. Some examples of methodologies used for this research type are prototyping, play-testing, and focus group interviews.

Mäyrä (2008) also noted that game studies' expanding popularity was due to two key factors. The first is that video games are a challenging but important phenomena that is under-researched. And interestingly, the second factor is the fact that an entire generation of academics who grew up playing video games, are embarking upon study in this field.

2.4 Motivation

2.4.1 Definition of Concept (Motivation)

In everyday usage, the term “motivation” is frequently used to describe why a person does something. It is what causes a person to act, whether it is getting a glass of water to reduce thirst, reading a book to gain knowledge or playing a video game to unwind after a long day at school or work. When we are motivated, we move and take action. It is the driving force behind human actions (Cherry, 2022).

Motivation can happen extrinsically or intrinsically (Cherry, 2022). Extrinsic motivation occurs when we are motivated to act because we want to gain a reward or avoid punishment. Intrinsic motivation occurs when we find it rewarding to be engaged in a particular behaviour. As we perform an activity for its own sake as the behaviour itself is its own reward, and not the desire for an external reward.

This study will focus on the intrinsic aspect of motivation.

2.4.2 Why do people play video games?

Borne of studies to compare intrinsic and extrinsic motivation, the Self Determination Theory (SDT) (Deci & Ryan, 1985) explains that people tend to be motivated by a need to grow and gain fulfilment. SDT theorise that there are three basic, innate psychological needs which are universal to everyone

that would lead to self-motivation, growth and well-being if fulfilled. These psychological needs are:

Competence: Described as the need to experience mastery, to feel successful, effective, feel that you are growing and learning.

Autonomy: Described as the need to feel like you're in control of your choices and in harmony with them. That you're free to do whatever you want. In games it translates to choice, customization and agency.

Relatedness: Described as the need to be cared for and to care for, to be connected with others, knowing that you belong and matter. (Neves, 2018)

SDT also addresses factors that either facilitate or undermine both extrinsic and intrinsic motivation and makes a clear distinction between the two. Extrinsic motivation is when people are motivated to act because they would earn a reward or to avoid punishment. It is not because we enjoy the act or find it satisfying, but it is only done because we expect something in return or to avoid something unpleasant. And when a person is motivated to act due to an external factor like punishment, the act is no longer self determined. However, intrinsic motivation is when a person is motivated internally to achieve something. Instead of the desire for an external reward, the behaviour itself is its own reward (Cherry, 2022). But this is not to say that extrinsic motivation is bad, as some people may have extrinsic goals that they could

identify with and wish to fulfil. This would then be considered as a good type of extrinsic motivation.

According to SDT, intrinsic motivation is a core type of motivation that underlies play and sport, and is a type of motivation that is clearly relevant to video game participation, as with sport, most gamers play because THEY want to. This is undeniable as most gamers pay to play video games, and some even face disapproval for playing. In view of this, Ryan et al. (2006) suggested that people typically play games because they are intrinsically satisfying or as Bartle (2004) would put it, because gamers are seeking “fun”.

2.5 Theoretical Framework

The Player Experience of Need Satisfaction (PENS) model will be used as a theoretical foundation to guide this study on video games’ ability to satisfy the three basic psychological needs mentioned above and motivating gamers to play and keep playing.

2.5.1 Player Experience of Need Satisfaction (PENS)

“Fun” is a broad concept that has multiple meanings and is typically very vague when we are trying to make sense of it. What is the difference between saying having fun playing video games, and having fun at the beach? Despite using the same word, we are probably talking about different things because it is the situational context that aids us in understanding what “fun”

means. Player Experience of Need Satisfaction or PENS was developed in 2006 (Ryan et al., 2006), with SDT as its foundation, to make sense of these experiences that evoke “fun” within the context of video games (Rigby & Ryan, 2011). The PENS model strives to understand the deeper satisfactions that support games’ strong pull, by identifying the psychological needs that video games are capable of satisfying and how video games could fulfil those needs.

Rigby & Ryan (2011) explain that through the PENS model, it has consistently proven that when video games are able to satisfy our needs for competence, autonomy, and relatedness; that is when video games are most engaging, fun and successful.

Competence is referring to the inherent desire to develop our potential and overcome new challenges. This innate desire of mastery is present in each of us and influences us personally and professionally. In real life, the fulfilment of our competence needs is oftentimes a dragged out and unpredictable process. In comparison, video games are efficient in allowing us to feel mastery. The fundamental designs of video games are to create challenges to test the player’s skill and ability. When video games present us with challenges, it is an invitation for us to push ourselves to overcome our limits. When accomplished, it would satisfy our intrinsic need for competence. Video games satisfy our competence needs by providing us with opportunities to mastering challenges and heroic narratives to implicitly communicate a confidence that the player can overcome challenges. From a young age, we

would instinctively seek to gain mastery over our environment and even ourselves. We would learn how things work through observation, exploration and manipulation, which is first done through play, and later through a variety of activities, hobbies and even work. Being able to overcome new challenges is fundamental to us from the day we are born, and is something we would pursue each day without fail. As seeking out and mastering challenges is inherently enjoyable and it energises us (Ryan & Deci, 2007). And though it seems unlikely, video game stories are also capable of fulfilling our competence needs. Games that have a strong story element would always put the player in the shoes of a protagonist, who needs to overcome unique and important challenges. This heroic narrative would see the player persevere through trials and tribulations that would eventually lead to an ultimate victory, providing a natural framework that satisfies the player's need for competence in an optimal manner. In stories told through traditional mediums such as books or movies, we could only enjoy the hero's exploits indirectly through our imaginations. But in video games, the heroic narrative supports in the players' minds that they are a hero and implicitly communicates a confidence that the player can overcome challenges by putting the players into heroic circumstances (Rigby & Ryan, 2011).

Autonomy refers to our innate desire to take actions out of our own personal volition, and not because we are "controlled" by external factors or by others. By taking action in ways that truly represent our own desires would result in satisfying our intrinsic need for autonomy. According to Ryan and Deci (2000), when people experience autonomy, they are happier, healthier,

and more motivated. As with mastery experiences, people are naturally motivated to seek out and stay engaged with activities that instill a sense of personal autonomy. But having the freedom to do anything is not enough; we have to be able to recognize the opportunities available to us within our surroundings, as we are more likely to feel satisfaction when compelling opportunities and choices are available to us (Rigby & Ryan, 2011). A true sense of choice could only be felt when we are able to distinguish the situation as providing interesting options that we could actually consider and attain. It is through these meaningful choices or opportunities for action that satisfies our need for autonomy the most. Video games are capable of engaging their audience because the choices that are provided within the video games' digital world are capable of evoking an ongoing feeling of possibility, or opportunities for action (Rigby & Ryan, 2011). These opportunities for action are important to satisfy our need for autonomy, as they encourage the "what if" thoughts that would draw players back to the games they played. This "what if" thoughts prompts the player to think of new methods to tackle challenges and content that they had encountered, or generate interest to further explore the game world to discover areas or contents that they might have missed, or even the interest in replaying the same game content with a different character. This "what if" effect is a crucial factor to determine the gamers' interest to replay a game. But it is important to note that autonomy is not just about having "options", but being able to act volitionally on a fundamental level. We may only have a single path ahead of us, but it can still feel autonomous when the only option available is reasonable for us to pursue.

Relatedness refers to our desire to have meaningful connection with others. Feelings of camaraderie, the sense of belonging, and that you matter to others are all part of feeling relatedness. When these needs are satisfied, we would become motivated to participate in the activities that satisfy us. But if they were impeded, our motivation would diminish. As humans, we would naturally seek to be connected with others, and to interact with each other in meaningful ways. As we would feel anxious at the thought of losing important relationships, feel depressed when our connections with certain people are severed, and feel lonely when we lack important relationships (Rigby & Ryan, 2011). Making interpersonal rejection one of the most painful psychological experiences that we could experience, a testament to just how deeply important relatedness is to us (Baumeister & Leary, 1995). Video games are a unique and efficient medium to experience relatedness because of its capability to instantly connect people in shared worlds. Making it an ideal platform to facilitate companionship, social opportunities and competitive play, factors that are vital in satisfying our relatedness needs. Video games facilitate companionship really well as it offers a strong opportunity for the player to instantly connect and experience companionship. It is also becoming more and more a social world – where it would serve as a place for players to meet new people, spend time with friends, and to share experiences. Game developers are also focusing on improving social opportunities by providing ways for the players to easily play, communicate, or collaborate with each other within video games. By allowing players with the possibilities to cooperate and support each other, it helps increase the feeling of meaningful connection and companionship between players when playing together.

Though it may seem that cooperative and collaborative opportunities are essential to support relatedness in order to increase the feeling of meaningful connection and companionship, the feeling of relatedness can also exist through competitive play (Rigby & Ryan, 2011). In recreational competitions, video games included, we would essentially be contributing to the competence of our opponents and vice versa through competition. Creating the type of connection that is also meaningful and supportive, which are traits of relatedness. But despite competitive play's ability to enhance relatedness and other needs satisfaction, it is equally capable in thwarting it as well. According to Rigby & Ryan (2011), competitive play that enhances relatedness is constructive competition, whereas competitive play that thwarts relatedness is considered to be destructive competition. Constructive competition is when competition against another player helps us hone our skill and enables us to improve, even if it was a fierce competition. In comparison, destructive competition happens when we feel suppressed or oppressed by our opponents through taunts, cheating, and mean-spirited play. Ryan & Rigby (2011) also believe that the more capable a game structure is in encouraging support and cooperation, the likelier it is for the players to feel that their needs for relatedness are being fulfilled, and making it more likely for the players to return to the game.

