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Motivation To Play Esports: Case of League of Legends

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MOTIVATION TO PLAY ESPORTS: CASE OF LEAGUE OF LEGENDS

by

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ABSTRACT

The population of playing electronic sports has increased recently, and the most popular one is League of Legends (LoL). As a multiplayer online battle arena video game, it's not only a game, but also a competitive electronic sport. The purpose of this study was to assess the motivations of playing League of Legends and to relate them by genders, age groups and frequency groups. The final sample comprised 111 LoL players. The study categorized 12 items into three factors: achievement, socialization and immersion. Results indicated that achievement factors were stronger motives for men than women. For different age groups, there was no significant difference on socialization factors. The immersion factors for players who spent different times on LoL were not very influential.

TABLE OF CONTENTS

ABSTRACT.....	iii
LIST OF TABLES.....	vi
CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: LITERATURE REVIEW.....	4
2.1 Introduction of electronic sports.....	4
2.2 Introduction of League of Legends.....	6
2.3 Three types of League of Legends' players.....	7
2.4 The motivation difference among genders, different age groups and time Length.....	9
CHAPTER 3: METHOD.....	13
3.1 Participants.....	13
3.2 Procedure.....	13
3.3 Measures.....	14
CHAPTER 4: RESULTS.....	16
4.1 Descriptive statistics and reliabilities.....	16
4.2 Factor analysis.....	17
4.3 Hypotheses testing.....	17

CHAPTER 5 DISCUSSION.....	29
5.1 Overview of findings.....	29
5.2 Support for hypotheses.....	29
5.3 Lack of support for hypothesis.....	31
5.4 Implications of the study.....	31
CHAPTER 6 LIMITATIONS.....	35
REFERENCES.....	36

LIST OF TABLES

Table 3.1 Descriptive statistics of the education level of participants.....	15
Table 4.1 Demographic profile of participants.....	19
Table 4.2 Descriptive Statistics and Cronbach's Alphas.....	20
Table 4.3 KMO and Bartlett's Test.....	20
Table 4.4 Correlation Matrix.....	21
Table 4.5 12 items factor analysis.....	22
Table 4.6 T test on motivations by gender.....	23
Table 4.7 One-way ANOVA on motivations by age group.....	24
Table 4.8 One-way ANOVA among different age groups.....	25
Table 4.9 one-way ANOVA on motivations by frequency.....	26
Table 4.10 T test on motivation by players who spent 0-15 hours and players who spent 16 or more hours per week.....	27
Table 4.11 One-way ANOVA among different frequency groups.....	27
Table 4.12 T test on motivations by gender among 18-24 years old players.....	28

CHAPTER 1

INTRODUCTION

League of Legends has rapidly grown to become one of the largest online multiplayer games with a massive eSports scene that matches or exceeds that of traditional sports such as Basketball or Baseball (Agha, 2015). In 2015, there were 334 million viewers of the League of Legends World Championships (Magus, 2015). The champion team received one million dollars, which is half of the total prize. For the League of Legends 2016 World Championship, the prize pool was \$5,070,000.00, and the winning team received 40% of the prize. From the reports Riot Games released in 2014, there were 27 million people playing the game daily.

League of Legends was developed and published by Riot Games. It is a multiplayer online battle arena video game. It is not only a game, but also a competitive sport because it needs strategies and teamwork. People like to spend time playing the game with friends, which helps their relationships to be stronger, and they can enjoy the happiness when winning the game. Usually, there will be five positions that you can take, and different positions have different jobs to do. There are 133 champions in the League of Legends, and those champions' abilities will be updated and will be different from season to season. Players experience different champions and find their favorite and most adept one. They

explore the maximum use of the champion. Some champions can shoot further (marksman), some attack with magic, some have a lot of health (tank), which means they can take a higher amount of damage. For the last 5 years, League of Legends has developed so well that players around the world have created clubs and teams dedicated to playing the game competitively. With a large player base and high viewership, League of Legends has the most visible and notable scene of professional Esport players (Brandon Agha, 2015). There are 11 servers from all over the world, such as Korea, Europe, and North America. Take the 2016 League of Legends World Championship as an example: there were 16 teams chosen from 5 regional events and two international wildcard qualifications. The 2016 World Championship started with the Group Stage in San Francisco, then moved to the Quarterfinals in Chicago, and after that, the Semifinals held in New York City. For the epic conclusion of Worlds 2016, the final game was held at the Staples Center in Los Angeles to crown the new World Champion.

The growth of the Internet and information technology (IT) has accelerated the popularity of interactive digital communications, and in turn, has boosted Esports consumption. Consequently, multimedia outlets cover more Esports games and potential investors have paid more attention to this market segment as a growing sponsorship opportunity. Global companies such as Samsung and Microsoft have been sponsoring the World Cyber Games at event and team levels (Tyler Louis Snaveley, 2014). For example, the second place team of the League of Legends 2016 world championship, SSG (Samsung Galaxy), the team was sponsored by Samsung.

Young people spend more time online than on television. Not only traditional sports will attract their attention, but also Esports. Watching League of Legends live streams has become more popular recently. Professional players and game casters spend time on playing the game for audiences to watch. A good broadcaster always helps audiences to enjoy more about watching the game and makes people feel that they are at the scene. Some good players with funny and entertaining personalities have started to live stream their games. People like to watch those videos because it can teach them some control tips to play the game, and make them happy.

