FACTOR POSITIVELY AFFECTING CUSTOMER LOYALTY OF
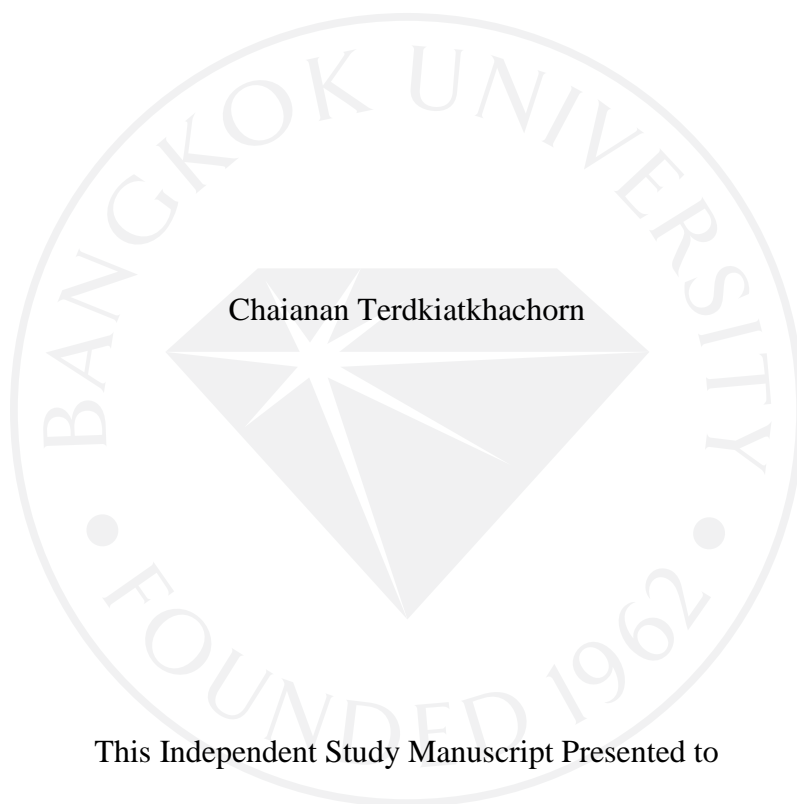
MOBILE PHONE GAME "A"OF EMPLOYEES IN KHLONG TOEI

DISTRICT IN BANGKOK

FACTOR POSITIVELY AFFECTING CUSTOMER LOYALTY OF

MOBILE PHONE GAME "A"OF EMPLOYEES IN KHLONG TOEI

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Factors Positively Affecting Customer Loyalty of Mobile Phone Game "A" of Employees in Khlong Toei District in Bangkok (90 pp.)

Advisor: Penjira Kanthawongs, Ph.D.

ABSTRACT

The purpose of this paper was to examine the independent factors positively affecting customer loyalty of Mobile Phone Game "A" of employees in Khlong Toei District in Bangkok. Most of the respondents are male aged between 23 to 39 years old. The independent factors were Entertainment Gratification, Interactivity, Connectedness, Satisfaction, Attitude, Social Norm, Social Identification, and Stickiness that positively affecting Customer Loyalty of Mobile Phone Game "A". Total samples data of 400 mobile phone game "A" players were collected via the survey questionnaire. The data sets utilized descriptive statistics and multiple regression analysis. The researcher found that Stickiness ($\beta = 0.284$), Attitude ($\beta = 0.203$), and Interactivity ($\beta = 0.115$) accounted for 23.1% positively affecting customer loyalty of mobile phone game "A" of employees in Khlong Toei District in Bangkok with statistical significant at .01.

Keywords: Mobile Phone Game, Customer Loyalty

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Chaianan Terdkiatkhachorn

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CHAPTER 1

INTRODUCTION

1.1 Rationale and Problem Statement

Mobile phone game is an ever-growing industry everywhere in the world. In Thailand, the industry grew by an estimate of $44.5 million in 2017. According to KOCCA (Korea Creative Content Agency), in 2016, Thailand Mobile phone game market size was 89 million USD, compared to Personal Computer (PC) game market which was about 162 million USD. However, the growth in mobile market was approximately 5 times of that of PC (thisisgamethailand.com, 2017).

There are various reasons for mobile phone game rapid growth. Mobile phone games are often simple to learn and commonly perceived as less complex than other gaming platforms. Most mobile phone games are not expensive or free to play (come with in-game purchase options). Almost everyone has a mobile phone that they carry around everywhere. This means they can start gaming whenever they want, especially to kill time while they travel or wait for something. Moreover, as technology advance, decent mobile phones with reasonable price are able to accommodate better graphics and more developed gameplays. These are

some of the main reasons for mobile phone game market amazing growth rate. (statista.com, 2017)

However, it is no secret within the gaming industry that the product life cycle has been steadily shortening over the years. During the early days of online games there were only a handful of choices for the players and they were able to retain their player base much easier because they were able to leave unforgettable memories, holding a special place in the heart of the players. Nowadays, when some of the old classics eventually died down, the competition has been fiercer than ever. There is an insane amount of competition within the industry, as the market grows, more and more games were developed and offered to the ever-growing player base. With more and more games available in the market, relatively newer games held the competitive edge in attracting players because they are fresher and unexplored.