The reason why video games elicit such great engagement in those who play them is because video games are really good at satisfying the aforementioned three intrinsic needs (Rigby & Ryan, 2011). In a series of six studies that included four experiments, Przybylski, Ryan and Rigby (2009)

explored the relations between violent contents and player's motivation and enjoyment of video game play. The results of their studies found that enjoyment, value, and desire for future play were strongly associated with the experience of autonomy and competence in gameplay. Violent content added little unique variance in accounting for these outcomes and was largely unrelated to need satisfactions. In another experimental study, Peng, Lin, Pfeiffer and Winn (2012) manipulated competence and autonomy-supportive features of an interactive exercise game (exergame) to examine the effects on user experience. In the competence-supportive condition, the game introduced dynamic difficulty, and badges that provide feedback on player performance. As for the autonomy-supportive condition, the players could customise their character's appearance and decide the growth of their character's abilities, and they have dialogue options when conversing with the NPCs. But in the no-competence and no-autonomy condition, none of the mentioned features were available. Results of the experiment showed that the features significantly affected the players' game enjoyment, motivation for future play, and overall game ratings positively. A different investigation by Pe-Than, Goh and Lee (2014) on the perceived enjoyment in human computation games (HCG) found that the significance of the relatedness need indicates that people achieve enjoyment in HCGs through fulfilment of social belongingness via virtual interaction and communication. And these social features could have assisted players to encounter other individuals who share common interest with them, thereby forming a sense of relatedness.

In comparison to the many activities we engage in life, games are so capable in satisfying the psychological needs because of the immediacy, consistency, and density of the intrinsic satisfactions they provide. Immediacy is in relation to games' capability to instantly transport us to worlds filled with challenges and opportunities. Consistency is the high likelihood that games would deliver on their promise of engagement and need satisfaction. In video games, outcomes and results will consistently reflect our actions and expectations once we have mastered their rules and conventions. As opposed to real life, where things rarely go according to plan regardless of how foolproof we think our plans would be. And density refers to video games' ability to deliver competence and other satisfactions at a high rate of frequency, keeping the player engaged with a consistent stream of enjoyable experiences from start to finish (Rigby & Ryan, 2011).

By focusing on the three basic psychological needs found within PENS, it would provide a clearer understanding as to what makes a game fun and engaging.

2.6 Concluding Remark

Despite the video game industry's relative youth, its growth has been rapid due to the advancement of technology. Its reach on a global scale could not be understated as well, as gamers young and old have played, will play and will continue playing games well into the future as video games become more and more accessible and available to the general populace. Studies have been

done to understand video games but critics and advocates alike tend to focus only on specific aspects of games and there has been little mainstream empirical literature conducted on game motivation, and theories that do exist were largely based on the ideas of game developers and advocates. Motivational psychologists such as Rigby and Ryan (2011) believe that by understanding video games' motivational pull and emotional appeal, it would provide a better viewpoint to explore how the fundamental dynamics of games could manifest both in a positive and negative manner.

The PENS model was chosen for this study to aid the understanding of the gamers' personal account of why they play and keep playing video games.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter explains the methodology and methods used to conduct this qualitative research. The focus group and data collection method, ethical consideration, respondent recruitment and selection, discussion process, and data processing are discussed in this chapter.

3.2 Focus Group and Data Collection Method

Focus group is a research method that gained popularity for its usage from the mid-1980s onward, and was developed by Robert K. Merton and Paul Lazarsfeld in 1941. This method was cited by more than 5000 articles in 2020 in the Social Science Citation Index (SSCI) (Morgan, 2021). It is also a method frequently used as a qualitative approach to gain an in-depth understanding on a specific topic, aiming to draw from the complex personal experiences, beliefs, perceptions and attitudes of the participants through a moderated interaction (Nyumba, Wilson, Derrick & Mukherjee, 2017).

This study adopted the focus group discussion as this method provide an in-depth look into why gamers would want to play and keep playing video games, through the sharing of their very own personal experiences which

would be difficult to quantify. Particular benefit in using this method is that data can be generated in quantity quickly and a wider variety of information could be observed as numerous participants are involved in the interview process. Another benefit in utilising this method to collect data is that it allows the researcher to understand the meaning that daily activities hold for people. This format of interview also allows the researcher flexibility to explore unanticipated issues as they arise during the focus group discussion (Marshall & Rossman, 2011).

The role of the researcher in the conducted focus group discussions was that of a facilitator, which facilitates the group discussion between participants, not between the researcher and the participants. This is done to avoid influencing the opinions and discussion of the participants. And to facilitate a conducive discussion, the researcher must take into consideration the participants' comfort, access to the venue, and levels of distraction (Smith, 1972). The focus groups were conducted in one of Universiti Tunku Abdul Rahman's design rooms, and the living room of one of the participants. The locations selected were spacious, air-conditioned and quiet to ensure that the participants were feeling comfortable. Snacks were also provided to create a more casual setting that would allow the participants to discuss the topic of the research in a relaxed manner. The focus group discussion sessions were also designed to last less than two hours, as it was a rule of thumb according to Gibson (2012) and Heary & Hennessy (2002), to ensure that participants do not suffer from fatigue and possibly losing interest in the topic discussed. Video recording was used as the main data collection method during the focus

group discussions.

3.2.1 Ethical Consideration

Participants were briefed on the purpose of this study and that their participation was completely voluntary. The participants were also informed that the discussion will be recorded with a camera and the video recordings are only meant to facilitate the findings done within this study as no video clips will be published. They are also aware that to protect their confidentiality, their personal identity would not be disclosed in any way in the study. They were informed that they have the right to withdraw from the study at any time. Consent forms were provided for each participant to sign at the beginning of each discussion session.

3.3 Respondent Recruitment and Selection

Recruitment was done through Facebook Messenger, as personal messages were sent out to the participants asking if they were interested to participate in a focus group discussion relating to video games. All potential participants were also informed that their participation is voluntary, and they are free to decline the invitation. And in an event where they have accepted the invitation but needed to withdraw, they could freely do so without the need to find a replacement.

Fifteen young adults, comprising ten male and five female participants were recruited to participate in the focus group discussions. The participants were between the ages of 20 and 27, and were currently residing in the Klang Valley area. Some of the participants hail from different states such as Kedah, Melaka, Perak and Perlis who are residing in the Klang Valley to pursue their undergraduate degree. One participant is a Taiwan exchange student attached to the Game Design programme offered at UTAR.

Purposive sampling method was used to recruit the participants for this study. This method was necessary because the goal of purposive sampling is to sample cases or participants thoroughly to ensure that those sampled are relevant to the research topic (Bryman, 2012). And according to Morgan (1996), purposive sampling is widely recommended due to focus group discussion's reliance on the ability and capacity of the participants to provide relevant information. Through purposive sampling, individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest can be identified and selected (Creswell & Plano Clark, 2017).

The participants were selected mainly due to their interest and experience in playing video games (see Appendix B). According to Krueger (2014), the willingness to fully engage in a group discussion can be achieved more readily within a group that shares the same interest. It is also worth noting that some of the participants have experience in developing video games, and most of them have either obtained or are pursuing an

undergraduate degree in video game development.

3.4 Discussion Process

Three focus group discussions were conducted on the 7th, 9th and 10th of December 2018 in two separate locations. Two of the focus groups were conducted in one of Universiti Tunku Abdul Rahman's design rooms and another was conducted in the living room of one of the participants. The locations were set up in a cosy manner with snacks provided to create an environment in which the participants could discuss the topic of the research comfortably. Participants were also encouraged and reminded to speak freely as there are no right or wrong answers but rather differing opinions and points of views. The focus group discussions are recorded, with prior consents from the participants, and lasted between 98 to 144 minutes.

The 15 participants were divided into three separate groups based on their availability to attend on the given dates. The first focus group consisted of 5 participants between the ages of 21 and 23. This group of participants is nearing the end of their undergraduate studies. The second focus group consisted of 4 participants between the ages of 24 and 27, who are currently working in the game industry. The final group of 6 participants is still juniors in their respective undergraduate degree programmes and between the ages of 20 and 24. All three groups had a mixture of both male and female participants.

The questions (see Appendix C) developed for the focus group discussion included both open and close ended questions. The close ended questions are designed to provide the researcher some of the participants' basic personal information such as name and demographic. The open ended questions are concerned with the participants' general gaming experiences, playing habits, game genre preferences, decision making process when deciding to play a game, and their likes/dislike in playing video games. These questions were designed to enable the researcher to find out why the participants would play and keep playing video games.

3.5 Interview Data Presentation

Given that people in Malaysia speak in variations of standard and local English, such as Manglish¹, grammatical errors found in the excerpts and quotations taken from the interview data will be fixed to ensure a smoother academic reading. Though local expressions would be retained as it would better reflect how the respondents are using the words to express themselves.

3.6 Data Processing

Upon completion of the focus group interviews, the video recordings for each group were manually transcribed. Attributes for the competence, autonomy and relatedness needs were then developed according to the PENS model (see Appendix A) to better process the transcribed data. The

¹ Manglish is an informal form of Malaysian English with features of an English-based creole used in Malaysia. It is heavily influenced by the dominant languages of the country, Malay, Chinese languages, and Tamil.

transcriptions were then examined to identify and extract comments that fit the relevant attributes. The extracted comments were grouped according to the attributes in order to determine the frequency of each attribute in the focus group discussions (see Appendix A). Attributes with high frequency were selected for the data analysis as a larger amount of data from the focus group discussions were attached to them. The scope of the study as a Master level dissertation was also a determining factor in prioritizing the analysis of high frequency attributes.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

To understand why people play video games and keep playing them, three focus group discussions were conducted for this study. After transcribing the discussions, the data were then processed and refined using the Player Experience of Need Satisfaction (PENS) model. The data were sorted under three main themes, namely Competence, Autonomy, and Relatedness.

These themes were selected because according to PENS, when video games are able to satisfy our intrinsic needs of competence, autonomy, and relatedness, that is when video games are most engaging, fun and successful. Competence refers to our innate desire to grow our abilities and gain mastery of new situations and challenges. Autonomy reflects our innate desire to take actions out of personal volition, and not because we are “controlled” by circumstances or by others. And relatedness refers to our innate desire to have meaningful connection to others. When these intrinsic needs are satisfied, we become motivated to participate in the activities that satisfy us. But when impeded, we would be demotivated and feel our energy fading away.

Though the questions developed to drive these focus group discussions were not developed based on the PENS model (as the questions were concerned with the participants' demographic, playing habits, game genre preferences, decision making process in deciding whether to play a game or not, their likes/dislikes when playing video games, and their gaming experiences in general) the data yielded results that were in line with the PENS model's assertion of video games' strong motivational pull that keep players glued to the games that they are playing.

In the following sections, we will look at how the participants were drawn into playing video games, and what motivates them to keep playing certain games over another with the PENS model being utilised to explain and make sense of the reasoning behind their actions.