What makes players interested in starting playing League of Legends is worth researching. As an ESport, League of Legends has a large player base around the world. What motivates them to play the game? What makes players want to stay and play the same game for so many years? I played League of Legends for 3 years, and many of the people who played with me played for at least 5 years. We still have goals to achieve during the game. We are not professional players, but we enjoy the experience of being teammates.

The aim of this thesis is to study the motivations of League of Legends players and see how this information can help to develop the future of the Esports industry. Most Esports players are aged from 18 to 25. They are the future of the world, and studying what they like enables us to get to know and provide for the needs of the future Esports market.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction of electronic sports

Esports (also known as electronic sports, eSports, e-sports, competitive (video) gaming, professional gaming, or pro gaming) is a form of competition that is facilitated by electronic systems, particularly video games; the input of players and teams as well as the output of the Esports system are mediated by human-computer interfaces (Hamari & Sjöblom, 2016). The most common video game genres associated with Esports are real-time strategy, fighting, first-person shooter (FPS), and multiplayer online battle arena (MOBA). Esports is defined as “recreational activity involving competition using mental and physical abilities in a virtual online environment similar to the reality” and includes “various competitions and leagues involving network games” by Korea e-Sports Association (Lee, An, & Lee, 2014).

The origin of Esports relies heavily on the launching of the worldwide web (www) in 1989, and on the early 1990s software and hardware technologies with network and multiplayer functions. The history of Esports began in the early 1990s, and it became increasingly popular during this decade, the number of players growing considerably (Jonasson & Thiborg, 2010). The history of Esports growth from the 1980s into the 21st

century had proven an opportunity for competition organization to exist. However, the industry lacked a legitimate event organizer capable of sustaining mass participation and competition (Snaveley, 2014).

Unlike traditional sports such as hockey, baseball, and soccer, Esports is an interconnection of multiple platforms, combining computing, gaming, media into one as a sports event (Jin, 2010). Esports providers such as the Electronic Sports League, the National Gaming League, and the European Xtreme Gamers host Esports platforms. They organize and occasionally also broadcast Esports events.

Recent studies have found positive effects, on children and adults playing computer games, such as spatial skills, reaction time, family relationships, parental obedience, social networking, school performance and abstinence from drinking alcohol and using drugs (Jonasson & Thiborg, 2010). Esports have evolved into a highly social, highly publicized activity. Global contests such as the 'Major League Gaming' series in the United States feature thousands of people coming together from all over the world to socialize, observe and play professional games. The four main marketing points that apply to Esports and many other mediums are escapism, education, aesthetic and entertainment (Seo, 2013).

There are a lot of similarities between sports and Esports. They both provide heated entertainment to the audience viewing the game, as they are both competitive environments that provide displays of skill and prowess and are designed in a very similar way (Michaluk, 2012). Therefore, the development of Esports in the future could

refer back to that of the sports industry.

2.2 Introduction of League of Legends

League of Legends is a multiplayer online video game, which was released by Riot Games in 2009. Riot Games uses a freemium model for League of Legends where players can download and play the game for free while there are champions and items that you can purchase with both in-game currency (Inuence Points) and real currency (converted into \Riot Points") (Lee & Ramler, 2015).

It is a team-based game, where the teams fight against each other to destroy the opponent's base. The most popular game mode has 5 players on a team and the teams compete on a map called Summoners Rift. Each player has a position in the game. The available positions are top, jungle, mid, adc, and support. This can be thought in similar terms to positions in basketball with point guard, shooting guard, power forward, center, and small forward.

League of Legends' genre characteristics are a mix of real-time strategy, tower defense, and computer roleplaying game (Walbridge, 2008). It is described as a competitive game set in an imaginative world where players take the role of a "powerful Summoner" to call and control "brave Champions into battle" (GEForce, 2015). NPC armies march down three lanes from one enemy base to another, and the ten human players must "push" these army lines forward through opponents and their defensive towers. Players, who are grouped together from a pool of many millions, must coordinate strategies, tactical maneuvers, reconnaissance missions, itemization synergies, and

resource sharing amongst each other. Matches typically last over 40 minutes, but a game that is going poorly for one team at the 20-minute mark may be abandoned with a majority “surrender” vote (casually referred to by players as “GG” or “good game”) (Ferrari, 2013).

The biggest game event of League of Legends is the World Championship. Fans’ response to the 2015 World Championship broke records, there was an all-time high of 360 million hours of live Esports viewed, nearly doubling 2014’s total hours viewed of 194 million. For the final between SKT and Koo Tigers in Berlin’s Mercedes-Benz Arena, peak concurrent viewership (PCU - the highest number of fans tuned in at any one point) was 14 million - up from 11 million in 2014. Overall, the unique viewer count for the Final was 36 million - a record-breaking high for any Esports event and a climb from last year’s Samsung White-Royal Club matchup at Sangam Stadium which drew 27 million unique viewers (Magus, 2015). The 2016 League of Legends World Championship, more commonly called Worlds, is an international Esports event that takes place over five weeks of competitive play with the top 16 teams from around the world. Top teams from Europe, North America, Korea, China, Southeast Asia received direct invitations, while squads from Wildcard regions qualified via an international Wildcard Qualifier. The total prize pool for this game is \$5,070,000, and the champion team got 40% of them, which is \$2,028,000.