The story would also take similar shape with mobile phone games. Many early successful products would have relatively longer lifecycle than the newer waves, but would slowly lose their popularity and ultimately die out. Market growth, extreme competition and limitation in many aspects of mobile phone product would result in shortened product life cycle. The researcher therefore would like to conduct this research on factors that positively affecting customer loyalty on the highly popular mobile phone online battle arena game "A" so that

the industry can evaluate their options to extend their product life cycle and maintain their valuable customers' satisfaction.

Multiplayer online battle arena games are mostly real-time strategy game, where the player team up with 4 to 5 teammates to achieve the goal of the game and defeat the opponent through teamwork and coordination, it has been widely popular in many countries as a computer game, but in recent years, the genre has tried to gain market share in the mobile phone game category and found success with the likes of game A, B and C.
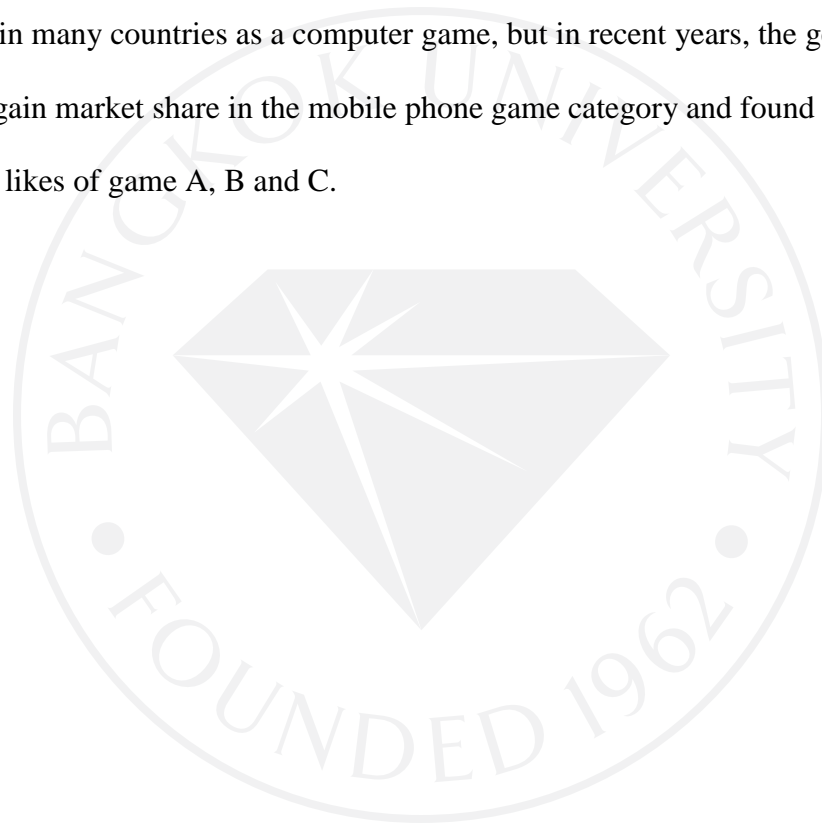
Table 1.1: Mobile phone game "Realm of Valor", "Vainglory" and "Mobile

Legends" SWOT analysis

	Realm of Valor	Vainglory	Mobile Legends
Strength	1. Fast, interesting gameplay and very easy to learn 2. The company that developed the game is big and holds almost a monopoly status in China mobile game market Also own one of the most popular mobile social network application in China, and use it as a marketing channel 3. Effective marketing in Thailand by Garena Online (Thailand) Co., Ltd 4. Highest player-base among mobile phone battle arena games	1. Excellent gameplay and graphics 2. The company takes good care to balance out the strength of each character to make the gameplay is fair 3. Provided player with option for unique game control style	1. Fast update in term of new characters 2. Fast gameplay 3. The game provides more rewards from winning games per week

(Continued)

Table 1.1 (Continued): Mobile phone game "Realm of Valor", "Vainglory" and

"Mobile Legends" SWOT analysis

	Realm of Valor	**Vainglory**	**Mobile Legends**
Strength	4. Highest player-base among mobile phone battle arena games 5. Trustworthiness of game provider in Thailand (Garena) 6. Offer bigger tournaments with more prize money		

(Continued)

Table 1.1 (Continued): Mobile phone game "Realm of Valor", "Vainglory" and

"Mobile Legends" SWOT analysis

	Realm of Valor	Vainglory	Mobile Legends
Weakness	1. There are many "toxic" players because it's free to play, and the punishments are not severe 2. Players need to use in-game currency or real money to purchase heroes and some upgrades which mean not every hero characters is accessible for players	1. The company does not intend to compete in China market which is the biggest 2. The company is not willing to spend a lot of money into marketing. 3. Game length could be considered a little too long for a mobile game: around 25 minutes	1. Less recognition compared to market leaders in Thailand 2. Player can get slow responses from game server due to bad connection between game client and the server. 3. Lower attractiveness of in-game graphic

(Continued)