4.2 Competence

Competence is the first major component of PENS. In real life, the fulfilment of our competence needs is oftentimes a dragged out and unpredictable process. By comparison, video games are efficient in satisfying our competence needs through its capability in providing gamers with avenues to mastering challenges, and to experiencing heroic narratives.

4.2.1 Mastering Challenges

Mastering new challenges is fundamental to us as human beings as it is inherently enjoyable and it energises us (Ryan & Deci, 2007). This is evident in the focus group discussions, as the majority of the participants cited the need to get better at the video games they are playing as a reason for their motivation to keep playing.

Wilson, who has been gaming for 12 years, explains that the main reason he plays first-person shooters (FPS), such as *Counter-Strike: Global Offensive* and *Rainbow Six: Siege* competitively is because he wants to get better and increase his rank in the game. Ranking is important in these games as they serve as a signifier to the player's skill level in the game. In two separate instances, Wilson shared why he is into competitive games,

“For me, I play FPS and also JRPG². But then good JRPGs are not available on PC. So I would usually play FPS on PC instead. I think the main reason in playing FPS competitively is it keeps you wanting to be better and wanting to keep climbing up the ELO ladder”.

And when asked what aspect of his favourite game attracted him in the first place,

² JRPG is the abbreviation for Japanese role-playing games.

[Researcher] Then I would like to ask, what aspect of the game would make you enjoy playing it? Why is it your favourite game? What aspect of it that attracts you?

[Wilson] For my favourite competitive FPS game like *Rainbow Six*, it is the feeling of wanting to get better and improve myself in the game that keeps me wanting to play the game.

It is clear that the aspect of being able to compete directly with other players who are equally skilled or more adept is important as it presents Wilson with the opportunities to constantly improve through competitions. This competitive aspect is also present in multiplayer online battle arena (MOBA) games such as *Defense of the Ancients 2 (DOTA 2)*, as it also provides opportunities for players like Chris to strive to be the best. Chris even mentioned that the reason he kept replaying *DOTA 2* was because he wants to become the best *DOTA 2* player in the world, evident in the 8,000 over hours (and counting) that he has spent playing the game.

Lauren, currently 26 and who has been gaming since she was in primary (elementary) school, also enjoys playing competitive games. But she was clear in mentioning that she prefers playing skill-driven competitive games over luck-driven ones (where an outcome is random, e.g. a coin flip, a dice roll, when drawing a card, and no amount of skill or knowledge could

prevent you from losing) as it allows her to see her own improvement the more she plays. Ace, who was a participant from a different focus group, shares similar view with Lauren but would go as far as to not play a non-skill-driven game, as it is vital for him that the time and effort he spends mastering a game is properly rewarded in a way where his skill could affect and determine the outcome. He used to play a lot of massively multiplayer online role-playing games (MMORPG) but ended up quitting most of them because the games ended up becoming pay-to-win (P2W) games.

“Ya³, most of the MMORPGs I played ended up like that because it’s kinda like the business model. When there’s not enough money made, the game company would introduce pay-to-win to keep the game running a while longer. So, ya. That’s why I dropped *Tree of Savior*, and most of the MMO I dropped is because of that. Because most of these pay-to-win games, no matter how much time you spend on it, without spending money you cannot achieve the same level as the guys that are using money”.

As it wouldn’t matter how much effort and time he invests to improve his skill and character in a P2W game, he would never be able to outplay those who spend actual money in the game. As these paying players would have access to in-game items and abilities that are not available to non-paying players, providing them a significant advantage. Ace isn’t alone on this matter,

³ Ya means yes in the Malay language.

as multiple participants from his focus group share his distaste towards P2W games. Norman and Gwen, who are both currently working in the game industry, recalled why they quit playing *Maple Story* (a free-to-play MMORPG). Norman quit playing the moment the game became focused on P2W, despite investing a huge amount of time in *Maple Story* to reach level 200. Gwen, who plays and enjoys *Maple Story* as well, couldn't help but agree saying that,

“Eventually the developers change their mind, they change it, they want more money and then everything just goes downhill”.

In a separate focus group discussion, Chris recounted his experience playing *Shadowverse*, a collectible card video game, which he ended up disliking because he felt that it was unfair when he lost to his friend due to the fact that his friend spent a lot of money acquiring rare cards. Even with strategy, he was unable to outplay his friend as the rare cards provided an obvious advantage over his deck of common cards.

[Chris] I end up disliking it because I think there's an aspect of pay-to-win. I think most card games have it, but it plays a big part in *Shadowverse* la⁴.
It feels unfair when I lose to one of my friends.
Because he played the game a lot longer and then

⁴ La or Lah is a frequently used suffix in Malaysia. This simple word can mean affirmation, dismissal, exasperation or exclamation in different contexts. Many also use it as an expression after a statement as a mere emphasis.

he also bought a lot of cards. And then he got a lot of rare cards and then I lose to him.

[Researcher] There's no way for you to beat him at all? Even with strategy?

[Chris] I don't think so with my cards. Maybe I play too little, I mean I invested less time in it. So I don't get a lot of cards, that may be one of the factors but on a fair occasion, I don't think I can win.

[Harry] As long as it is pay-to-win game, it sucks. Like the newest *DOTA* franchise, *Artifact*. Basically you need to pay to get cards, the more you pay the more quality cards you will get. Then you will have a higher chance to win the game. Although the game requires strategy but at the end...

[Chris] Ya, I would not want to exclude the strategic part of the card games but I think the microtransaction is too big of a problem. It's like the best card in the game is credit cards.

[Everyone] *laughs*

Evan, a fellow participant in Chris' group and a gamer for 20 years who is pursuing his undergraduate degree in Game Design, prefers playing single player games where he could challenge himself instead, as he gets motivated playing games with a high level of difficulty where the players are expected to constantly fail before eventually overcoming the challenge

presented. He admits that he does get frustrated, but he believes that the frustration drives him to keep trying,

[Evan] For me I like action RPG games. I prefer to play games where I can challenge myself. For example, something like *Dark Souls* or *Bloodborne*, where I can kick... play the game. Where the monsters would keep killing me, so I can keep playing the game. It's like it hypes me up to play the game. So, I will play those types of games la usually.

[Researcher] But then, I would like to ask, are you saying that the monsters in the game keep beating you but then you are hype to actually go back and keep playing it?

[Evan] Ya.

[Researcher] Why?

[Evan] Well, maybe I'm a "M" [masochist] *laughs*. I mean, personally I hate to lose. So for example if the monsters keep killing me I will feel like, uh, I tak puas hati⁵. I will be like "What the f**k?" *laughs*. So, I will keep coming back to kill...

[Harry] Revenge!

[Evan] ... uh, revenge, to take revenge until I kill the monsters. So, after I kill the monsters I'll feel,

⁵ Tak puas hati is the expression of dissatisfaction in the Malay language.

“YES!!” *clenching fist* those kind of feeling
so...

[Chris] *imitating gesture*

[Evan] So, I love those kinds of feelings the game gives
me. It's like after I have defeated a boss that's
very difficult to beat. After defeating it I will feel
proud of myself like, “OH YEAH BABY!”
laughs

[Researcher] Won't you get frustrated?

[Evan] Ya, ya. I think definitely you will get frustrated
but I think what drives you is your frustration. So,
in a way your frustration drives you to play the
game, uh, so.. *laughs*

[Harry] Basically it's your man's pride la?

[Evan] Ya *laughs*

It is clear that when a game has the ability to allow the players to overcome and master challenges, they would enjoy the game more and grow fond of it. But by impeding them from overcoming and mastering challenges, or making light of their achievements, the players would end up disliking and quit playing the game altogether.

4.2.2 Heroic Narrative (Competence)

In stories told through traditional media such as books or movies, we could only enjoy the hero's exploits indirectly through our imaginations. But in video games, the heroic narrative supports in the players' minds that they are a hero and implicitly communicates a confidence that the player can overcome the challenges ahead by putting the players into heroic circumstances.

Gwen is a big fan of *Mass Effect 2*, a single player action role-playing game where the player takes the role of Commander Shepard to stop an insectoid alien race that threatens the survival of humanity. One of the main reasons for the game being her favourite is because of how the game made her feel like a total 'badass' when playing through the entire game as the protagonist, Captain Shepard.

"No, I think it's kinda like a mixture. It has really good story, you feel like a badass, because Commander Shepard is like a bloody badass, nice story with interesting characters and you are really invested in the game. And the shooting is pretty simple compared to like other games but it still has a variety of guns you could use, even though it's sci-fi but it's just a different skin. You still have like your machine guns, your sniper and there are different character classes. You can utilise different skills too but I am also not terribly sure why I like it

so much. It's just really enjoyable. I think mainly it's because you feel like a badass whenever you play through the entire game. Like ya.. Yup, yup. The story is like, uh, actually *Mass Effect 2* doesn't have multiple endings. The game has a good ending and a slightly bad ending which varies a bit. Like depending on who survives or who lives but most of the events in the game are quite linear. Like this happen, next happen and next happen. It really feels like you are being taken on this super, epic adventure. You gonna save like the bloody universe. Nobody believes you. Actually it's the same like *Warframe* *laughs* max power volt, everybody runs through the door except me. It's like ya, the feeling of feeling like a badass when you play. I think that really appeals to me”.

But when a heroic narrative is not done right in a video game, it would affect the player's experience negatively. Jane, a foreign exchange student from Taiwan that has been gaming for 16 years, mentioned that she would quit playing a game depending on how annoyed she is with the game's protagonist.

[Jane] I have never played or really played a game that allows me to customise my in-game partner. But I believe that you can normally personalise the protagonist, I mean like naming them. And I think that if I name the protagonist with my name and the character keeps doing some stupid things, I

will feel really annoyed. I will feel like that's not me.

[Researcher] But you are the one controlling the character right?

[Wade] No, no. The case where the game story is doing something that you will never do but that's like, that's my name though. *laughs*

[Jane] It's annoying but whether I will quit the game depends on how annoying it is. For example I already quit a game because the protagonist is too annoying. *laughs*

[Researcher] What game is that?

[Jane] It's a mobile game and I don't remember the name. A lot of people are playing it but I am just annoyed with the story. The story is really bad.

Contrasting experience between Gwen and Jane underlines how a well written heroic narrative would draw the player into a game, while a poorly written one would inadvertently push the player away. And at the point of the focus group discussion, Gwen had replayed *Mass Effect 2* at least 4 to 5 times.