2.3 Three types of League of Legends’ players

There are three types of players: professional players, players who do live

streaming and general players. Within the League of Legends community, Riot Games reports that over 90% of players are male (Gallegos, 2012).

Professional players play the professional games, such as the world championship, NA LCS (The North America League of Legends Championship Series, the preeminent League of Legends Esports league in North America.), LPL (The Tencent League of Legends Pro League, the premier League of Legends Esports competition in China.), ULOL campus series, LCK (League of Legends Champions Korea, the ultimate League of Legends Esports league in Korea) and so on. Different area leagues can receive the opportunity to attend the world championships. During the 2016 World Championship for example, top teams from LCK, LPL, LMS, NA LCS, and EU LCS received direct invitations to Worlds 2016, while squads from Wildcard regions qualified via an International Wildcard Qualifier.

Some of the players like to live-stream when they play the game because they have some interesting point of view of the game or they have a funny way of explaining it, which can entertain the audiences. People like to spend time watching their live-streaming videos. There are some platforms for these people, such as Twitch and Youtube, which have gaming channels for League of Legends, with some of the videos have more than 4 million views. William A. Hamilton, Oliver Garretson, and Andruid Kerne found that while Esports spectating is a significant live streaming activity, many streams focus not on the highest level of play, but on social engagement and community building.

Some players just play the game for fun, either by themselves or with friends as a team. Some of them are also audiences for the first two type of players. They are the biggest group of people who play League of Legends. We will focus on these general players in this research.

2.4 The motivation difference among genders, different age groups and time length

From Bartle's Player Type about Multi-User Dungeon (MUD), there are four things that players enjoyed: achievement within the game context, exploration of the game, socializing with others and imposition upon others. (Bartle, 1996). From Nick Yee's research (Yee, 2006), the components are described in three ways: the achievement component (advancement, mechanics, competition), the social component (socializing, relationship, teamwork) and the immersion component (discovery, role-playing, customization, escapism).

The Entertainment Software Association's (ESA, 2013) 2013 report, Essential Facts About the Computer and Games Industry, states that 45% of the "game players" are female and, furthermore, that "women 18 or older represent a significantly greater portion of the game-playing population (31%) than boys age 17 or younger (19%).".

The gender differences that have been found in earlier studies, for example that body-related and social factors are stronger motives for women, and that competition and competence motives are more valued by men, are likely to have emerged due to societal expectations of proper behavior for men and women. Men are expected to be competitive, which women do not (Bem, 1974, 1981). Although physical appearance concerns both

men and women, it is more important to women, and compared to men there is also a much stronger pressure on women to have a youthful appearance and to be slim (Garner, Garfinkel, Schwartz, & Thompson, 1980; Henley, 1977; Willis & Campbell, 1992). The female gamer is generally less aggressive and achievement-oriented than her male counterpart, and she actually logs more time engaging in gameplay (Williams, Consalvo, Caplan & Yee, 2009). Additionally, the female gamer is generally healthier than male gamers and the general population at large (Williams, Consalvo, Caplan & Yee, 2009). The average female gamer is more likely to be older than the average male gamer (Yee 2008). One suggested explanation for this is that the vast majority of females are introduced to video games through a romantic partner (Yee, 2008). Stable romantic relationships typically occur at a slighter later point in life, thus accounting for the age difference between males and females (Yee, 2008). Males are much less likely to be introduced to video games by a female romantic partner (Yee, 2008). Additionally, women report that they prefer to engage in video games with their partner, while men tend to prefer solitary gameplay, or playing with other men (Yee, 2008). Although the video game community has traditionally been dominated by male gamers, there has been a steady increase in the number of women taking part in this community (Dickey, 2006). While this change has been gradual, women now makeup up an estimated 40% of all game players in the United States, and 80% of adolescence girls reported playing video games in their homes (Behm-Morawitz & Mastro, 2009).

With 87% of 8-17-year-olds playing video games to some degree, it is clear that

video games have become an incredibly influential medium (Bruggess, Stermer & Burgess 2007). In a previous study, Griffiths, Davies, & Chappell (2003) collated data from two online gaming fan sites, which showed that over 60% of players were older than 19 years. Thirty-three percent of the sample was still at an educational establishment, including those currently in middle school (3%), high school (14%), college (14%), and graduate school (2%). Of those who were employed, 23% had a high school diploma, 33% had an undergraduate diploma, 7% had a Master's degree, and 2% had a doctoral degree. The data provided evidence that the game clientele was very much an adult profile and suggested a different picture from the stereotypical image of an adolescent online gamer. Based on Griffiths, Davies, & Chappell's research in 2004, different age groups spent different times per week on playing games. The most popular features among both adult and adolescent players were the social feature. Their results also showed that significantly more adolescents specifically stated that violence is their favorite aspect of gameplay (Griffiths, Davies, & Chappell, 2004).

To this end, the following hypotheses are proposed:

Hypothesis 1: Motivations for playing League of Legends will be significantly different between genders.

Hypothesis 2: Motivations for playing League of Legends will be different significantly between age groups.

Hypothesis 3: Motivations for playing League of Legends will vary based on playing frequency.

Hypothesis 4: In younger age groups, motivations for playing League of Legends will be significantly different between genders.