Table 1.1 (Continued): Mobile phone game "Realm of Valor", "Vainglory" and

"Mobile Legends" SWOT analysis

	Realm of Valor	Vainglory	Mobile Legends
Opportunities	1. Gain more popularity from big regional and international tournaments 2. Gain more reputation from corporate social responsibility (CSR) 3. Punish toxic players more severely so people cannot ruin the mood of teammates without facing consequences	1. Be more aggressive with marketing plans 2. Be more active with seeking new markets 3. Provide game modes with shorter game time to give players more options	1. Fix connection problem or provide more local servers 2. Try to be more effective with marketing plans

Table 1.1 (Continued): Mobile phone game "Realm of Valor", "Vainglory" and

"Mobile Legends" SWOT analysis

	Realm of Valor	**Vainglory**	**Mobile Legends**
Threat	1. Rise of battle royal games popularity and their expansion into mobile phone 2. Players leaving for other genres because of toxicity	1. Rise of battle royal games popularity and their expansion into mobile phone 2. Players leaving for other genres because of toxicity	1. Rise of battle royal games popularity and their expansion into mobile phone 2. Players leaving for other genres because of toxicity

Source: *Appgame.* (2017, January 1) Retrieved from ROV and the challenge of

gaming significance towards game provider in Thailand:

http://appgame.in.th/news/realm- of-valor-moba

Smartphonetabletthai. (2017, February 16) Retrieved from Mobile Legends vs

ROV, which one is more enjoyable and attractive:

https://www.smartphonetabletthai.com/mobile-legends-vs-rov/

Medium.com.(2017, July 15) Retrieved from How Vainglory Can Compete with

Honor of Kings: https://medium.com/esports-and-gaming-analysis-by-

owens/why-honor-of-kings-is-crushing-vainglory-2f728a38e53d

As the mobile phone game industry in Thailand continues to grow at an incredible rate, there is a need to search for every competitive edge available. Giant game provider companies in Thailand have started to invest and acquire many different games from oversea so Thai people could explore and enjoy themselves to the fullest because the content of the game is translated to Thai and also almost everyone in the game community are Thai. However, the challenge would be keeping customer's loyalty towards the game, and maybe also towards the game provider company (thisisgamethailand.com, 2017).

1.2 Objectives of Study

The objective of this research is to study positive factors which influence customer loyalty in mobile phone games. The factors are as follow: Entertainment Gratification, Interactivity, Connectedness, Satisfaction, Attitude, Social Norm, Social Identification, and Stickiness.

1.3 Contribution of Study

The contribution of this research is to allow mobile phone game providers to gauge some chosen factors that may affect customer loyalty and possibly make adjustments to keep their players' loyalty.

CHAPTER 2

LITERATURE REVIEW

2.1 Related Theories and Previous Studies

2.1.1 The research of Huang & Hsieh (2011) state in their research about online game loyalty that entertainment gratification is a key to customer loyalty towards online games. They describe player being immersed in gaming activity with the phrase "online flow" which is use to explain when someone receive desirable experience and want to repeat it as often as possible. This happens when the player face continually challenging task and more difficult objectives, and therefore keep playing / coming back to the game. The entertainment gratification variable considers both playing the game to fill time and playing the game purely just for entertainment.

2.1.2 The research of Huang & Hsieh (2011) also consider interactivity between players as one of the main factor for online game customer loyalty. In this topic they also consider the interactivity between the player and the game such as any commands, gesture, response time, that lead to progress of the game, or movement on screen, and they suggested both interaction can be critical to customer loyalty. The interaction between players would give them entertainment as well as social belonging, while the player to game or player to game's interface

will also be a big factor to determine whether they want to come back to play the game or not, because if the responses are slow and unpleasant, it will create some negative impact.

2.1.3 Hsiao & Chen (2016) considers connectedness as one of the factor that positively affects mobile phone game loyalty. Citing quotes from questionnaire participants, many participants reveal they get to share their experience with their friends and family members, some even go as far as saying they play so that they can join in friends' conversation and not feel left out. This may be an indication that player of online and/or mobile phone game share a bond among the player base, and therefore could lead to game loyalty.

2.1.4 Satisfaction is the next factor associated with this research. The factor was considered in Hsu & Lin (2016) research of Technological Forecasting and Social Change, titled Effect of Perceived Value and Social Influence on Mobile App Stickiness and in-app Purchase Intention. While purchase intention is a little different, they are closely related in term of mobile application, because the willingness to pay for a normally free service can be considered loyalty. Satisfaction should positively affects user's attitude and lead to positive attitude, more stickiness and ultimately more loyalty.

2.15 Attitude is perceived as the reflection of the customer impression on the mobile phone game, and it is a tricky one because it can be highly based on first impression for some people, but for some people it can always change

whenever they encounter new updates or interaction with other users. Nevertheless, it is considered to positively affect customer loyalty in a sense that whenever the attitude towards the game drops, the loyalty would also drops, and therefore could show the link between the two variables at the time that the participants answer the questionnaire. (Hsu & Lin, 2016)

2.1.6 Social influence is an important factor, and is considered separately in two parts (Hsu & Lin, 2016). The first part is Social Norm. This factor is investigated from the participants' social group point of view, and the questionnaire question will ask the participants to consider what people who know them, or are important to them think of their mobile game usage. It is believed that social influence plays a big part in purchase intention because people often are cautious of what their social circle think of them, however, this factor may prove challenging for some participants if they have limited in social interactions.

