Name:	Kong Mun Jun, Lee Chun Xian, Lee Jun Xian
Programme:	RDS2
Tutorial Group:	G3
Research Title:	A study on the relationship of the advantages of Multiplayer Online Battle Arena
	(MOBA) games, usability and Gender Equality

Introduction

In the risen of the computer games era, there are many types of computer games among several choices provided by different platform for gamers that used to attract them for paying much attention and stamina sitting front of the computer, which is called as Multiplayer Online Battle Arena (MOBA) Games. However, some highlights about the MOBA games which are built-up or matching up with other strangers as a team and each of the teammate plays essential role on manipulate their own character to destroy the base camp of the opponent to get victory of the game. Other than that, MOBA games tend to be tendency in recently because of people are more focus on aiming to get victory in-game and contribute their own ability to strengthen up the entire team therefore fascinate many players to play MOBA games and inspired them for establishing strong teamwork spirit in every their games. Examples of such games are *DOTA2*, *League of Legends (LOL)*, and *Vainglory*.

Research Problem Statement

Back in the days where video games were just a thing peoples do to past time, it is safe to say that video games were popular among boys and were rarely seen girls playing video games at that time. Even until now where video games are becoming E-sport and are what people do for a living just by streaming themselves playing video games, although the number of female gamers is increased, the community is still not diverse enough to overthrow the idea of "gaming is for boys". Other than, achieving the ultimate goal of gender equality, having a somewhat balance diversity as your user for a game is important because if you do then you will have the market to target.

Research Objectives

The objective of this research is to access the worth of Multiplayer Online Battle Arena(MOBA) game by studying the relationship between gender equality in terms of numbers, consistency of gamers playing the game, and the growth that happens to be improved after a long period of gaming. Furthermore, the correlation of genders and experience will be evaluated as well with the aspects of the attractiveness of the games, the layout designs, and user satisfaction in this study.

Research Questions

- 1. Is there any relationship between Gender Equality and Consistency of gamers and Growth proved after a long period of gaming?
- 2. Will MOBA games recommend growth and development to teenagers in terms of brain development??
- 3. What would gamers prefer in the games, User Interface, Character Designs, or Storylines in the games?

Research Hypotheses/Sub-objectives

- 1. There is a correlation between Gender Equality and Consistency of gamers and Growth proved after a long period of gaming.
- 2. There will be more male players than the female player in MOBA genre games.
- 3. MOBA games will recommend growth and development to teenagers in terms of brain development.
- 4. There is an interaction between Gender and experience of User Interface.
- 5. There is an interaction between Gender and experience of Character Design.
- 6. There is an interaction between Gender and experience of Game Storylines.
- 7. Girls have weaker skills than boys in Gaming.
- 8. Gaming is an unhealthy activity towards society.

Methodology

This research collects data by conducting surveys as our method for research. The survey questionnaire will be complete by a sample of 300 respondents (will be further explained in the Sampling section) aged between 13 to 33, mostly in Selangor, Kuala Lumpur, Malaysia. This sample group is selected as Computer Games trends started and progressing around the age of theirs.

Research Instrument/Data Collection

Instrument 1: Questionnaire

The instrument used in this research is the Questionnaire. The questionnaire is divided into 4 sections which are the Demographic, Gaming Experience, Usability, and the Gender Issues in Game.

The demographic section will ask about some questions about gender, ages, and the occupation to separate the participants into a few categories for us to easily analyze the next few parts of our

research. The second part will be the Gaming experience where we will have our questions focus on the MOBA type gaming experience from the participants. Whereas in the Third Part, we will ask about the usability in the games from the aspects, reasons, and effects. Last but not least, in the Gender Issues part, we will ask the participants some thoughts about gender issues that happen in the games.

Our Questionnaire used various scales to have more visual and easy analysis from the response. First of all, Nominal Scale will be used for some Yes or No Questions and some Demographic questions such as Genders; which 0:male, 1:female or 0:No, 1:Yes. Likert Scale also will be used in some Rating Questions such as rating how much they like a game, 1:Very Dislike to 5:Like Very Much. Open-ended questions will be asked in the Questionnaire.