Evan shared an interesting observation, suggesting that linear games have a better chance for the game developers to create a narrative that would have a stronger emotional impact on the player, in contrast with non-linear games.

[Evan] For me I think impact is very important. For a linear game, I think the developers will have more chances to create an impactful experience to the players as the path that the players could take is linear. But for non-linear games, it's quite difficult for the developers to do that because the players can move around freely, so maybe, it kind of breaks the players' immersion when playing the game. But for linear game, it's much more precise and the path is linear, so it's like the developer can convey what they want to convey to the players immediately. It's like, even though I only played the linear games once but maybe I can feel like WOW *exclaiming* this game is so awesome! But for non-linear games, maybe your story is awesome, I may feel that this part is awesome but because I could freely go anywhere in the game, once I discover something new elsewhere I may no longer feel the same anymore for this particular part because I lost my immersion already.

[Researcher] Can you explain a bit more on, when you said the game is giving you an impact, what do you mean by that? What sort of impact are you looking for?

[Evan] What sort of impact I am looking for is like, how do I say it...

[Kyle] Emotional

[Evan] Ya, ya. Kinda like emotional impact on the players. Because for example in a linear game right, you would feel much more emotionally connected to the character, so when you are playing linear games, you will feel like, oh this character is going through a certain process of development and you keep going through a story, in a linear way. So, it's like you keep looking at this character, how they develop and when the cutscene plays, you will feel like emotional.. maybe if the character dies, you would feel sad because you have been playing along with the character for so long. But for non-linear games, you are the character but you can do whatever you want, so you don't have that emotional attachment to the character compared to a linear game.

As the linear game structure is more contained, it would allow the developers to convey their design intention to the player immediately and pace the player's experience accordingly. This is harder to achieve with non-linear games in general because the player is able to act freely in games with such a structure making it difficult to follow the game character's heroic narrative and seeing his/her growth and development, as crafted and intended by the developers. As the player is less invested in a game character that he or she

does not care about, it becomes difficult for the player to form an emotional attachment with the game character that they are controlling. This disconnect between player and game character would prevent the game from communicating to the player that they ARE a hero that is capable of rising to the challenges ahead of them, eliminating the support for competence that is an important contributor to the player's motivation to continue playing.

As Rigby & Ryan (2011) state that by having support for competence from those around us (i.e. the heroic narrative), and to receive useful feedback on our improvement and potential (as the player progresses in the heroic narrative) would affect our motivation and well-being positively.

4.3 Autonomy

The second major component of PENS is autonomy. According to Ryan and Deci (2000), when people experience autonomy, they are happier, healthier, and more motivated. But having the freedom to do anything is not enough; we have to be able to recognize the opportunities available to us within our surroundings. It is through these meaningful choices, or opportunities for action that satisfies our autonomy needs the most.

4.3.1 Opportunities for Action

Opportunities for action are important to satisfy our need for autonomy, as they encourage the “what if” thoughts that would draw players back to the games they played. This “what if” effect is a crucial factor to determine the gamers’ interest to replay a game.

Through the focus group discussion, it is apparent that these opportunities for action are really important in motivating the participants to play and keep playing the games that they are playing, as a lack of opportunities would discourage them from replaying a game. But having an abundance of opportunities is also not a sure fire way to keep the players engaged, if the opportunities are not meaningful.

For Kyle, an undergraduate student who has been gaming for 11 years, he would not be motivated to replay a game that he has completed, even if it was great, because he already knows how the game would end,

“...the linear games you play for once, you would feel like, oh that’s it, this game is so great but then after that I wouldn’t really go back and replay it again because I already know the ending of the story”.

Wilson, who is a seasoned gamer like Kyle, echoes the latter's sentiment, as he also finds it difficult to replay games that he has completed because he knows what will happen as there are no available interesting opportunities for him to play the game any differently,

“...the freshness is not there. It's like you know what's gonna happen, so you just walk there and just let it happen. No more motivation to keep playing”.

Sam, a gamer who has been gaming since he was 4 years old, also finds the process of replaying the same game with a linear experience to be tedious as it does not offer any new experiences. This is why he enjoys playing non-linear, open world games like *Minecraft* as there are a lot of things he could do, and customise in the game. As the game world is procedurally generated every time the player moves forward, he would never run out of things to do and he could be digging, mining, building, exploring the world or even defeating a monster or two at any given moment. He exclaimed that, “As long as there are [sic] new stuff to do, I will enjoy it”.

Jane instead finds linear games to be restrictive, as the players do not have a choice to alter the game's ending if they dislike it, unlike non-linear games where she can make her own choices that would influence the narrative outcome of the game. She felt depressed with how the story of *The Last of Us* ended as the story was linear, and she did not have any opportunity to alter it. She prefers game like *Detroit: Become Human*, where the players have the

opportunities to affect the narrative that would lead to a multitude of possible endings and that motivates her to replay the game. Cassie's two favourite games, *Radiant Historia* and *Life is Strange*, also have similar decision making mechanics that would change or affect the storyline as the game progresses. This opportunity to affect how the story unfolds is vital in her fondness towards these games.

[Cassie] But my favourite is probably the one with a good storyline like *Radiant Historia* or *Life is Strange*.

[Gwen] The story is so good.

[Jane] They have this kind of decision making that maybe will change...

[Gwen] *keeps nodding in agreement*

[Jane] ...the whole storyline. Or how it will affect the story later on. That's what I actually like about these type of games.

But in certain instances, having a long list of activities to participate in is not a sure fire way of keeping the players engaged. When Harry plays, he would rush through the game and experiment as much as he could to see how far he could push the game's boundaries, as he gets bored easily. Due to this, he would typically not replay a game, unless the game has different outcomes every time he plays that is based on the choices he makes, or the plans and strategies he uses. Rigby and Ryan's (2011) opportunities for action explains that when the players are given choices over the strategies, and solutions to

overcome challenges; it encourages the “what if” thinking that pulls the players back to the game.

Sam, who has played *League of Legends (LoL)* for more than 3000 hours, thinks that *LoL* is a highly replayable game because the outcome of each match is unpredictable. The game boasts over 100 playable champions, and 170 plus items that the player could equip their champions with to battle it out against each other. With such a huge roster of playable champions and usable items, there are a myriad of combinations and strategies that the player could explore, discover and develop depending on the situation of each match. *Bloodborne* is another game that provides the players with an abundance of opportunities to discover strategies in overcoming its challenges. Evan explains how the game allows him to discover different type of playstyle through experimentation,

“Maybe the first time I play the game I am going for Dexterity build, so when I replay the game again, I will go for Strength build next. And my main weapon will be different also”.

And having the ability to experiment with different strategies to overcome obstacles is interesting to him as he could approach the same obstacle with a different method each time. Using a boss encounter he explains,

“For example you have this Boss A but you have a few ways to kill Boss A. The first time I can kill Boss A using the first method, then for the second time I can use the second method. It’s like playing the same game but in a different way”.

It is this sense of discovery that keeps him playing, as he would like to discover everything the game has to offer.

The wildly popular *Pokémon* role-playing game is another example of a game that provides ample strategic opportunities for the players to discover and use in their quest to be the very best. Chris, a gamer with 13 years of experience, has replayed the *Pokémon* game multiple times with the sole purpose of challenging the Elite Four (the toughest AI enemies that the player would encounter in the game) over and over again by using different combinations of *Pokémon*, “Maybe sometimes I will use Legendary *Pokémon* only and sometimes I will not use starter *Pokémon*. There are a lot of combinations”. As he enjoys games that require strategizing, he finds it exhilarating to defeat his opponent by countering their strategy. But despite having the choice to build the strongest and most optimised *Pokémon* team to defeat his opponents, Chris would intentionally put himself in an unfavourable position to create his own challenge within the game, “For example, this enemy mainly uses Dark *Pokémon*, and Dark is invulnerable to Psychic but I like to use Psychic *Pokémon* to defeat him”, showing the game’s capability to not only provide opportunities for action but also allowing the player to create their own.

Interestingly, having a multitude of opportunities for action could also be a downside for certain players. Typically non-linear games or open-world games are jam packed with activities that the player could freely participate in, but Wade finds that this aspect to be very time consuming if he intends to play the game in its entirety. Evan on the other hand sees a downside in non-linear games' design that allows the players to move and act freely; as he felt that the player experience would become less engaging and would affect the player's immersion, causing the player to lose interest easily and may affect the players' motivation to continue playing. He reasoned that as the developers are unable to pace the player's experience accordingly in a non-linear setting, the player might end up discovering and exhausting the interesting and exciting elements in the game earlier than planned. This is also a reason why Lauren prefers linear games as she could experience the story that the game developers have intended for the players. What she dislikes about non-linear games is that she felt pressured to make the right choices in order to avoid needing to go through repeated contents again,

“What if I make this choice but then what if I cannot go back later, and then I have to replay again to try another choice. It is time consuming and you need to play the same thing again”.

And though certain participants find linear games to be restrictive, they are also those who revealed that linear games are equally capable in drawing in players to replay them, if done right. Despite not wanting to play through repeated contents, Lauren had no problem replaying Journey, a game where

the path and ending is the same in each subsequent playthrough. There were hidden items strewn about within the game that made her feel great as she discovered and collected them. She admitted to being quite the explorer as she wants to check every nook and cranny of the game, finding Easter eggs⁶ or secret, hidden areas that she has yet to explore at her own leisure. Gwen is another participant who has replayed her favourite game, *Mass Effect 2*, multiple times despite knowing what would happen at the end of her journey in the game. She noted that this was because the experience in each subsequent playthrough can be different depending on what she decides to do,

“Like the second time, what do you want to do? Do I want to be nice to this person? Or do I want to see what happens if I choose option C? Or option B? And because I am so invested in the character and I like the characters, I WANT to see what happens when I pick the other options”.

This game also allows the player to build romantic relationships with the characters that they interact with. And as the player is free to choose who they build their romantic relationship with, Gwen mentioned that there are people who would also replay the game multiple times just to create specific save files for specific characters that they wish to build a romantic relationship with. Jane, who found linear games to be restrictive, interestingly mentioned *Undertale* (a game with a linear narrative) to be her favourite game that she has replayed three times, due to how it made her feel. Jane explains,

⁶ Easter eggs are messages, images, hidden features or surprises found in video games.