CHAPTER 3

METHOD

3.1 Participants

Study participants were League of Legends players. There were 129 responses over the course of twenty-five days. However, three of them skipped the age or gender question, so these data were discarded. For this study, we only discuss the motivations of general players, which means that the fifteen statistics for professional players and live streaming players will not be used for analysis. This left a final sample of 111 players. From table 3.1, eighteen percent of the participants had graduated from high school, 55.4 percent were in college or had graduated from college, and 22.3% were in higher level of education.

3.2 Procedure

The sample (N=111) comprised attendees of the League of Legends survey. Data were collected from January 30th through February 23rd. The researcher sent out surveys to the League of Legends players in many ways. For example, a survey link was posted to the boards section on the League of Legends official website (<http://boards.na.leagueoflegends.com/en/c/miscellaneous>), the League of Legends Facebook page (<https://www.facebook.com/leagueoflegends/>) and other player groups,

such as the Esport Club of the University of South Carolina. The survey was adapted to be compatible with the free software SurveyMonkey, an application that allows surveys to be created in three pages. The survey took three to five minutes to complete. Participants were prevented from completing the survey more than once via the use of IP address. Responses were stored in the SurveyMonkey database. Later, the data were imported into excel spreadsheets and pdf files.

3.3 Measures

Items were constructed following a literature search into motivations for online game-playing, and included three factors of motivations: achievement (or competence/power) (Bartle, 2005; Choi, Lee, Choi, & Kim, 2007; Yee, 2006b), socialization (Cole & Griffiths, 2007; Hussain & Griffiths, 2008; Bartle, 2005; Yee, 2006a, 2006b; Whang & Chang, 2004), and immersion (Yee, 2006). Based on the literature review and conclusion from an author who had done research on the motivations for play in online games, twelve potential motives were advanced. The five achievement factor items were the desire to gain power and progress rapidly (A1), having interest in analyzing the underlying rules and system in order to optimize champion's performance (A2), the desire to challenge and compete with others (A3), for the prestige of being a good player (A4), and finding and knowing things that most other players don't know about (A5). The three socialization factor items were helping and chatting with others (B1), the desire to form long-term meaningful relationships with others (B2), and B3 deriving satisfaction from being part of a group effort. The four immersion factor

items were using the online environment to avoid thinking about real life problems (C1), having an interest in customizing runes and masteries of different champions (C2), and discovery the game, its history and the various phenomena that occur within the game (C3), creating a persona with a background story and interacting with other players to create an improvised story (C4) (Yee, 2006; Fuster, Oberst, Griffiths, Carbonell, Chamarro, & Talarn, 2012). All items were measured using a scale of 1-7 (1=Does Not Correspond at All; 7=Very Much Corresponds) to assess reasons why participants play League of Legends.

Table 3.1 Descriptive statistics of the education level of participants

Education	Frequency N	Percent %
Did not attend school	1	0.8%
Graduated from high school	22	18.0%
1 year of college	16	13.1%
2 year of college	13	10.7%
3 year of college	18	14.8%
Graduated from college	24	19.7%
Some graduate school	5	4.1%
Master's degree	18	14.8%
Doctor or Professional degree	5	4.1%
Total	122	100%

CHAPTER 4

RESULTS

The sample was made up of 84.7% males and 15.3% females, with ages spanning across groups of 18-21 years (45.0%), 22-24 years (32.4%), 25-34 years (20.7%), 35-44 years (0.9%), and 45 or older (0.9%). In total, most players spent 2-5 hours (28.7%), or 6-10 hours (32.6%) per week playing League of Legends. Also, 15.5% participants spent 16 or more hours per week playing. All these statistics are shown in table 4.1

4.1 Descriptive statistics and reliabilities

Table 4.2 showed descriptive statistics and reliability alphas for the twelve motivation items and the three component factors. The achievement and socialization motivation factors received a similar mean, and the mean of immersion factor was around 1 point lower than the other two. The study used the average score from A1 to A5 as achievement scores, B1 to B3 for socialization scores, and immersion scores came up from the mean scores from C1 to C4

The Kaiser-Meyer-Olkin (KMO) index value (table 4.3) obtained was 0.809, indicative of the suitability of the data for factor analysis. Reliability estimates for the three motivation factors were all adequate. The first factor (achievement) included five items, which were advancement, mechanics and competition. Its Cronbach's Alpha was

0.83. The second factor (socialization) had an internal consistency of 0.88, the three items were referred about socializing, relationship and teamwork. The third factor (immersion) had an internal consistency of 0.70, and there were four items: discovery, role-playing, customization and escapism. For each motive, items were summed and averaged to form an average scale score. Mean and standard deviations for each item were: A1 (M=4.19, SD=1.72), A2 (M=4.18, SD=1.88), A3 (M=4.97, SD=1.64), A4(M=4.76, 1.81), A5 (3.86, SD=2.02), B1 (M=4.37, SD=1.91), B2 (M=4.12, SD=1.91), B3 (M=4.70, SD=1.75), C1 (M=4.02, SD=2.08), C2 (M=3.50, SD=1.94), C3 (M=3.59, SD=2.67), C4 (M=2.67, SD=1.80). Mean scores and standard deviations for each motive factor were: achievement (M=4.37, SD=1.40), socialization (M=4.34, SD=1.66), and immersion (M=3.42, SD=1.41).