No pressure is given to the respondent which will ensure that Hawstrone effect is not happening that will affect the conclusions.

Validity and Reliability Consideration

Validity refers to how accurately a method measures what it is intended to measure (Middleton, 2019). Thus, the questions prepared in the questionnaire are only related to the attractiveness of MOBA games, the usability of games, and gender issues in the games to ensure the validity of the research. All of those questions can conclude the level of addiction of both genders in Gamings. Tilo and Christoph (2017) state that Many studies conducted in social science fields such as psychology report that girls and young women display less interest in digital games, have less game-related knowledge, and play less frequently and for shorter durations than do boys and young men (Brown, Hall, Holtzer, Brown, & Brown, 1997; Cassell & Jenkins, 1998a; Lucas & Sherry, 2004; Wright, et al., 2001). therefore, this proves that there is a strong correlation between the attractiveness in games and the number of both different genders involving in computer games.

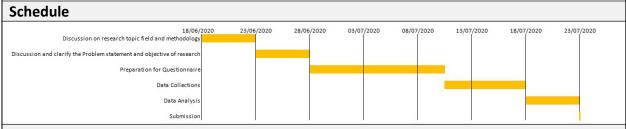
Moreover, Reliability is defined as to the extent which a research instrument consistently has the same results if it is used in the same situation on repeated occasions (Heale and Twycross, 2015). Hence, the participants will be required to fill in every part of the questions in the questionnaire to ensure consistency of numbers and percentages for every part to be analyzed. Besides that, every question was created in a form of short, easy to read, and understandable for participants as we considered our respondents' ages between 13 to 35. Bilingual also under our consideration where we also translated the questions into Chinese to prevent some respondents who did not grow up

understanding the English language. To bring the best performance in our surveys, we pre-tested with our questionnaire and sample responses gathered by our teams will be attached as Appendix II.

Sampling

The sampling that we choose to do our questionnaire survey is arranged for our data sampling. We shared our surveys most to teenagers with the ages between 13 to 33 and we will classify them based on the categories age, which is Highschool Students (13-17), University Students (18-24), Post-work Society (25-33). The research will mostly take place at Selangor, Kuala Lumpur, and Malaysia.

We will share our surveys to at least 200 netizens for every age category we have set, all of them will be later grouped by based on the interests in playing MOBA games and the time consumed for computer games. Thus, we target at least 500 responses we will achieve for our surveys.



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Appendix I (Sample of Questionnaire)

Research on Gaming Experience and Usability

Dear respondents, This Questionnaire was prepared by my group which is Lee Chun Xian, Lee Jun Xian, and Kong Mun Jun. We are from Tunku Abdul Rahman University College (TARUC) and pursuing in Bachelor of Computer Science (Honours) in Data Science Year 2.

Currently, we are doing a research project about The Study of Multiplayer Online Battle Arena (MOBA) Games and Gender Equality. The purpose of this research is to find out the Advantages of MOBA Games, the Effect of Usability during the games, and the Factors of Gender Equality in the games.

You are very welcome to take part in the project. NO PRIVACY INFO is required in this survey and all the responses will remain confidential and only accessible for those who will be assisting and evaluating the Research Paper. It is our pleasure and a very deep appreciation from us to have you fill up this survey.

The survey is separate into few sections which are:

Part 1: Demographic

Part 2: Gaming Experience

Part 3: Usability in Games

Part 4: Gender Issues in Games

For more simplifications or inquiries, do contact one of us to provide you a clear mind,

- 1. Kong Mun Jun (kongmj-wm18@student.tarc.edu.my)
- 2. Lee Jun Xian (jxlee-wm18@student.tarc.edu.my)
- 3. Lee Chun Xian (leecx-wm18@student.tarc.edu.my)

* Required

Part 1: D	emograp	hic)	口统计

In this part, we will ask you some general questions for some personal informations of yours.