2.1.7 Social Identification is the second part of social influence. This factor consider how people feel the sense of belonging in a group and that can lead to positive impact such as stickiness, purchase intention, and ultimately loyalty. They consider Social Identification as the idea of being a member of a community where one shares mutual interests and hobbies would enhance the above factors because it has been linked to many positive behaviors (Hsu & Lin, 2016).

2.1.8 Stickiness is the last independent factors considered in this research. From Literature review, this is defined as the degree to which users re-use a given app and prolong the duration of each usage. As it is defined, the more people use and feel attached to a mobile phone application or in this research case, a mobile phone game, should have a positive effect on their loyalty (Hsu & Lin, 2016).

2.1.9 Customer Loyalty is the dependent variable considered by both Hsiao & Chen (2016) and Huang & Hsieh (2011) research. While the former focused on a mobile phone game, and the latter focused on computer game, there are many similar elements such as the social aspects, and entertainment gratification. Loyalty to games in general may be difficult to gauge due to the nature of the product which is the experience, and therefore the customer may shift their loyalty more towards the game producer or provider instead. However, there are many online and mobile phone games with noticeable longevity in favor of players and this research aims to discover how these factors influence mobile game loyalty in a popular mobile phone game in Thailand "A".

2.2 Hypothesis

2.2.1 There is a positive relationship between Entertainment Gratification and Customer Loyalty.

2.2.2 There is a positive relationship between Interactivity and Customer Loyalty.

2.2.3 There is a positive relationship between Connectedness and Customer Loyalty.

2.2.4 There is a positive relationship between Satisfaction and Customer Loyalty.

2.2.5 There is a positive relationship between Attitude and Customer Loyalty.

2.2.6 There is a positive relationship between Social Norm and Customer Loyalty.

2.2.7 There is a positive relationship between Social Identification and Customer Loyalty.

2.2.8 There is a positive relationship between Stickiness and Customer Loyalty.

2.2.9 Entertainment Gratification, Interactivity, Connectedness,

Satisfaction, Attitude, Social Norm, Social Identification, and Stickiness

positively affect Customer Loyalty of mobile phone game "A" of

employees in Khlong Toei District, Bangkok.

2.3 Conceptual Framework

Independent Variables   Dependent Variable

| Entertainment Gratification |

| Interactivity |

| Connectedness |

| Satisfaction |

| Attitude |

| Social Norm |

| Social Identification |

| Stickiness |

| Customer Loyalty |
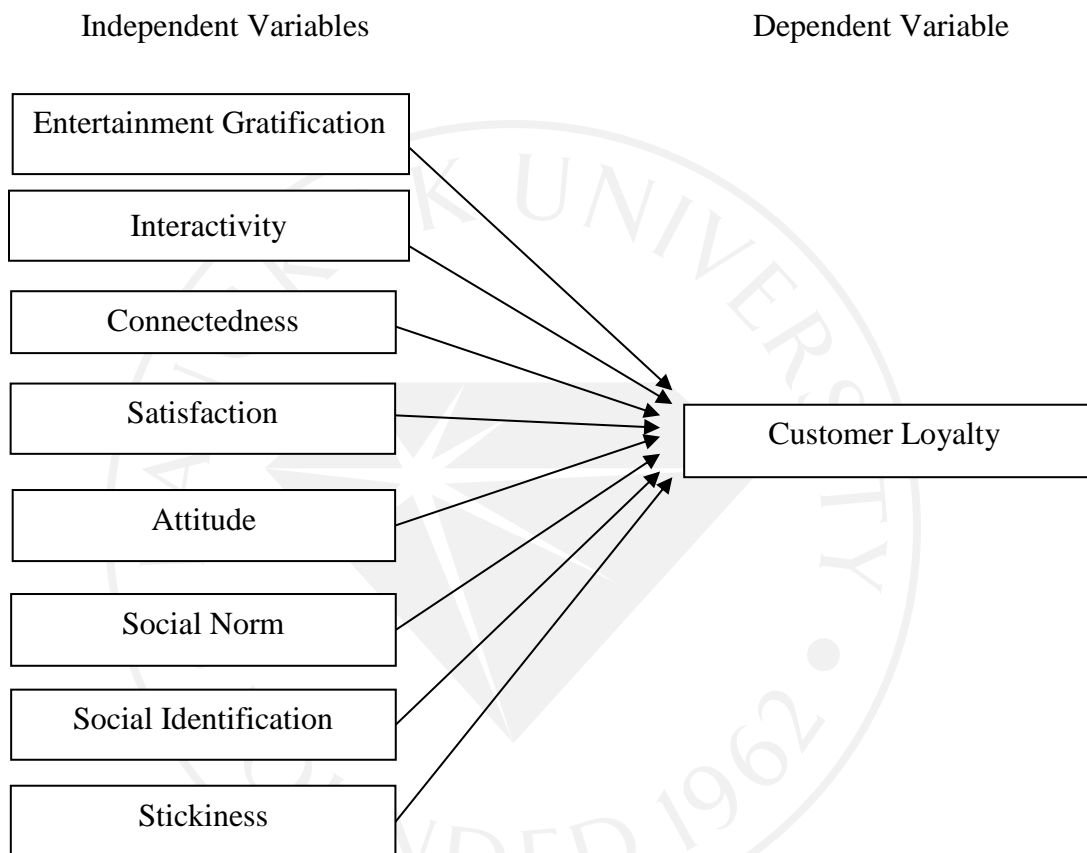
Figure 2.1: Theoretical framework for future intentions

CHAPTER 3

METHODOLOGY

3.1 Research Design

This research objective was to explore factors positively customer loyalty of mobile phone game "A" of employees in Khlong Toei, Bangkok The methodology was based on a quantitative approach. The survey method and data collection through questionnaires were chosen for this research.