4.2 Factor analysis

The twelve items' Correlation Matrix is presented in table 4.4. Factor achievement includes item A1 to A5, factor socialization includes item B1 to B3 and factor immersion includes item C1 to C4. Table 10 showed that most of the items were correlated with other items under its factor. For example, the Correlation Matrix (table 4.5) showed that A1 (.816), A2 (.768), A3 (.704), A4 (.786), A5 (.744) were suitable as items under achievement factor.

4.3 Hypotheses testing

Table 4.6 showed the results for the T-test of motivations for League of Legends players by gender. The achievement factor was different between genders, but only at

marginally significant level ($p=0.069<0.1$), item A1 ($p=0.019<0.05$), A2 ($p=0.011<0.05$), and A5 ($p=0.040<0.05$) were significantly different between genders.

Because there was only one player aged from 35-44 and one player aged 45 or older, the study could not use their statistics to present that group of players. From the one-way ANOVA test on table 4.7, achievement ($p\text{-value}=0.016<0.05$) was significantly different among the three age groups. If group 1 is defined, players aged 18-21, group 2 were players aged 22-24, group 3 were players aged 25-34, Table 4.8 showed that the achievement factor ($p=0.006<0.05$) was significantly different between age group 1 and age group 2, and the immersion factor ($p=0.44$) was significantly different between group 1 and group 3.

Table 4.9 was the one-way ANOVA on motivations by frequency, it showed that the achievement ($p=0.100$) and immersion components ($p=0.484$) were not significantly different among different frequency groups. The socialization component ($p=0.094<0.1$) was different among different frequency groups, only at marginally significant level. Items A1 ($p=0.012<0.05$), B1 ($p=0.020<0.05$) were significantly different among different frequency groups. Table 4.10 showed the socialization factor ($p=0.024<0.05$) was significantly different between players who spent 16 or more hours per week and players who spent 0-15 hours per week.

Group 1 were players who spent 0-1 hour per week, group 2 were players who spent 2-5 hours per week, group 3 were players who spent 6-10 hours per week, group 4 were players who spent 11-15 hours per week and group 5 were players who spent 16 or more

hours per week on playing League of Legends. Table 4.11 showed achievement ($p=0.041$) was significantly different between group 1 and group 5, group 2 and group 5 ($p=0.014$), group 3 and group 5 ($p=0.027$), socialization was significantly different between group 1 and group 5 ($p=0.028$), group 2 and group 5 ($p=0.020$), group 4 and group 5 ($p=0.027$).

Table 4.12 showed that for players aged from 18 to 24, the achievement component ($p=0.009<0.05$) was significantly different between genders.

Table 4.1 Demographic profile of participants

Demographics	Frequency N	Percent %
Gender		
Male	94	84.7%
Female	17	15.3%
Age category (years)		
18-21	50	45.0%
22-24	36	32.4%
25-34	23	20.7%
35-44	1	0.9%
45 or older	1	0.9%
Frequency (hour/week)		
0-1	9	8.1%
2-5	33	29.7%
6-10	36	32.4%
11-15	17	15.3%
16+	16	14.4%
Total	111	100%

Table 4.2 Descriptive Statistics and Cronbach's Alphas

Motivations	Mean	Std. Deviation	Cronbach's Alpha
Achievement	4.37	1.40	0.83
The desire to gain power, progress rapidly	4.19	1.72	
Having interest in analyzing the underlying rules and system in order to optimize champion's performance	4.18	1.88	
The desire to challenge and compete with others	4.97	1.64	
For the prestige of being a good player	4.76	1.81	
Finding and knowing things that most other players don't know about	3.86	2.02	
Socialization	4.34	1.66	0.88
Helping and chatting with others	4.37	1.91	
The desire to form long-term meaningful relationships with others	4.12	1.91	
Deriving satisfaction from being part of a group effort	4.70	1.75	
Immersion	3.42	1.41	0.70
Using the online environment to avoid thinking about real life problems	4.02	2.08	
Having an interest in customizing runes and masteries of different champions	3.50	1.94	
Discovery the game, its history and the various phenomena that occur within the game	3.59	2.02	
Creating a persona with a background story and interacting with other players to create an improvised story	2.67	1.80	

Table 4.3 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
	Approx. Chi-Square	563.060
Bartlett's Test of Sphericity	df	66
	Sig.	.000

Table 4.4 Correlation Matrix

	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4
A1 The desire to gain power progress rapidly	1.00	.632	.408	.609	.477	.210	.281	.305	.295	.394	.258	.228
A2 Having interest in analyzing the underlying rules and system in order to optimize champion's performance	.632	1.00	.395	.404	.519	.174	.243	.252	.271	.385	.294	.209
A3 The desire to challenge and compete with others	.408	.395	1.00	.634	.373	.317	.269	.297	.236	.319	.057	.188
A4 For the prestige of being a good player	.609	.404	.634	1.00	.417	.225	.223	.264	.309	.316	.212	.311
A5 Finding and knowing things that most other players don't know about	.477	.519	.373	.417	1.00	.245	.303	.341	.362	.569	.450	.360
B1 Helping and chatting with others	.210	.174	.317	.225	.245	1.00	.779	.642	.431	.316	.053	.266
B2 The desire to form long-term meaningful relationships with others	.281	.243	.269	.223	.303	.779	1.00	.655	.320	.434	.100	.401
B3 Deriving satisfaction from being part of a group effort	.305	.252	.297	.264	.341	.642	.655	1.00	.365	.442	.189	.310
C1 Using the online environment to avoid thinking about real life problems	.295	.271	.236	.309	.362	.431	.320	.365	1.00	.358	.205	.202
C2 Having an interest in customizing runes and masteries of different champions	.394	.385	.319	.316	.569	.316	.434	.442	.358	1.00	.480	.500
C3 Discovery the game, its history and the various phenomena that occur within the game	.258	.294	.057	.212	.450	.053	.100	.189	.205	.480	1.00	.475
C4 Creating a persona with a background story and interacting with other players to create an improvised story	.228	.209	.188	.311	.360	.266	.401	.310	.202	.500	.475	1.00