What is your gender? 您的性别: * Male 男
○ Female 女
What is your age? 您的年龄: *
O Below 12 years old 低于12岁
O 13 – 17
O 18 – 24
O 25 – 33
O Above 34 years old 高于34岁

What is your occupation? 您的职业: *
○ Student 中小学生
○ Undergraduate Student 大学生
O Postgraduate Student 研究生
Part-Time Employee 兼职员工
○ Full-Time Employee 全职员工
○ Unemployed 待业中
Other:
Do you play any games? 您曾有玩过任何游戏? *
○ Yes 是
○ No 否
How much time did you spend each day playing computer / mobile games? 您一天花上多少时间在玩手游或桌游上?**
O Less than 1 hour 少于一小时
O 1-3
O 4-6
○ 7 and above 七小时或以上
Other:
Back Next

* Required

Part 2: Gaming Experience 游戏经验

In this part, we will ask some questions related to experiences with the Multiplayer Online Battle Arena (MOBA) Game.

Multiplayer online battle arena (MOBA) is a sub genre of strategy video games in which each player controls a single character as part of a team competing against another team of players, usually on a map from an isometric perspective.

Have you ever played a 有玩过任何多人在线上				attle are	ena (MO	BA) Game? 您是否
○ Yes 是						
○ No 否						
Maybe 也许						
Please rate how much 衷程度 *	you like	МОВА	Games.	请评价	你对线上	战斗竞技游戏的热
	1	2	3	4	5	
Hate it 非常不喜欢	0	\bigcirc	0	0	\circ	Love it 非常喜欢

Which MOBA Game do you ever play? 以下哪项是你曾玩过的MOBA游戏?*
CS:GO
DOTA2
League of Legends
■ Identity V 第五人格
□ PUBG 和平精英
Vainglory
Mobile Legends: Bang Bang (Arena of Valor / Honor of Kings)
□ 王者荣耀
Other:
Why are you playing these MOBA games? 您为了什么而玩MOBA游戏*
☐ I aim to play professionally 我想成为专业玩家
I genuinely enjoy the game 我真心喜欢这游戏
☐ I am good at that game 我很擅长这种游戏
□ I play this game when my friends are playing 当我朋友玩这个游戏时我也陪他一起玩
□ I like to flex my gaming skills with others 我喜欢跟其他人炫耀我的游戏技巧
Other:

What do you think that the keys lead to victory in every match of MOBA games? 您觉得是什么关键的要素让每一场游戏都能取得胜利?*
□ Unity of Teammate 团结的队友 □ Personal Strength 个人实力 □ Actual Gameplay 临场发挥 □ Strategy and Planning 战略和策划 □ Communication 沟通
Do you think that playing online games may help teenagers to develop themselves? 您觉得玩线上游戏会有助于青少年自我的发展吗? * 【Yes, I think it can help in brain development 我觉得玩线上游戏可以促进大脑发育】 【Yes, I think it can help in strengthen their friendships 我觉得玩线上游戏可以增进友谊
Yes, I think it can help to develop their sense of creativity 我觉得玩线上游戏可以增强创造力 No, I think it does not help them to develop themselves 我觉得玩线上游戏不会有助于青少年的自我发展
Other:

* Required

Part 3: Usability 使用性
What attracts you to continue playing that MOBA Game? 是什么吸引您继续地玩这款游戏?*
User Interface 用户界面
☐ Game Content 游戏内容
☐ Game Controls 游戏操作
Character Designs 角色设计
☐ Game Difficulty 游戏难度
☐ Game Play 游戏玩法
Do you have any difficulties in games control when you play the MOBA game for the first time? 当您第一次玩游戏时是否有任何游戏操作难度困扰到您?**
○ Yes 是
○ No 否
O Maybe 也许

Which of the following is your focusing place about character designs? 以下哪个是您对于角色设计更加的专注的地方? *
Quality Splash Art 漂亮的角色海报
Cool Appearance 酷炫的角色外表
Powerful Skill 强力的角色技能
Supportive Skill 辅助型的角色技能
Details of Design on Appearance 设计细节到位的角色外表
Would you rather play a more challenging game than a game that is easy to master? 您更喜欢选择玩有挑战性的游戏大于能轻易掌握的游戏?*
○ Yes 是
○ No 否
O Depends on how it attract me from advertisement 取决于游戏的广告有没有吸引我