“... to get the true ending, we need 10 hours. And I played it for 3 times. And I have to admit that *Undertale* does not have much replayability because after you finish it, you just know all the jokes. And besides, I think that this game somehow stops you from replaying it, because resetting everything is like saying goodbye to your friends. But replaying it would also mean to go back and see your old friends”.

For Norman, it did not matter whether the gameplay or story is linear or non-linear. He would enjoy the game regardless, as long as it gave him a sense of control, “... having different types of approach to tackle a certain situation in the game. Like stealth or non-stealth. You have the choice to play the game however you want”. It is no surprise then that his preferred genre of games are adventure based or gameplay that centres around providing the players with options to make their own choices. *Skyrim*, Norman’s favourite game, is an open world role-playing game that fits the bill perfectly, as it is a massive world filled with quests and secrets hidden all over waiting to be discovered. As Norman explains,

“One thing I like about the game is that you can explore the whole world. And the stuff that you thought you have done before, you would realise you could approach it differently when you replay the game. Or you can discover new secrets along your playthrough. I like something like that.

“...the diversity of each gameplay you get to experience. It’s the one thing that attracts me to play the game over and over again. Just to see what else can I do? And what does the game allow me to do?”

And there is no denying the fact that he enjoys the game so much that he easily loses track of time while playing. As he explains, “Spending hours just inside some cave and then when you pull up from the computer, it’s already like, what, the next day already”.

The participants’ accounts clearly echo Rigby and Ryan’s view that though it is important to present the players with opportunities for action, it is not entirely a matter of quantity, but the quality of the opportunities for action presented to the players that matters the most in order to satisfy the players’ autonomy needs and to keep them playing.

4.4 Relatedness

Relatedness is the third major component of PENS. As humans, we would naturally seek to be connected with one another, to feel the happiness that results from it (Rigby & Ryan, 2011). Making interpersonal rejection one of the most painful psychological experiences that we could experience, a testament to how deeply important relatedness is to us (Baumeister & Leary, 1995).

Video games were stereotypically viewed as a largely solitary and isolating activity, but with each passing year video games are becoming more a social world. With its capability to instantly connect people in shared worlds, it is a unique and efficient medium to satisfy our intrinsic need for relatedness in the forms of companionship, social opportunities and competitive play.

4.4.1 Companionship & Social Opportunities

Video games facilitate companionship really well, and it also provides social opportunities to players to easily chat, collaborate, and play together within shared worlds. Allowing gamers who are physically apart with their real life friends to meet up and have fun virtually, and even for new friendships to be discovered and developed.

Nancy, a sociable gamer with 16 years under her belt, rarely plays single player games because she finds it uninteresting to be playing alone. Instead, she plays a lot of multiplayer games as it makes her happier being able to play with others.

“Uh, I prefer social games more than playing alone because I get frustrated if I am stuck in a level. The first online game, not browser game la, I played is *Maple Story* when I was 8. And I would constantly play and move from MMORPG to MMORPG. So, I know a lot of groups of friends la from

playing different MMORPGs. So, I feel happier when I play multiplayer games”.

She is even willing to pick up and learn how to play game genres that she has never played before (i.e. first-person shooters) in order to play with her friends. Due to that, she has been playing a lot of *Fortnite*, but only when her friends are playing.

“For me it’s like, multiplayer games or games with a very good story. Because if some friends recommend me to play some games I would consider it, and I’m willing to learn because to be honest like last year, *Fortnite* is my first shooting game that I’m willing to learn to play. Because I have never played any shooting game”.

She also admitted that her time spent playing games would reduce significantly if she loses the option to play with others, even if it was a game that she really likes. Even Wade from a separate focus group has similar opinion, saying that games that provide a good experience may immerse him, but he would still spend hours playing a mediocre game when he plays it with a good friend,

“Some games with good gameplay experience tend to just immerse me in the game, some that are questionable but there’s a good friend to play together with, I would also lose time in it

la”.

Nancy and Wade are not alone in saying that it is more enjoyable playing online video games with their real life friends, as Wilson has a lot of fun playing online games with his friends as they could enjoy each other’s company by talking and joking with each other while playing games,

“Even though the game is not really a good game, but then you are playing with your friend, it’s fun. Because we are chatting and joking with each other. We are just enjoying ourselves in the game”.

Dom mentioned that having a friend along would help make boring tasks in the games he plays much more bearable and fun to complete. Similarly, Gwen does not mind grindy games like *Warframe*, where the players would need to perform repetitive tasks to achieve a desired outcome, as she finds it to be really fun to play, especially with friends. For Harry, he finds that friends are an important aspect that encourages him to play as he revealed that it felt lonely and demotivating to be playing a cooperative game without a friend.

“If you don’t have friends to play with in a cooperative game, it is so lonely.

“It is so sad when you play alone, in the room and then you don’t talk to anyone. Well it’s not like it is the end of the world without friends but it feels so... not motivated to play”.

Cassie on the other hand is quite adventurous as she would play online games to meet new friends. Likewise, Sam would hop online into a multiplayer game just to socialise and talk to someone. As for Kyle, he did not mind playing with strangers online because the opportunity to play cooperatively with other players in a game series that is predominantly a single player game blew Kyle away. Even though the story of the *Assassin’s Creed* series focused on the assassin brotherhood’s struggles against the Templars, the gameplay was always focused on a single assassin’s perspective. So having the opportunity to finally play together with other players allowed Kyle to live the fantasy of being in an assassin brotherhood.

But not all players are that adventurous or comfortable in seeking social relationships through video games. When playing online games, Gwen would either play alone or with friends, but not strangers as she had a bad experience playing with strangers. But she explains that it is fine if the stranger was introduced by a friend,

“Like any online game friends that I have, they will most probably be like my friend’s friend. So they sort of have been screened”.

Interestingly, she revealed that she did eventually become friends with some other gamers she met online,

“Doing party quests in *Maple Story* is what turns me off, like on random strangers. Which is funny because I think *Maple* was probably the time when I was most active in like interacting. Almost all of my friends on *Maple* which I am surprisingly in contact with right now, I met them online. I have also met with some of them offline eventually”.

Despite providing positive experiences to many gamers, there are also instances where avenues for social opportunities are being misused. The in-game chat function that is available in most online multiplayer games is intended for the players to communicate and coordinate with each other, but in a game like *LoL*, it could get quite toxic as players would berate or trash talk each other if the team is not performing well. To deal with such toxicity, Ace would mute everyone whenever he plays the game. Even though it is counter-intuitive to do so in a multiplayer game that requires communication and coordination, Ace decided to do so, in order to keep playing a game that he enjoys a lot.

It is clear that video games are very capable in providing companionship and social opportunities that would satisfy our need for relatedness, but when these opportunities are misused, it is equally capable in creating an unpleasant experience for the players involved.

4.4.2 Competitive Play

Though it may seem that cooperative and collaborative opportunities are essential to support relatedness in order to increase the feeling of meaningful connection and companionship, the feeling of relatedness can also exist through competitive play (Rigby & Ryan, 2011). Competitive play could either enhance or thwart relatedness through constructive competition or destructive competition respectively. But the allure of competitive play is evident as gamers seek to constantly improve themselves in the games they play.

It was apparent that the participants enjoyed positive experiences while playing games competitively, as Wilson professed his love in playing competitive games because it allows him to get better and to improve himself. Lauren also mentioned that she prefers competitive games that are skill dependent, as that would allow her to see her own improvement the more she plays. Similarly, Chris likes the competitive aspect of *DOTA 2* as it gives him the opportunity to strive to be the best.

[Researcher] Some of them did point out some of the points. Is like, in your case, what makes you replay it then?
There's definitely something there right? That makes you keep replaying the game.

[Sam] It is the same like *League of Legends*, we have over 100 characters. And we have over 100 items. So, the combination possibility is very, very wide. I mean there are a lot of combinations.

[Chris] I mean, maybe Sam answered one of the factors. But because you have roles in *DOTA 2* where you can be a Carry, or Support and then I only play a particular role such as Carry. It narrows down the hero selection. So, I will play within those 10 heroes. But I never get bored with the game because, I think, there's myself pushing me, I want to become the... how to say, want to become the best, at least, in the world.

[Evan] You got big dreams boy.

[Harry] You want to become the best, say it loudly la!

[Chris] *laughs* Ya, I think it kinda pushes me to, I want to try to become the best in the game. That's why I just keep playing.

Chris would not mind playing any genre of competitive games, whether it is FPS, MOBA, or digital card games, as long as he is able to compete with others. But *DOTA 2* is definitely his go-to game with a total of 8000 hours spent, motivated by his desire to become the best in the world.

Sam, who also enjoys competitive games, elaborated that he prefers playing competitive games such as *Hearthstone*, *LoL*, *DOTA* and *CS:GO* because these games give him the opportunity to think and plan out strategies. And it is especially enjoyable seeing his strategy plays out perfectly, and defeating his opponent in the process. He even went as far as saying that he does not get a sense of achievement playing non-competitive games, stating that he would only feel joy in his achievement in competitive games.

[Sam] For me it depends on the game being competitive and e-sport worthy, and then I will play. If not, then no *laughs*

[Researcher] Why so? Maybe you want to elaborate on that.

[Sam] Because I am more interested in the strategic part. I love to plan and strategise and see the strategy play out in the game. So if the game is not, uh, e-sport or competitive worthy right, I don't find it fun. I don't get an achievement from playing that game. If I play a competitive game or e-sport games, if I achieve something from it then I feel the joy.

[Researcher] So, basically are you saying that, if the game is not competitive or e-sport worthy, you wouldn't play it at all?

[Sam] Ya, most likely I am not playing it.

Interestingly, Evan does not feel the need to overcome his opponents in competitive games, even when he loses. For Evan, the point of playing a competitive game is just to have fun with friends. Instead, he would get frustrated when he fails in a single player game and would want to keep challenging himself to overcome the challenge he faces in a non-competitive game.

“Usually, for the game that I play alone right, when I lose I will feel like very frustrated, I hate to lose but when playing competitive games I don’t really have that kind of feeling. Because I think competitive game is a game you play to...

“You play to have fun with your friends and even though you lose, you still can have fun with your friends actually. So it’s like, it’s okay. It’s just a loss, there’s nothing much for me to say la. But there are friends who have lost to you but they would keep trying to defeat you *laughs* and they won’t allow you to change character *laughs* so it’s quite difficult for me to play. But ya, for competitive games, I don’t really feel like when I lose, I need to keep playing until I win. But for single player games, I will feel frustrated, and I will want to keep trying to challenge myself”.