Table 4.5 12 items factor analysis

	Achievement	Socialization	Immersion
The desire to gain power, progress rapidly	.816		
Having interest in analyzing the underlying rules and system in order to optimize champion's performance	.768		
The desire to challenge and compete with others	.704		
For the prestige of being a good player	.786		
Finding and knowing things that most other players don't know about	.744		
Helping and chatting with others		.897	
The desire to form long-term meaningful relationships with others		.893	
Deriving satisfaction from being part of a group effort		.843	
Using the online environment to avoid thinking about real life problems			.617
Having an interest in customizing runes and masteries of different champions			.799
Discovery the game, its history and the various phenomena that occur within the game			.740
Creating a persona with a background story and interacting with other players to create an improvised story			.731

Table 4.6 T test on motivations by gender

Motivations	Female M (SD)		Male M (SD)		T statistic
Achievement	3.60	(1.86)	4.51	(1.26)	0.069
The desire to gain power, progress rapidly	3.29	(1.93)	4.35	(1.64)	0.019
Having interest in analyzing the underlying rules and system in order to optimize champion's performance	3.12	(1.93)	4.37	(1.81)	0.011
The desire to challenge and compete with others	4.12	(2.18)	5.13	(1.48)	0.082
For the prestige of being a good player	4.53	(2.45)	4.81	(1.68)	0.672
Finding and knowing things that most other players don't know about	2.94	(1.98)	4.03	(1.99)	0.040
Socialization	4.71	(1.63)	4.27	(1.67)	0.325
Helping and chatting with others	4.65	(1.87)	4.32	(1.92)	0.518
The desire to form long-term meaningful relationships with others	4.29	(2.05)	4.09	(1.89)	0.679
Deriving satisfaction from being part of a group effort	5.18	(1.47)	4.61	(1.80)	0.225
Immersion	3.46	(1.78)	3.41	(1.34)	0.907
Using the online environment to avoid thinking about real life problems	4.24	(2.28)	3.98	(2.05)	0.692
Having an interest in customizing runes and masteries of different champions	3.06	(2.08)	3.58	(1.92)	0.311
Discovery the game, its history and the various phenomena that occur within the game	3.41	(2.29)	3.62	(1.97)	0.641
Creating a persona with a background story and interacting with other players to create an improvised story	3.12	(2.42)	2.59	(1.67)	0.395

Table 4.7 One-way ANOVA on motivations by age group

Motivations	18-21 M		22-24 M		25-34 M		Sig
		(SD)		(SD)		(SD)	
Achievement	4.74	(1.38)	3.92	(1.30)	4.10	(1.31)	.016
The desire to gain power, progress rapidly	4.34	(1.67)	3.86	(1.66)	4.17	(1.87)	
Having interest in analyzing the underlying rules and system in order to optimize champion's performance	4.56	(1.82)	3.83	(1.80)	3.65	(1.90)	
The desire to challenge and compete with others	5.32	(1.61)	4.50	(1.52)	4.83	(1.75)	
For the prestige of being a good player	5.14	(1.75)	4.23	(1.78)	4.61	(1.88)	
Finding and knowing things that most other players don't know about	4.41	(2.07)	3.37	(1.85)	3.26	(1.86)	
Socialization	4.52	(1.66)	4.31	(1.68)	3.81	(1.53)	.236
Helping and chatting with others	4.68	(1.97)	4.11	(1.86)	4.00	(1.81)	
The desire to form long-term meaningful relationships with others	4.10	(1.94)	4.33	(1.82)	3.61	(1.90)	
Deriving satisfaction from being part of a group effort	4.88	(1.67)	4.77	(1.86)	4.00	(1.63)	
Immersion	3.67	(1.25)	3.19	(1.30)	2.98	(1.55)	.083
Using the online environment to avoid thinking about real life problems	4.70	(2.03)	3.09	(1.74)	3.70	(2.03)	
Having an interest in customizing runes and masteries of different champions	3.80	(1.99)	3.44	(1.92)	2.70	(1.58)	
Discovery the game, its history and the various phenomena that occur within the game	3.80	(1.92)	3.42	(1.89)	3.09	(2.24)	
Creating a persona with a background story and interacting with other players to create an improvised story	2.44	(1.59)	2.89	(1.82)	2.57	(2.04)	