3.2 Population and Sample Selection

Populations in this research were recruited by asking mutual friends in the game community group to help distribute the questionnaire, the targets are people who plays "A" game around the researcher's neighborhood. Research participants consist of "A" player who are employees from various companies in Khlong Toei district, mutual friends, as well as patrons and employees at the Gateway Ekkamai shopping mall, and BTS commuters at Prompong, Thong lo, Ekkamai, and Phra Khanong station. The process of sample selection is The researcher chose to conduct survey questionnaires to this group of participants as the advisor

suggested that the employees people are more reliable in their questionnaire response.

The sample size was calculated from 40 pilot questionnaires by using G*power version 3.1.9.2, created by Cohen (1977) and approveed by several researchers (Erdfelder, Faul & Buchner, 1996; Wiratchai, 2012), with the Power $(1-\beta)$ of 0.80, Alpha (α) of 0.20, Number of Test Predictor of 8, Effect Size of 0.0320983 (Calculated by Partial R^2 of 0.0311). As a result of G*power calculation, the minimum number of the total sample size was 385 (Cohen, 1977). Consequently, therefore, total of 400 sets of the questionnaire were collected from participants.

3.3 Research Instrument

3.3.1 The researcher explored published articles and journals related to gaming industry and mobile phone game applications from www.emeraldinsight.com and www.sciencedirect.com with the advisor's guidance.

3.3.2 The researcher created a questionnaire form by selecting the variables and questions from articles and journals and gets approval from the advisor.

3.3.3 The researcher asked two experts in the game industry, Mr. Natthawong Limsuwan, Project Manager at INI3 Digital PLC and Mr. Pattarawut

Udomyan, Section Manager at INI3 Digital PLC for consultant, and then finalized the questionnaire by referring to comments from the two experts and the advisor.

3.3.4 Launching 40 pilots testing of questionnaires. Next step was to conduct the reliability test of each variable in individual factor by using Cronbach's Alpha Coefficient. Value of Cronbach's Alpha was between $0 \leq \alpha \leq 1$, higher value means higher reliability and closely related of the section.

3.3.5 Analysis of the reliability test was executed for 40 pilots testing of questionnaires in order to ensure the grouping of question and the consistency of each factor were aligned with theories of study.

From instruments mentioned above, the questionnaire form that created from related principles could be divided into three parts with total fifty questions.

Part 1 Consist of 10 questions which were 6 closed-ended response questions about demographic and general information such as Gender, Age, Status, Level of education, Monthly income and Professional status. The other four questions were about game and mobile phone game, such as Experience with "A" game, amount of money spent on "A" game, number of game(s) installed on mobile phone and the preferred gaming platform (can select more than one).

Part 2 Closed-ended response questions on "Factor Positively Affecting Customer Loyalty of Mobile Phone Game "A" of Employees in Khlong Toei District in Bangkok"

Entertainment Gratification	4 Questions
Interactivity	4 Questions
Connectedness	4 Questions
Satisfaction	4 Questions
Attitude	4 Questions
Social Norm	4 Questions
Social Identification	4 Questions
Stickiness	4 Questions
Customer Loyalty	4 Questions

This part was evaluated from interval scale by using a five-point scales ranking from 1 (lowest agreeable level) to 5 (Highest agreeable level).

Part 3 Open-ended response question for participants to recommend other factors that might affect future intentions to exercise