* Required

Part 4: Gender Issues in Game 游戏里的性别问题

Do you know the actual gender of the players you met in games? 您是否知道在游戏中玩家的真实性别?*

 ○ Yes 是

○ No 否

Maybe 也许

Based on your previous game experience, what is the percentage of you meeting your opposite gender? 根据您过往的游戏经验,您遇到异性的比例是多少?*



Have you ever experience or witness gender discrimination during your gaming experience or within the gaming community? 您有在玩着游戏的时候或在游戏讨论区里被性别歧视过或见证过别人被性别歧视吗? *						
○ Yes 有	○ Yes 有					
○ No 没有						
Maybe 可能有						
Do you think that gender is related to competitiveness? 您觉得性别与竞争力有关系吗? *						
	1	2	3	4	5	
Strongly Disagree 非常不同意	0	0	0	0	0	Strongly Agree 非常同意
Do you think that gender is related to gaming skills? 您觉得性别与游戏的操作技术有关系吗? *						
	1	2	3	4	5	
Strongly Disagree 非常不同意	0	0	0	0	0	Strongly Agree 非常同意

Do you feel that the characters in the games you were playing are overly sexualized? 您会觉得游戏里的角色过于被异性吗? *						
	1	2	3	4	5	
Strongly Disagree 非常不同意	0	0	0	0	0	Strongly Agree 非常同意
Do you think anyone can be a 都可以成为优秀的游戏玩家,	25			1000	ess ge	nder? 您是否认为任何人
	1	2	3	4	5	
Strongly Disagree 非常不同意	0	0	0	0	0	Strongly Agree 非常同意
Do you have any comments requestionnaire? If yes, please the 的问题有任何意见吗?如有意	feel f	ree to	leave	еасо	mmer	
Your answer						
Back Submit						

Appendix II (Sample Response of Questionnaire)

What is your gender? 您的性别:*					
● Male 男					
○ Female 女					
What is your age? 您的年龄: *					
O Below 12 years old 低于12岁					
O 13 – 17					
O 25 – 33					
○ Above 34 years old 高于34岁					
What is your occupation? 您的职业: *					
○ Student 中小学生					
○ Undergraduate Student 大学生					
● Postgraduate Student 研究生					
○ Part-Time Employee 兼职员工					
○ Full-Time Employee 全职员工					
○ Unemployed 待业中					
Other:					

Do you play any games? 您曾有玩过任何游戏?*
● Yes 是
○ No 否
How much time did you spend each day playing computer / mobile games? 您一天花上多少时间在玩手游或桌游上? *
O Less than 1 hour 少于一小时
O 4-6
○ 7 and above 七小时或以上
Other:

Have you ever played a 有玩过任何多人在线上		Carlo State of Assessment		attle are	ena (MO	BA) Game? 您是否
● Yes 是						
○ No 否						
Maybe 也许						
Please rate how much 衷程度 *	you like	MOBA	Games.	请评价	你对线上	战斗竞技游戏的热
	1	2	3	4	5	
Hate it 非常不喜欢	0	0	0	0		Love it 非常喜欢
3,100,000						
			V 171 1000	空 目 ル 2	4 τ − 1.4 4 <i>h</i>	110 D 1 W 100 t
Which MOBA Game do	o you ev	er play	以下哪	坝是你智	当玩过的	MOBA游戏?
CS:GO						
DOTA2						
League of Legends						
✓ Identity V 第五人格						
✓ PUBG 和平精英						
Vainglory						
Mobile Legends: Bar	ng Bang (Arena of	Valor / H	lonor of	Kings)	
▼ 王者荣耀						
Other:						