The focus group discussion also revealed how some of the participants enjoyed messing with their opponents in competitive games. On top of the 8000 hours that he had spent on his main *DOTA 2* account, Chris has 2 sub accounts that he would use for ‘smurfing’. Smurfing happens when high-level players create new accounts to play against low-level players, allowing the player to dominate their less experienced opponents. Evan on the other hand prefers playing with others because he feels that it is much more fun and satisfying when he is ‘trolling’ other players as it helps him to release stress. Trolling happens when a player tries to intentionally ruin the gaming experience for other players. But Evan mentioned that it did not matter whether the game is cooperative or competitive when he is trolling other players. These two instances are perfect examples of destructive competition that would diminish and hinder relatedness and other need satisfactions of the affected players.

Through the accounts of this study’s participants, it is evident that video games offer great opportunities to instantly connect and experience companionship, but these opportunities have equal chance of being a positive or negative experience depending on the types of gamers you play with, and the games that you play. And though we could not control how gamers would interact with each other when given the opportunity, Rigby and Ryan (2011) suggest that game developers could create a positive and constructive social environment to maximise relatedness through their design in how the players can interact with each other, and by emphasising rewards for positive and constructive interaction.

CHAPTER FIVE

CONCLUSION

In order to understand what motivates gamers in Malaysia to play and keep playing video games, this study utilised three focus groups consisting of a total of 15 gamers between the ages of 20 to 27 years old. Based on the collected data from the focus group discussions, we can now answer the two research questions proposed earlier in the study.

The first research question was to discover what motivates gamers in Malaysia to play video games. The findings supported the notion that gamers are very much motivated to play video games because it is excellent at satisfying their needs for competence, autonomy and relatedness. This is consistent with the findings of previous studies done by Przybylski et al. (2009), Peng et al. (2012), Pe-Than et al. (2014), and the PENS model's assertion. The participants were motivated to play video games because of their innate desire to overcome challenges to become better (competence needs), to have the opportunities to take actions on their own accord (autonomy needs), and to connect and interact with others (relatedness needs).

Some key findings from the study revealed that there are gamers who would spend over 8,000 hours playing the same game, as they strive to be the best player in the world, an indicator of how well the game is at satisfying the gamers' competence needs. Another finding revealed how a well designed game system that is capable of satisfying the gamers' autonomy needs, would motivate the gamers to replay the same game several times. As the game allows the player to make her own decisions, and each decision she makes in the game carries weight, in turn making every subsequent playthrough of the game an enjoyable and unique experience to her. The study also discovered that some gamers would go the extra mile in learning how to play games that they have never played before just so that they could play it with their friends, in order to satisfy their relatedness needs. As some gamers find happiness in being able to play with others

The second research question was to discover how video games motivate and captivate gamers in Malaysia to keep playing. Based on the participants' account, games found with any of these five attributes would often keep the players coming back for more. There are the games that provide opportunities to mastering challenges, games that tell a heroic narrative, games that provide opportunities for action, games that provide a platform for companionship and social opportunities, and games that provide competitive play.

Games like *DOTA 2*, *Counter-Strike: Global Offensive*, and *League of Legends* that provide opportunities to mastering challenges have the ability to provide the players with opportunity to compete directly with other players who are equally skilled or more adept, providing constant opportunities to improve through competition. Then there are games like *Bloodborne* and *Dark Souls*, which would provide difficult but fair challenges for the players to overcome, through their effort in honing their in-game ability and skills.

For a game like *Mass Effect 2* that tells a heroic narrative, the players would be made to feel like a badass as they traverse across the galaxy to fight genocidal aliens that are trying to wage war with the entire galaxy. Communicating to the player that they are a hero, and they have the capability to overcome insurmountable odds.

As for games that provide opportunities for action, the players are given opportunities to explore and experiment to their heart's content with things that interest them the most. *Minecraft* is one such game, allowing players to dig, mine, build, explore the world, or even defeat a monster or two at any given moment, as it gives the player the freedom to seek out and play out the activities that they enjoy the most. *Detroit: Become Human*, on the other hand, provides the players with opportunities to make decisions in the game that would affect the narrative, and would lead to a multitude of possible endings. Then there's *Pokémon*, where the battle system allows the players to experiment with any sort of strategies the players could think of through their *Pokémon* team composition. The battle system is so robust that players could

intentionally use a strategy that would put them in an unfavourable position to create their own set of challenges within the game.

Video games that provide a platform for companionship and social opportunities would typically have a multiplayer option, and can be played online. Games like *Maple Story*, *Minecraft*, *Fortnite*, and *Warframe* are some of the games that act as platforms that allow players to easily chat, collaborate, and even cooperate to slay monsters, or build cities together through the games' online multiplayer function.

For video games that provide competitive play, the players are able to play competitive modes that would pit their wits and skills against other players. Through constructive competition, the players are not only honing their own skills and improving, they are also contributing to the competence needs of their opponents, creating the type of connection that is also meaningful and supportive, which are traits of relatedness. Needless to say, competitive games like *DOTA 2*, *Fortnite*, *League of Legends*, *Hearthstone* provide competitive play.

It is apparent that when done right, video games are very competent in satisfying our intrinsic needs, in turn keeping us motivated and captivated to keep playing. But it is equally capable in demotivating us when the game is designed poorly. When a game impedes the player from overcoming and mastering challenges, or making light of their achievements, the players would end up disliking and quitting the game altogether. Similarly, the players would

not be motivated to keep playing when a game provides an abundance of opportunities for action that is purposeless. As it is not entirely a matter of quantity, but the quality of the opportunities for action presented to the players that matters the most, in order to satisfy the players' autonomy needs and to keep them playing. And social opportunities meant for the players to communicate, to collaborate, or to compete constructively with each other, could easily be misused to create an unpleasant experience to the players involved.

By studying what makes the gamers tick, it would allow us to have a deeper understanding of why people play video games in the first place, and keep playing after they have saved the world for the umpteenth time. And instead of implicitly categorising video games as superficial entertainment, perhaps we should start trying to understand the context of what makes video games fun.

5.1 Research Limitations

To keep within the scope of the Master (by Mixed Mode), all three focus group discussions were conducted once. It is said that one cannot exhaustively discuss a topic by conducting a single group discussion (Nyumba, Wilson, Derrick & Mukherjee, 2017). And according to the principle of theoretical saturation, focus group discussion should be conducted until a clear pattern emerges and subsequent groups produce no new information (Krueger, 2014). Despite that, the collected data from the

three focus group discussions with a total of 15 participants did manage to yield repeated themes and patterns that inform the data analysis process.

Interviewing also has its limitations (Marshall & Rossman, 2011). During the focus group discussion, there were instances where certain participants were unable to find the words to convey their thoughts clearly. Certain questions could also be worded more simply to avoid confusing some of the participants and hindering them from confidently sharing their thoughts. For example, “What aspect of the game that you like or enjoy most?” could have been worded as “What do you enjoy most about the game?”

And as this study was focused on gamers in general, the possibility of age, gender, and/or culture being factors that may or may not have affected the participants’ motivation to play and keep playing video games were not considered. The age range of the participants (20 – 27 years) could also have been a limiting factor to this study, as there are gamers that are either below or above the age range.

5.2 Recommendations for Future Research

This study can be further expanded in the future by putting more focus on the gamers’ different generational background. Such a study may yield distinct responses as gamers from different generations (Millennial, Generation Z, Gen Alpha) would have differing values, expectations and behaviours in regards to their motivation to play, and keep playing video

games. An experimental study could also be conducted to examine how a group of diverse participants' needs satisfaction would be affected when playing the same game. The study could either utilize commercially released video games or a game developed specifically for the study, where features that support competence, autonomy or relatedness needs could be manipulated by the researcher.

5.3 Research Implications

This study aims to fill the gap in the lack of video game related research focusing on the Malaysian population, specifically in trying to understand why people play and enjoy video games. Though it is normal for those who play video games to say that it is a fun activity, this study has shown there is more to it than just being fun, as gamers are motivated to play to satisfy their intrinsic needs for competence, autonomy and relatedness.

Game developers could also use the knowledge generated from this study as a basis to inform their design decisions to develop video games that would provide meaningful and engaging experiences to their player base.

Further research is definitely needed to build upon this initial study as video games continue to evolve, and more people are starting to play video games.

REFERENCES

- Ahoy. (2013, September 16). *A brief history of video games* [Video file]. Retrieved from <https://www.youtube.com/watch?v=GoyGlyrYb9c>
- Adachi, P. J. & Willoughby, T. (2013). More than just fun and games: The longitudinal relationships between strategic video games, self-reported problem solving skills, and academic grades. *Journal of Youth and Adolescence, 42*, 1041-1052.
- Anderson, C. & Ford, C. (1986). Affect of the game player: Short-term effects of highly and mildly aggressive video games. *Personality and Social Psychology Bulletin, 12*(4), 390-402.
- Anderson, C. & Dill, K. (2000). Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. *Journal of Personality and Social Psychology, 78*(4), 772-790.
- Anderson, C. & Bushman, B. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science, 12*(5), 353-359.
- Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., Rothstein, H. R. & Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in eastern and western countries: A meta-analytic review. *Psychological Bulletin, 136*(2), 151-173.