3.4 Testing Research Instrument

      The researcher examined the validity and appropriateness of each question with 3 experts using an Index of Item-Objective Congruence: IOC. After revising each questionnaire items according to the expert comments, 40 pilot test questionnaires were launched. The Cronbach's Alpha Coefficient of each factors were computed, and the value was between 0.668-0.925 which exceed 0.65 regarding the suggested level.
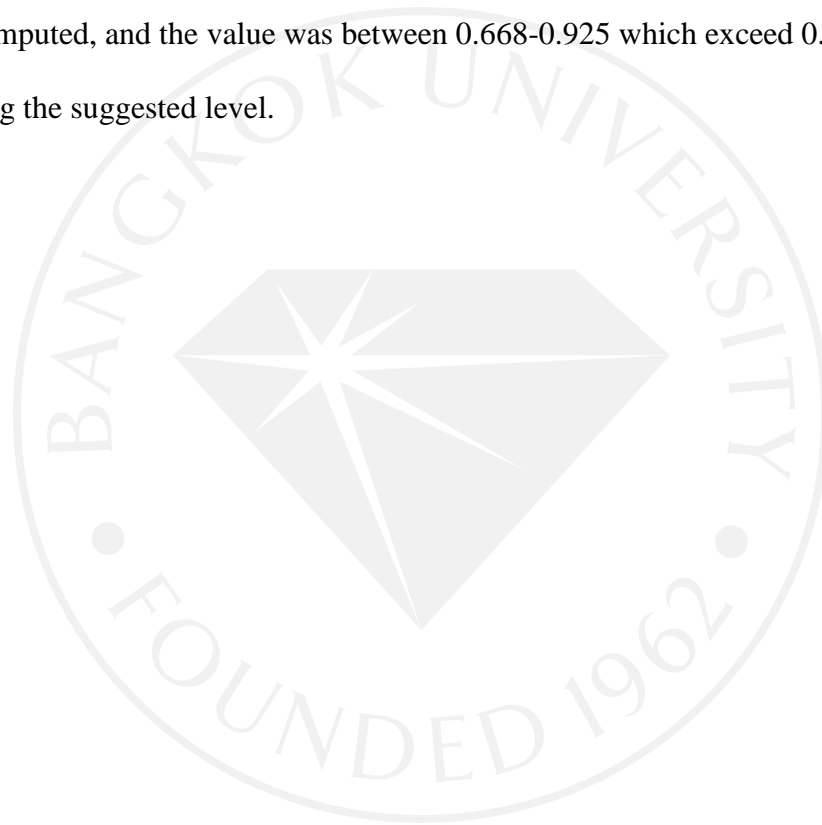
Table 3.1: Cronbach's Alpha Coefficient of 40 pilots testing of questionnaires

Questionnaire	n = 40	n = 400
Variable Factor		
Entertainment Gratification (EG)	.832	.656
Interactivity (IT)	.682	.801
Connectedness (CN)	.868	.858
Satisfaction (ST)	.925	.908
Attitude (AT)	.812	.858
Social Norm (SN)	.765	.730
Social Identification (SI)	.804	.807
Stickiness (SK)	.878	.920
Independent Factor		
Customer Loyalty (LY)	.742	.726

In this process, a total of four questionnaire items were deleted to increase Conbrach's Alpha Coefficient: those are IT4, AT4, SI1, and SK1. The questions IT4: "I like the interaction with people in "A"", AT4: "I feel that the developer and customer service team try to meet customer needs", SI1: "Playing "A" game would enhance my chance to meet people with whom I share common interest", and SK1: "I play "A" game every time I have free time and my mobile." were removed.

The researcher used factor analysis technique to investigate construct validity as well as analyzed factor loading value of each factor. The factor loading value result should exceed 0.3 to ensure the reliable component of questions.

Factor analysis was conducted based on these factors: Entertainment Gratification (EG), Interactivity (IT), Connectedness (CN), Satisfaction (ST), Attitude (AT), Social Norm (SN), Social Identification (SI), Stickiness (SK), and Customer Loyalty (LY) at n=400

Table 3.2: Factor Analysis of factors positively Affecting Customer Loyalty of Mobile Phone Game "A" of Employees in Khlong Toei District in Bangkok at n = 400

	EG	IT	CN	ST	AT	SN	SI	SK	LY
EG1	0.555								
EG2	0.578								
EG3	0.575								
EG4	0.399								
IT1		0.747							
IT2		0.792							
IT3		0.621							
CN1			0.640						
CN2			0.843						
CN3			0.655						
CN4			0.712						
ST1				0.687					
ST2				0.696					
ST3				0.812					
ST4				0.771					
AT1					0.611				
AT2					0.634				
AT3					0.752				

(Continued)

Table 3.2: (Continued) Factor Analysis of factors positively Affecting Customer Loyalty of Mobile Phone Game "A" of Employees in Khlong Toei District in Bangkok at n = 400

	EG	IT	CN	ST	AT	SN	SI	SK	LY
SN1						0.622			
SN2						0.696			
SN3						0.641			
SN4						0.487			
SI1							0.773		
SI2							0.781		
SI3							0.623		
SK2								0.881	
SK3								0.885	
SK4								0.802	
LY1									0.565
LY2									0.629
LY3									0.584
LY4									0.666

3.5 Statistics for Data Analysis

The questionnaires data were analyzed using a statistical analysis software SPSS version 23, with a Statistical Significant level of .01.

Descriptive statistics analysis such as demographic, general information and respondent's exercise behavior were measured by using Frequency and Percentage; whereas the scale ranking as Entertainment Gratification, Interactivity, Connectedness, Satisfaction, Attitude, Social Norm, Social Identification, Stickiness, and Customer Loyalty were measured by using Mean ($\bar{x}$) and Standard Deviation (S.D). Furthermore, Pearson's Correlation Coefficient and Multiple Regression analysis were used for Inferential Statistical Analysis to evaluate independent variable.

CHAPTER 4

RESEARCH RESULTS

The research objective was to explore factors positively customer loyalty of mobile phone game "A". The data was collected from 400 respondents using the survey questionnaire, and the data analysis was completed via SPSS version 23. The Cronbach's Alpha Coefficient of each factor was computed and the output value is between 0.656 - 0.920 as shown in table 3.1. This means that all alpha coefficients passed the suggested level (Nunnally, 1978) and had proven to be reliable.