Why are you playing these MOBA games? 您为了什么而玩MOBA游戏*
☐ I aim to play professionally 我想成为专业玩家
✓ I genuinely enjoy the game 我真心喜欢这游戏
☐ I am good at that game 我很擅长这种游戏
☑ I play this game when my friends are playing 当我朋友玩这个游戏时我也陪他一起玩
■ I like to flex my gaming skills with others 我喜欢跟其他人炫耀我的游戏技巧
Other:
What do you think that the keys lead to victory in every match of MOBA games?
您觉得是什么关键的要素让每一场游戏都能取得胜利?*
您觉得是什么关键的要素让每一场游戏都能取得胜利?★ ✓ Unity of Teammate 团结的队友
✓ Unity of Teammate 团结的队友
✓ Unity of Teammate 团结的队友 ☐ Personal Strength 个人实力
✓ Unity of Teammate 团结的队友 ☐ Personal Strength 个人实力 ☐ Actual Gameplay 临场发挥

Do you think that playing online games may help teenagers to develop themselves? 您觉得玩线上游戏会有助于青少年自我的发展吗?*
Yes, I think it can help in brain development 我觉得玩线上游戏可以促进大脑发育
✓ Yes, I think it can help in strengthen their friendships 我觉得玩线上游戏可以增进友谊
Yes, I think it can help to develop their sense of creativity 我觉得玩线上游戏可以增强创造力
No, I think it does not help them to develop themselves 我觉得玩线上游戏不会有助于青少年的自我发展
Other:

Part 3: Usability 使用性
What attracts you to continue playing that MOBA Game? 是什么吸引您继续地玩这款游戏?*
User Interface 用户界面
Game Content 游戏内容
☐ Game Controls 游戏操作
Character Designs 角色设计
Game Difficulty 游戏难度
Game Play 游戏玩法
Do you have any difficulties in games control when you play the MOBA game for the first time? 当您第一次玩游戏时是否有任何游戏操作难度困扰到您?*
○ Yes 是
○ No 否
● Maybe 也许

Which of the following is your focusing place about character designs? 以下哪个是您对于角色设计更加的专注的地方? *
Quality Splash Art 漂亮的角色海报
✓ Cool Appearance 酷炫的角色外表
Powerful Skill 强力的角色技能
Supportive Skill 辅助型的角色技能
☑ Details of Design on Appearance 设计细节到位的角色外表
Would you rather play a more challenging game than a game that is easy to master? 您更喜欢选择玩有挑战性的游戏大于能轻易掌握的游戏?**
● Yes 是
○ No 否
O Depends on how it attract me from advertisement 取决于游戏的广告有没有吸引我

Part 4: Gender Issues in Game 游戏里的性别问题
Do you know the actual gender of the players you met in games? 您是否知道在游戏中玩家的真实性别?*
○ Yes 是
○ No 否
● Maybe 也许
Based on your previous game experience, what is the percentage of you meeting your opposite gender? 根据您过往的游戏经验,您遇到异性的比例是多少?* 60% ▼
Have you ever experience or witness gender discrimination during your gaming experience or within the gaming community? 您有在玩着游戏的时候或在游戏讨论区里被性别歧视过或见证过别人被性别歧视吗? *
○ Yes 有
○ No 没有
● Maybe 可能有

Do you think that gender is r 系吗? *	elated	d to co	ompe	titiver	ness?	您觉得性别与竞争力有关
	1	2	3	4	5	
Strongly Disagree 非常不同意	0	•	0	0	0	Strongly Agree 非常同意
Do you think that gender is r 有关系吗? *	elated	d to g	aming	skills	? 您觉	得性别与游戏的操作技术
	1	2	3	4	5	
Strongly Disagree 非常不同意	•	0	0	0	0	Strongly Agree 非常同意
Do you feel that the characters sexualized? 您会觉得游戏里		1 1 1 1 1 1 1 1		14	2.5	laying are overly
	1	2	3	4	5	
Strongly Disagree 非常不同意	0	0	0	•	0	Strongly Agree 非常同意

	无论'	性别 贝	1何?			
	1	2	3	4	5	
Strongly Disagree 非常不同意	0	0	0	0		Strongly Agree 非常同意
Da vau bava any sammanta	regar	ding t	he qu	estio	ns cor	ducted in this
Do you have any comments		ree to	leave	e a co	mmer	nt bellow! 您对本调查表中
questionnaire? If yes, please			e eta e			
Do you have any comments questionnaire? If yes, please 的问题有任何意见吗?如有意			、发表	您的意	〔见!	