- Azman, N. H. (2022, February 14). Malaysia's population stands at 32.4m. Retrieved from <https://themalaysianreserve.com/2022/02/14/malaysias-population-stands-at-32-4m/>
- Bartle, R. A. (2004). *Designing virtual worlds*. Berkeley, CA: New Riders
- Barton, M. & Loguidice, B. (2009). The history of Pong: Avoid missing game to start industry. Retrieved from https://www.gamasutra.com/view/feature/132293/the_history_of_pong_avoid_missing.php
- Baumeister, R. & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Bavelier, D., Achtman, R. L., Mani, M., & Föcker, J. (2012). Neural bases of selective attention in action video game players. *Vision Research*, 61, 132–143. doi:10.1016/j.visres.2011.08.007
- Bavelier, D., Green, C. S., Pouget, A. & Schrater, P. (2012). Brain plasticity through the life span: learning to learn and action video games. *Annual Review of Neuroscience*, 35(1), 391-416.
- Bioware. (2007). *Mass Effect* [Xbox 360]. Retrieved from <http://www.bioware.com/en/games/#mass-effect>

- Brandom, R. (2013). 'Spacewar!' the story of the world's first digital video game. Retrieved from <https://www.theverge.com/2013/2/4/3949524/the-story-of-the-worlds-first-digital-video-game>
- Bryman, A. (2012). *Social research method* (4th ed.). Oxford: Oxford University Press.
- Brookhaven National Laboratory. (n.d.). The first video game? Retrieved from <https://www.bnl.gov/about/history/firstvideo.php>
- Bushman, B. J., & Gibson, B. (2010). Violent video game cause an increase in aggression long after the game has been turned off. *Social Psychological and Personality Science*, 2(1), 29-32. <https://doi.org/10.1177/1948550610379506>
- Cassie. (n.d.). The average gamer: How the demographics have shifted. Retrieved from <https://www.gamesparks.com/blog/the-average-gamer-how-the-demographics-have-shifted/>
- CD Projekt RED. (2007). *The Witcher* [Microsoft Windows]. Retrieved from <http://thewitcher.com/en/witcher1/>
- Cherry, K. (2022, May 23). Extrinsic vs intrinsic motivation: What's the difference? Retrieved from <https://www.verywellmind.com/differences-between-extrinsic-and-intrinsic-motivation-2795384>

- Cherry, K. (2022, August 10). What is motivation? The driving force behind human actions. Retrieved from <https://www.verywellmind.com/what-is-motivation-2795378>
- Colzato, L. S., van Leeuwen, P. J. A., van den Wildenberg, W. P. M. & Hommel, B. (2010). Doom'd to switch: superior cognitive flexibility in players of first person shooter games. *Frontiers in Psychology, 1*, 8.
- Creswell, J. W. & Plano Clark, V. L. (2017). *Designing and conducting mixed method research* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Cunningham, A. (2013). The NES turns 30: How it began, worked, and saved an industry. Retrieved from <https://arstechnica.com/gaming/2013/07/time-to-feel-old-inside-the-nes-on-its-30th-birthday/>
- Deci, E. & Ryan, R. M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. NY: Plenum Press
- DeLisi, M., Vaughn, M. G., Gentile, D. A., Anderson, C. A. & Shook, J. J. (2012). Violent video games, delinquency, and youth violence: New evidence. *Youth Violence and Juvenile Justice, 11*(2), 132-142.
- Department of Statistics Malaysia. (2022, July 29). Current population estimates, Malaysia, 2022. Retrieved https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=155&bul_id=dTZXanV6UUdyUEQ0SHNWVhpSXNMUT09&menu_id=L0pheU43NWJwRWVSZklWdzQ4TlhUUT09

Department of Statistics Malaysia. (2022, May 13). Malaysia economic performance 2021. Retrieved https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=153&bul_id=UWFBZkhFZDBhanN5ZEUXRS96T2VRdz09&menu_id=TE5CRUZCblh4ZTZMODZlBmk2aWRRQT09

Digital Content Creators Challenge. (2020). Retrieved from <https://mdec.my/digital-economy-initiatives/for-the-industry/entrepreneurs/digital-creative-content/digital-content-creators-challenge/>

Elliott, R. (2020, January 30). Insights into Malaysia's games market and its gamers. Retrieved from <https://newzoo.com/insights/articles/insights-into-malysias-games-market-and-its-gamers/>

Engelhardt, C. R., Bartholow, B. D., Kerr, G. T., & Bushman, B. J. (2011). This is your brain on violent video games: Neural desensitization to violence predicts increased aggression following violent video game exposure. *Journal of Experimental Social Psychology*, 47(5), 1033-1036. <https://doi.org/10.1016/j.jesp.2011.03.027>

Entertainment Software Association. (2019). 2019 essential facts about the computer and video game industry. Retrieved from <https://www.theesa.com/esa-research/2019-essential-facts-about-the-computer-and-video-game-industry/>

- Ewoldsen, D. R., Eno, C. A., Okdie, B. M., Velez, J. A., Guadagno, R. E. & DeCoster, J. (2012). Effect of playing violent video games cooperatively or competitively on subsequent cooperative behavior. *Cyberpsychology, Behavior, and Social Networking, 15*, 277-280.
- Ferguson, C. J. & Garza, A. (2011). Call of (civic) duty: Action games and civic behavior in a large sample of youth. *Computers in Human Behavior, 27*, 770-775.
- Ferguson, C. J. & Olson, C. K. (2013). Friends, fun, frustration and fantasy: Child motivations for video game play. *Motivation and Emotion, 37*, 154-164.
- Fernandes, G. (2019, November 12). Games market trends and publishers to watch in Southeast Asia: The world's fastest-growing mobile games market. Retrieved from <https://newzoo.com/insights/articles/games-market-trends-and-publishers-to-watch-in-southeast-asia-the-worlds-fastest-growing-mobile-games-market/>
- Fraser, A. M., Padilla-Walker, L. M., Coyne, S. M., Nelson, L. J., & Stockdale, L. A. (2012). Associations between violent video gaming, empathic concern, and prosocial behavior toward strangers, friends, and family members. *Journal of Youth and Adolescence, 41*(5), 636-649.
- From Software. (2019). *Sekiro: Shadows Die Twice* [PlayStation 4]. Retrieved from <https://www.sekirothegame.com/>

- Gabbiadini, A., Riva, P., Andrighetto, L., Volpato, C. & Bushman, B. J. (2013). Interactive effect of moral disengagement and violent video games on self-control, cheating, and aggression. *Social Psychological and Personality Science*, 5(4), 451-458.
- Gibson, J. E. (2012). Interviews and focus groups with children: Methods that match children's developing competencies. *Journal of Family Theory & Review*, 4(2), 148-159.
- Green, C. S., Pouget, A. & Bavelier, D. (2010). Improved probabilistic inference as a general learning mechanism with action video games. *Current Biology*, 20(17), 1573-1579.
- Green, C. S., & Bavelier, D. (2012). Learning, attentional control, and action video games. *Current Biology*, 22, 197–206.
- Guerilla Games. (2017). *Horizon Zero Dawn* [PlayStation 4]. Retrieved from <https://www.guerrilla-games.com/play/horizon>
- Hartmann, T. & Vorderer, P. (2010). It's okay to shoot a character: Moral disengagement in violent video games. *Journal of Communication*, 60(1), 94-119.
- Heary, C. M. & Hennessy, E. (2002). The use of focus group interviews in pediatric health care research. *Journal of Pediatric Psychology*, 27, 47-57.

- Hirschmann, R. (2020, March). Share of online gamers in Malaysia in 2020, by age group. Retrieved from <https://www.statista.com/statistics/1117575/malaysia-age-breakdown-of-online-gamers/>
- Ho, J. (2017, January 19). What are freemium games? Retrieved from http://www.manoanow.org/kaleo/features/what-are-freemium-games/article_6f98eb0c-dea7-11e6-aa41-47566408a03c.html
- InnerSloth. (2018). *Among Us* [Mobile application software]. Retrieved from <http://www.innersloth.com/gameAmongUs.php>
- Ion Storm. (2000). *Deus Ex* [Microsoft Windows]. Retrieved from <https://www.mobygames.com/company/ion-storm-lp>
- Irrational Games. (2007). *Bioshock* [PlayStation 3]. Retrieved from <https://irrationalgames.ghoststorygames.com/studio/projects/bioshock/>
- Jackson, L. A., Witt, E. A., Games, A. I., Fitzgerald, H. E., von Eye, A., & Zhao, Y. (2012). Information technology use and creativity: Findings from the Children and Technology Project. *Computers in Human Behavior*, 28, 370–376. doi:10.1016/j.chb.2011.10.006
- Jayanth, M. (2014). 52% of gamers are women – but the industry doesn't know it. Retrieved from <https://www.gamesparks.com/blog/the-average-gamer-how-the-demographics-have-shifted/>

- Kamenetz, A. (2013). Why video games succeed where the movie and music industries fail. Retrieved from <https://www.fastcompany.com/3021008/why-video-games-succeed-where-the-movie-and-music-industries-fail>
- King. (2012). *Candy Crush Saga* [Mobile application software]. Retrieved from <https://king.com/game/candycrush>
- King, D. L., & Delfabbro, P. H. (2020). Video game addiction. In C. A. Essau & P. H. Delfabbro (Eds.), *Adolescent Addiction* (pp.185-213). Academic Press. <https://doi.org/10.1016/B978-0-12-818626-8.00007-4>
- Konami. (2001). *Metal Gear Solid 2* [PlayStation 2]. Retrieved from <https://www.konami.com/games/eu/en/products/mgs2/>
- Krueger, R. A. (2014). *Focus groups: A practical guide for applied research* (5th ed.). Thousand Oaks, CA: Sage Publications.
- Latif, R. A. (2007) Understanding Malaysian students as gamers: experience. *Proceedings of the 2nd international conference on Digital interactive media in entertainment and arts*, 137-141.
- Lenovo. (2020). What is a smartphone? Retrieved from <https://www.lenovo.com/my/en/faqs/pc-life-faqs/what-is-a-smartphone/>
- Level UP KL. (2020). Retrieved from <https://levelupkl.com/business/>

- Lofgren, K. (2017). 2017 video game trends and statistics – who’s playing what and why? Retrieved from <https://www.bigfishgames.com/blog/2017-video-game-trends-and-statistics-whos-playing-what-and-why/>
- Marshall, C & Rossman, G. B. (2011). *Designing qualitative research* (6th ed.). Thousand Oaks, CA: Sage.
- Mäyrä, F. (2008). *An Introduction to Game Studies*. SAGE Publications Ltd.
- McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. New York, NY: Penguin Press.
- Moonton. (2016). *Mobile Legends* [Mobile application software]. Retrieved from <https://m.mobilelegends.com/en>
- Morgan, D. L. (1996). *Focus group as qualitative research*. Newbury Park, CA: Sage Publications.
- Morgan, D. L. (2021, August 27). Robert Merton and the history of focus groups: Standing on the shoulders of a giant? *The American Sociologist*. <https://doi.org/10.1007/s12108-021-09500-5>
- Naughty Dog. (2013). *The Last of Us* [PlayStation 3]. Retrieved from https://www.naughtydog.com/games/the_last_of_us
- Neves, P. (2018, June 1). Looking at player motivation models. Retrieved from <https://medium.com/@pauladneves/looking-at-player-motivation-models-a80f18cd90f9>