4.1 Summary of Demographic Data

Of the 400 respondents, an overwhelming 385 people were male (96.25%), and only 15 people were female (3.75%), with the highest age range at 23-29 years old (56.5%), followed by 30-39 years old (36.5%). The majority marital status was single (75.5%), while the largest answer for education background was bachelor degree or equivalent (73.5%). Most respondents have an income at 15,000 – 50,000 Baht per month (a cumulative of 96%). 86.5% of respondents were private company employees, and most of them have more than 3 months of experience with ""A"" game (cumulative of 95.5%), and the typical number of game(s) installed on their mobile phone is 2-3 games (41.5%). Lastly,

for gaming platform preferences, personal computer and mobile phone are the top

two preferred platform at 70.5% and 70% respectively, while PlayStation (45%)

and Nintendo (41%) received slightly less than half preference.

4.2 Results of Research Variables

The analysis of the correlation between independent variable and the dependent variable using Pearson's Correlation Coefficient of Entertainment Gratification, Interactivity, Connectedness, Satisfaction, Attitude, Social Norm, Social Identification, and Stickin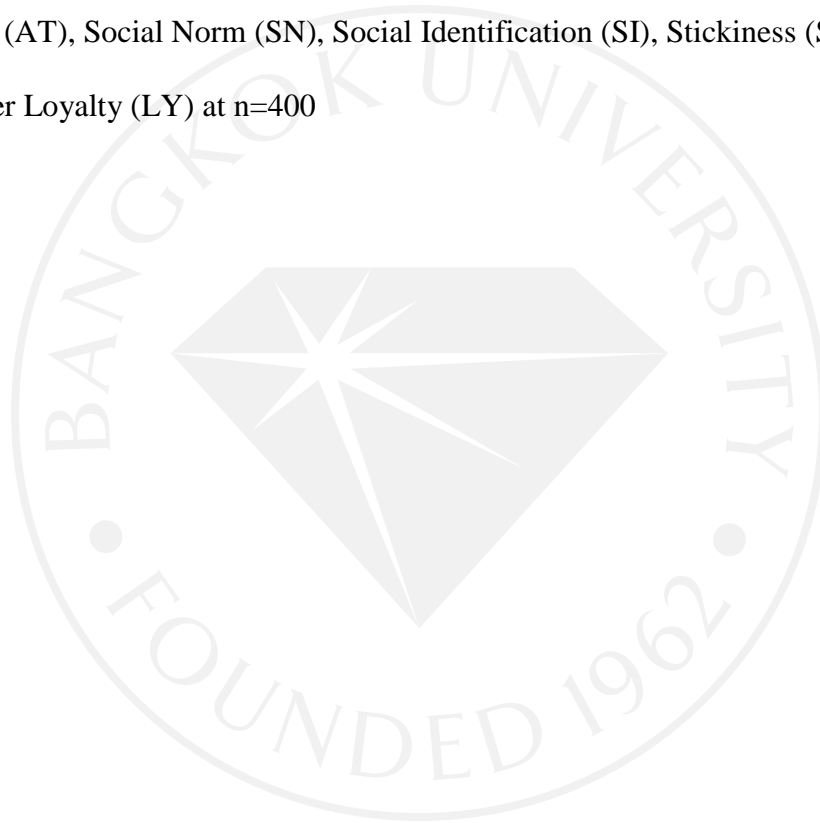ess that positively affecting Customer Loyalty of Mobile Phone Game "A" of Employees in Khlong Toei District in Bangkok.

The data was collected from 400 respondents via a survey questionnaire, and then the data analysis completed by SPSS version 23. The Cronbach's Alpha Coefficient of each factor was computed which had the result value between 0.656-0.920 as shown in table 3.1, meaning that all alpha coefficient passed the suggested level (Nunnally, 1978) and had proven to be reliable.

Table 4.1: Analysis of correlation between independent variable and dependent

variable using Pearson's Correlation Coefficient

(Descriptive Statistic)

	Mean	S.D.	N
Entertainment Gratification	4.3763	0.44567	400
Interactivity	3.6158	0.65650	400
Connectedness	2.7888	0.93962	400
Satisfaction	3.6925	0.77945	400
Attitude	3.8717	0.71088	400
Social Norm	3.2050	0.85428	400
Social Identification	2.9617	0.79274	400
Stickiness	2.9817	1.13877	400
Customer Loyalty	3.5788	0.75700	400

Table 4.2: Analysis of correlation between independent variable and the dependent variable using Pearson's Correlation Coefficient of Entertainment Gratification, Interactivity, Connectedness, Satisfaction, Attitude, Social Norm, Social Identification, and Stickiness that positively affecting Customer Loyalty of Mobile Phone Game "A"

Variable	EG	IT	CN	ST	AT	SN	SI	SK	LY
Entertainment Gratification (EG)	1								
Interactivity (IT)	.036	1							
Connectedness (CN)	.086	.043	1						
Satisfaction (ST)	.132**	.037	.272**	1					
Attitude (AT)	.167**	.009	.320**	.750**	1				
Social Norm (SN)	.077	-.024	.317**	.388**	.422**	1			
Social Identification (SI)	.089	.007	.130**	.202**	.291**	.152**	1		
Stickiness (SK)	.093	-.080	.108*	.259**	.321**	.133**	.186**	1	
Customer Loyalty (LY)	.133**	.105*	.207**	.292**	.353**	.106*	.168**	.366**	1

** Correlation is significant at the .01 level
* Correlation is significant at the .05 level

According to table 4.2, hypothesis can be explained as the following

Hypothesis 1: Entertainment Gratification has a positive relationship toward Customer Loyalty or not. The analysis revealed that Entertainment Gratification has a positive relationship toward Customer Loyalty (Pearson's Correlation = 0.133) at .01 significant level.