Table 4.8 One-way ANOVA between age groups

Dependent Variable	Age group	Age group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
achievement	LSD	1(18-21)	2	.8193*	0.29	.006	0.24	1.40
			3	0.63	0.34	.064	-0.04	1.30
	2(22-24)	1	-.8193*	0.29	.006	-1.40	-0.24	
		3	-0.19	0.36	.601	-0.90	0.52	
	3(25-34)	1	-0.63	0.34	.064	-1.30	0.04	
		2	0.19	0.36	.601	-0.52	0.90	
socialization	LSD	1(18-21)	2	0.21	0.36	.569	-0.51	0.92
			3	0.71	0.41	.090	-0.11	1.53
	2(22-24)	1	-0.21	0.36	.569	-0.92	0.51	
		3	0.50	0.44	.254	-0.37	1.37	
	3(25-34)	1	-0.71	0.41	.090	-1.53	0.11	
		2	-0.50	0.44	.254	-1.37	0.37	
immersion	LSD	1(18-21)	2	0.48	0.29	.105	-0.10	1.06
			3	.68674*	0.34	.044	0.02	1.35
	2(22-24)	1	-0.48	0.29	.105	-1.06	0.10	
		3	0.21	0.36	.558	-0.50	0.92	
	3(25-34)	1	-.68674*	0.34	.044	-1.35	-0.02	
		2	-0.21	0.36	.558	-0.92	0.50	

*. The mean difference is significant at the 0.05 level.

Table 4.9 One-way ANOVA on motivations by frequency

Motivations	0-1	2-5	6-10	11-15	16+	F	Sig.
Achievement	3.98	4.12	4.24	4.60	5.16	2.00	.100
The desire to gain power, progress rapidly	4.11	3.61	4.11	4.35	5.44	3.37	.012
Having interest in analyzing the underlying rules and system in order to optimize champion's performance	3.89	3.73	4.03	4.88	4.88	1.78	.138
The desire to challenge and compete with others	4.22	5.09	4.58	5.47	5.50	1.89	.117
For the prestige of being a good player	4.33	4.39	4.94	4.59	5.50	1.27	.288
Finding and knowing things that most other players don't know about	3.33	3.76	3.88	3.71	4.50	0.59	.669
Socialization	3.78	4.12	4.44	3.96	5.29	2.04	.094
Helping and chatting with others	3.11	4.06	4.61	4.06	5.50	3.06	.020
The desire to form long-term meaningful relationships with others	3.44	4.00	4.31	3.41	5.06	2.04	.094
Deriving satisfaction from being part of a group effort	4.78	4.44	4.79	4.41	5.31	0.80	.528
Immersion	3.22	3.45	3.44	2.99	3.88	0.87	.484
Using the online environment to avoid thinking about real life problems	3.00	3.44	4.44	3.94	4.88	2.34	.060
Having an interest in customizing runes and masteries of different champions	3.78	3.59	3.42	3.00	3.88	0.50	.734
Discovery the game, its history and the various phenomena that occur within the game	3.78	3.88	3.29	3.29	3.88	0.55	.699
Creating a persona with a background story and interacting with other players to create an improvised story	2.33	3.09	2.72	1.71	2.88	1.86	.122

Table 4.10 T test on motivation by players who spent 0-15 hours and players who spent 16 or more hours per week

		Sum of Squares	df	Mean Square	F	Sig.
achievement	Between Groups	6.468	1	6.468	3.388	.069
	Within Groups	160.368	84	1.909		
	Total	166.836	85			
socialization	Between Groups	13.926	1	13.926	5.278	.024
	Within Groups	221.645	84	2.639		
	Total	235.571	85			
immersion	Between Groups	1.376	1	1.376	.830	.365
	Within Groups	139.269	84	1.658		
	Total	140.645	85			

Table 4.11 One-way ANOVA among different frequency groups

		Frequency(hours/week)	2-5	6-10	11-15	16+
achievement	0-1		.791	.611	.275	.041
	2-5			.710	.240	.014
	6-10				.374	.027
	11-15					.243
	16+					
socialization	0-1		.576	.281	.786	.028
	2-5			.426	.742	.020
	6-10				.325	.083
	11-15					.021
	16+					
immersion	0-1		.673	.673	.684	.269
	2-5			.994	.275	.321
	6-10				.271	.312
	11-15					.073
	16+					

Table 4.12 T test on motivations by gender among 18-24 years old players

	gender	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)
achievement	female	14	3.19	1.72	0.46	.009
	male	72	4.63	1.21	0.14	
socialization	female	14	4.67	1.65	0.44	.571
	male	72	4.39	1.67	0.20	
immersion	female	14	3.04	1.55	0.42	.174
	male	72	3.55	1.22	0.14	

CHAPTER 5

DISCUSSION

5.1 Overview of findings

There were not many significant differences by genders, different age groups or different frequency groups, but the results showed some evidence to support part of my hypotheses. Otherwise, the results indicated some differences from the mean value for each item by genders, age groups and frequency groups. Based on the study mentioned on the Literature review, female players were only 10 percent from all the players, but 15% of the participants in the study were females, which could indicate that female players increased since data collection used the random sampling method. In earlier studies, it showed that social factors are stronger motives for women. However, the results from this study did not prove that.

5.2 Support for Hypotheses

There was significant evidence at the 0.1 level to conclude that the achievement component was different between males and females, especially for the desire to gain power, progress rapidly and having interest in analyzing the underlying rules and system in order to optimize a champion's performance. All the max, min and mean values of the socialization factor for female are higher than male. The achievement component showed

that males gave higher scores on average, and the standard deviation are smaller than female. Therefore, hypothesis 1 was partially supported. For the Hypothesis 2, the results concluded that the achievement factor was significantly different among three age groups. Since the players on the 35-44 and 45 or older age groups were so few, discussion would focus on the players aged 18 to 34. The results for these groups of people showed that for the achievement factor, there was significant difference between 18-21-year-old players and 22-24-year-old players. And for the immersion factor, there was significant difference between 18-21-year-old players and 25-34-year-old players.