- Newzoo. (2017, June 1). The Malaysian gamer. *Newzoo*. Retrieved from <https://newzoo.com/insights/infographics/the-malaysian-gamer-2017/>
- Niantic. (2016). *Pokémon GO* [Mobile application software]. Retrieved from <https://pokemongolive.com/en/>
- Nintendo. (1996). *Super Mario 64* [Nintendo 64]. Retrieved from <https://www.nintendo.com/games/detail/super-mario-64-wii-u>
- Nintendo. (2006). *Wii Sports* [Nintendo Wii]. Retrieved from <https://www.nintendo.com/games/detail/1OTtO06SP7M52gi5m8pD6CnahbW8CzxE>
- Nunez, S. (2020, August 7). Your phone is now more powerful than your PC. Retrieved from <https://insights.samsung.com/2020/08/07/your-phone-is-now-more-powerful-than-your-pc-2/>
- Nyumba, T. O., Wilson, K., Derrick, C. J. & Mukherjee, N. (2017). The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods in Ecology and Evolution*, 9, 20-32.
- PC Gamer. (2020). Cheap gaming PC deals this week. Retrieved from <https://www.pcgamer.com/best-cheap-gaming-pc/>
- Pe-Than, E. P. P., Goh, D. H.-L. & Lee, C. S. (2014). Making work fun: Investigating antecedents of perceived enjoyment in human computation games for information sharing. *Computers in Human Behavior*, 39, 88-99.

- Peng, W., Lin, L. H., Pfeiffer, K. A. & Winn, B. (2012). Need satisfaction supportive game features as motivational determinants: An experimental study of a self-determination theory guided exergame. *Media Psychology, 15*(2), 175-196.
- Przybylski, A. K., Ryan, R. M. & Rigby, C. S. (2009). The motivating role of violence in video games. *Personality and Social Psychology Bulletin, 35*(2), 243-259.
- PUBG Corporation. (2018). *PUBG Mobile* [Mobile application software]. Retrieved from <https://www.pubgmobile.com/en/event/payload/>
- Rigby, S & Ryan, R. M. (2011). *Glued to Games: How Video Games Draw Us In and Hold Us Spellbound*. Santa Barbara, CA: Praeger.
- Rockstar Games. (2001). *Grand Theft Auto III* [PlayStation 2]. Retrieved from <https://www.rockstargames.com/games/grandtheftauto3>
- Rovio Entertainment. (2015). *Angry Birds 2* [Mobile application software]. Retrieved from <https://www.angrybirds.com/games/angry-birds-2/>
- Ryan, J. (2020, September 16). PlayStation 5 launches in November, starting at \$399 for PS5 digital edition and \$499 for PS5 with ultra hd blu-ray disc drive. Retrieved from <https://blog.playstation.com/2020/09/16/playstation-5-launches-in-november-starting-at-399-for-ps5-digital-edition-and-499-for-ps5-with-ultra-hd-blu-ray-disc-drive/>

- Ryan, R. M. & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Ryan, R. M. & Deci, E. L. (2007). Introduction: Active human nature: Self-determination theory and the promotion and maintenance of sport, exercise, and health. In N. L. D. Chatzisarantis & M. Hagger (Eds.), *Intrinsic Motivation and Self-Determination in Exercise and Sport* (pp. 1-20). Champaign, IL: Human Kinetics.
- Ryan, R. M., Rigby, C. S. & Przybylski, A. K. (2006). The motivational pull of video games: A self-determination theory approach. *Motivation and Emotion*, 30(4), 344-360.
- Santa Monica Studio. (2018). *God of War* [PlayStation 4]. Retrieved from <https://godofwar.playstation.com/>
- Sardone, N., Devlin-Scherer, R. & Martinelli, J. (2008). Game-based instruction in a college classroom. In T. T. Kidd & H. Song (Eds.), *Handbook of Research on Instructional Systems and Technology* (pp. 463-475). IGI Global. <https://doi.org/10.4018/978-1-59904-865-9>
- Siyez, D. M. & Baran, B. (2017). Determining reactive and proactive aggression and empathy levels of middle school students regarding their video game preferences. *Computers in Human Behavior*, 72, 286-295.
- Smith, J. M. (1972). *Interviewing in market and social research*. London, UK: Routledge & K. Paul.

Spencer, P. (2020, September 9). Xbox Series S and Xbox Series X launch November 10, starting at \$24.99 a month with Xbox game pass ultimate and EA play. Retrieved from <https://news.xbox.com/en-us/2020/09/09/xbox-series-x-and-xbox-series-s-launching-november-10/#:~:text=In%20addition%20to%20the%20traditional,more%20to%20come%20in%202021.>

Statista. (2022). Number of smartphone users worldwide from 2016 to 2027 (in millions). Retrieved from <https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>

Supercell. (2016). *Clash Royale* [Mobile application software]. Retrieved from <https://supercell.com/en/games/clashroyale/>

Sweetser, P. & Wyeth, P. (2005). GameFlow: A model for evaluating player enjoyment in games. *Computers in Entertainment*, 3(3).

Takeuchi, L. M., & Vaala, S. (2014). Level up learning: A national survey on teaching with digital games. New York: The Joan Ganz Cooney Center at Sesame Workshop.

Tan, J.Y. (2019, November 23). The most interesting games of the SEA Games Awards 2019. *Digital News Asia*. Retrieved from <https://www.digitalnewsasia.com>

The Pokémon Company International. (1997). *Pokémon* [GameBoy]. Retrieved from <https://www.pokemon.com/us/>

The Star. (2019, November 7). Level Up KL: Videogame developer Larian Studios to open office in Malaysia. *The Star*. Retrieved from <https://www.thestar.com.my/>

The Star. (2019, November 8). Sony Interactive Entertainment WWS to set up studio in Malaysia. *The Star*. Retrieved from <https://www.thestar.com.my/>

Valve. (1998). *Half-Life* [Microsoft Windows]. Retrieved from <http://www.valvesoftware.com/games/backcatalog.html>

Valve. (2004). *Half-Life 2* [Microsoft Windows]. Retrieved from <http://www.valvesoftware.com/games/hl2.html>

Valve. (2007). *Portal* [Microsoft Windows]. Retrieved from <http://www.valvesoftware.com/games/portal.html>

Ventura, M., Shute, V. & Zhao, W. (2013). The relationship between video game use and performance-based measure of persistence. *Computer & Education*, 60, 52-58. Weinstein, A. M. (2010). Computer and video game addiction - A comparison between game users and non-game users. *The American Journal of Drug and Alcohol Abuse*, 36(5), 268-276. <https://doi.org/10.3109/00952990.2010.491879>

Weustink, J. (2020, July 3). Gaming in Southeast Asia: The playing, spending & viewing behavior of a fast-growing games market. Retrieved from <https://newzoo.com/insights/articles/southeast-asia-games-market-esports-game-streaming-spending-playing-engagement/>

Whitehead, T. (2015). Mario history: Super Mario bros. – 1985. Retrieved from http://www.nintendolife.com/news/2015/08/mario_history_super_mario_bros_-_1985

Wijman, T. (2022, July 26). The games market will show strong resilience in 2022, growing by 2.1% to reach \$196.8 billion. Retrieved from <https://newzoo.com/insights/articles/the-games-market-will-show-strong-resilience-in-2022>

APPENDICES

Appendix A

Competence Needs			
Attribute	Included in Analysis	Frequency in Data	%
Mastering Challenges	Yes	44	46.8%
Heroic Narrative	Yes	21	22.3%
Clear Goal	No	10	10.6%
Control Mastery	No	10	10.6%
Optimal Challenge	No	9	9.6%
Total		94	100%

Competence Needs - Attributes and Frequency in Data

Autonomy Needs			
Attribute	Included in Analysis	Frequency in Data	%
Opportunities for Action	Yes	94	71.2%
Activity	No	15	11.4%
Volitional Engagement	No	14	10.6%
Identity	No	6	4.5%
Freedom from Constraint	No	3	2.3%
Total		132	100%

Autonomy Needs - Attributes and Frequency in Data

Relatedness Needs			
Attribute	Included in Analysis	Frequency in Data	%
Companionship	Yes	40	32.8%
Competitive Play	Yes	30	24.6%
Social Opportunities	Yes	30	24.6%
Social World	No	15	12.3%
Moment of Relevance	No	7	5.7%
Total		122	100%

Relatedness Needs - Attributes and Frequency in Data

Appendix B

Name	Age	Years Gaming	Preferred Game Platform
Ace	24	19	PC & Mobile
Chris	21	13	PC
Daniel	22	12	PC & Mobile
Evan	24	20	Console
Harry	20	12	PC
Kyle	22	11	PC
Norman	25	18	PC
Sam	21	17	PC
Wade	23	11	PC
Wilson	23	12	Console & PC

Male Respondents' Demographic Detail

Name	Age	Years Gaming	Preferred Platform
Cassie	27	20	PC & Handheld Console
Gwen	25	13	Console & Mobile
Jane	21	15	PC & Mobile
Lauren	22	15	Console & Mobile
Nancy	20	16	PC

Female Respondents' Demographic Details

Appendix C

Focus Group Questions

Section 1 – Demographic

1. What is your name?
2. Where are you from?
3. How old are you?

Section 2 – Play habits and preference

4. How long have you been playing video games?
5. On what platform do you usually play on?
6. How is your gaming habit like? When do you usually play? How often do you play?
7. Do you play alone or with others? Which do you prefer? Why?
8. Do you have any preference between linear or non-linear games? Why?
9. How do you usually decide whether to play or not to play a game?

Section 3 – Likes

10. What type of games do you usually play?
11. Do you have a favourite game? Could you explain about the game briefly?
12. How much time do you spend playing the game? (If not much, why not?)
13. When you have completed the game, do you replay it? (Why or why not?)
14. What aspect of the game that you like or enjoy most? Why is it important to you?

15. How would it affect your experience if that aspect was removed?

Could you elaborate on it?

16. Do you think other games would benefit from this particular aspect that you enjoy?

Section 4 – Dislikes

17. Have you played any games that you end up disliking?

18. Could you elaborate what aspect of the game made you dislike it?

19. What could be done to improve the game then? (If nothing could be done, why not?)