For the hypothesis 3, results indicated that there was significant evidence at the 0.1 level to say that the socialization factor was different among different frequency groups. Furthermore, results showed significant difference on the achievement factor at 0.05 level between players who spent 16 or more hours per week on League of Legends and players who spent 2-5 hours, 6-10 hours and 11-15 hours. Also, the socialization was significantly different between players who spent 16 or more hours per week and players who spent 0-1 hour, 2-5 hours and 11-16 hours per week. With the growth of the frequency, players were more likely to give a higher score for the reason they played League of Legends. For the socialization factor, the mean value of players who spent 0-1 hour per week were much lower than players who spent 16 or more hours per week.

If 18-24-year-old players were in the younger age group, results indicated that the achievement motivation factor was significantly different between females and males.

From age 18 to 21, the mean value of the socialization component was similar between

genders, however, from 22 to 24, the female's mean value of the socialization component was around 1 point higher than the male's. The score range for females aged 22 to 24 were 5 to 6, which means that socialization was important for 22 to 24-year-old females to play League of Legends. Hypothesis 4 was partially supported because there was no significant difference on socialization and immersion factors between genders.

5.3 Lack of support for hypothesis

There was no significant difference between genders for the socialization on motivations for playing League of Legends, especially on helping and chatting with others and the desire to form long-term meaningful relationships with others. Also, there was no significant difference at 0.05 level on all the immersion factor items. For all the socialization items, there was no significant difference among three age groups. The achievement and immersion components didn't show any differences on the results of the one-way ANOVA test by frequency groups.

5.4 Implications of the study

In all, motivation for playing League of Legends on the immersion factor was less than the achievement component and the socialization component. Players who spent 16 or more hours per week have more motivation to play League of Legends. For males, feeling achievement from the game was a more attractive factor than for females. Earlier research showed that social factor was stronger for women, but we didn't see any significant difference between genders in the socialization factor. Females have a higher average socialization reason score for playing League of Legends. Of those sampled,

younger people gave higher scores for the reason why they play League of Legends, which might mean that younger people are more passionate about playing the game. Esport could establish more achievement and socialization motives for the players to attract them to get involved.

For female and male players, we could not see any difference from their immersion motivation. The same was true for different frequency groups. Males gave the highest average score on the desire to challenge and compete with others; this made the online games attractive to them. Females gave the highest average score on deriving satisfaction from being part of a group effort. League of Legends satisfied this need by the strategy setting used on the battle with other teams.

Players aged from 19-21 have higher motivation for achievement than players aged from 22-34. Immersion factor was not a strong motivation for all participants to play League of Legends. Even the socialization factor didn't show a significant difference among the three age groups. The study indicated that players' socialization motive was less impacted as they aged. The same conclusion can be made about the immersion factor. Older players would like to feel achievement from the game instead of socialization.

Research showed that there was evidence at 0.1 level that the socialization factor was significantly different between frequency groups. Players who spent 16 or more hours per week on League of Legends have stronger social motives than players who spent less than 16 hours per week. Around 60 percent of the participants spent 2-10 hours per week on the game. For the achievement component, the more time the players spent on the

game, the higher their motives were. For the socialization component, players gave higher scores when they played more often, except for players who spent 6-10 hours per week playing.

League of Legends, as a successful Esport, has many players around the world. It changes from season to season and updates very often to fit the needs of the players. Based on the study, achievement was not a strong motivation for female players. For developing female players, a game that makes it easier to operate or play and chat with others would attract females to Esports. They will enjoy more because of the teamwork. Even if they lose the game, they still feel satisfied from the game. But for male players, they will enjoy the achievement when they fight themselves, or when they kill someone, or get great performance during the game. When Esport wants to get more female players, social would be an important motive for them to focus on. These Esports would be game types which don't need difficult skills such as dodging, attack-moves or kites, are attractive for female players. Otherwise, cute or pretty skins would attract female players to play that champion, and exquisite scenery on their advertising page would get female players' attention. Esport gaming for general players, who play for fun, could set one or two positions only for female players to play, which is not difficult to operate but necessary for the team.

In general, players all have social motivations for playing electronic sports. To build the social motivators for players, Esport could improve the voice call features to help players work better together as a team. Electronic sport could also enable the players to

have their own team, allowing them to play with people they know. In this way, players can build stronger friendships while working as a team.

Tencent released a new MOBA game called “King of Glory” in 2015, which could be played by mobile phones. There are many female players on that game, because it’s not hard for them to learn how to play, and it’s easy to operate. Also, they can play with their friends.

CHAPTER 6

LIMITATIONS

The sample was not big enough to present all the League of Legends players. Statistics did not show a lot of significant differences in motivation factors between genders. There were not enough female samples to represent all of the female players. There was only one player aged from 35 to 44, and one that was 45 or older, which means these samples are not enough to analysis these two age groups of players.

The study did not consider the region of the players. The survey was in English, but participants may include players from China, South Korea or other countries. Different players may have some different motivations based on their cultural background and the environment they've been educated in.

League of Legends has different positions for the players, but research didn't ask the participants about the roles they always have in the game. For example, being a support requires the player to support other teammates instead of attacking others straight-on, so the support players may have more motives in the socialization component than achievement component.

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