Hypothesis 2: Interactivity has a positive relationship toward Customer Loyalty or not. The analysis revealed that Interactivity has a positive relationship toward Customer Loyalty (Pearson's Correlation = 0.105) at .01 significant level.

Hypothesis 3: Connectedness has a positive relationship toward Customer Loyalty or not. The analysis revealed that Connectedness has a positive relationship toward Customer Loyalty (Pearson's Correlation = 0.207) at .01 significant level.

Hypothesis 4: Satisfaction has a positive relationship toward Customer Loyalty or not. The analysis revealed that Satisfaction has a positive relationship toward Customer Loyalty (Pearson's Correlation = 0.292) at .01 significant level.

Hypothesis 5: Attitude has a positive relationship toward Customer Loyalty or not. The analysis revealed that Attitude has a positive relationship toward Customer Loyalty (Pearson's Correlation = 0.353) at .01 significant level.

Hypothesis 6: Social Norm has a positive relationship toward Customer Loyalty or not. The analysis revealed that Social Norm has a positive relationship toward Customer Loyalty (Pearson's Correlation = 0.106) at .01 significant level.

Hypothesis 7: Social Identification has a positive relationship toward Customer Loyalty or not. The analysis revealed that Social Identification has a positive relationship toward Customer Loyalty (Pearson's Correlation = 0.168) at .01 significant level.

Hypothesis 8: Stickiness has a positive relationship toward Customer Loyalty or not. The analysis revealed that Stickiness has a positive relationship toward Customer Loyalty (Pearson's Correlation = 0.366) at .01 significant level.

4.3 Results of Hypothesis Testing

Table 4.3: Analysis of variance (ANOVA) of Entertainment Gratification,

Interactivity, Connectedness, Satisfaction, Attitude, Social Norm,

Social Identification, and Stickiness should positively affect Customer

Loyalty of mobile phone game "A" in Khlong Toei, Bangkok

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.513	8	6.564	14.572	0.000[b]
	Residual	176.132	391	.450		
	Total	228.644	399			

From table 4.3 above, ANOVA analysis confirmed that independent factor

comprised of Entertainment Gratification, Interactivity, Connectedness,

Satisfaction, Attitude, Social Norm, Social Identification, and Stickiness that

positively affecting Customer Loyalty of Mobile Phone Game "A" because Sig.

of the equation equaled 0.000 at .01 significant level.

Table 4.4: Multiple Regression Analysis of Entertainment Gratification,

Interactivity, Connectedness, Satisfaction, Attitude, Social Norm, Social

Identification, and Stickiness that positively affect Customer Loyalty of mobile

phone game "A" of employees in Khlong Toei District, Bangkok.

Dependent Variable : Customer Loyalty, R = 0.479 , R^2 = 0.230 , Constant(a) = 0.986						
Independent Variables	**β**	**Std. Error**	**T**	**Sig**	**Tolerance**	**VIF**
(Constant)		0.406	2.428	.016		
Entertainment Gratification (EG)	0.055	0.077	1.221	0.223	0.966	1.035
Interactivity (IT)	0.115*	0.052	2.575	.010*	0.984	1.016
Connectedness (CN)	0.108	0.039	2.252	0.025	0.853	1.173
Satisfaction (ST)	0.047	0.066	0.694	0.488	0.430	2.328
Attitude (AT)	0.203*	0.077	2.827	0.005*	0.380	2.629
Social Norm (SN)	-0.077	0.045	-1.530	0.127	0.773	1.294
Social Identification (SI)	0.038	0.045	0.823	0.411	0.901	1.109
Stickiness (SK)	0.284*	0.031	5.997	0.000*	0.878	1.139

*significant at the .01 level

From table 4.4, Multiple Regression Analysis results defined that three independent variables, which were Interactivity (Sig = .010), Attitude (Sig =0.005), and Stickiness (Sig = 0.000) could be used as predictors for Customer Loyalty. While five other independent variables had no positive affect on Customer Loyalty: Entertainment Gratification (Sig = 0.223), Connectedness (Sig = 0.025), Satisfaction (Sig = 0.488), Social Norm (Sig = 0.127), and Social Identification (Sig = 0.411). Therefore these five independent variables were not a significant predictor of Customer Loyalty.

The most predictive independent variables were Stickiness (β = 0.284), Attitude (β = 0.203), and Interactivity (β = 0.115). As a result, Stickiness, Attitude, and Interactivity could be shown as the factors positively affecting Customer Loyalty of Mobile Phone Game "A" at 23.1%. The rest 76.9% were influenced by other variables which were not in used in this research. The standard error was ±0.406 by the following equation

Y (Customer Loyalty) = 0.986 + 0.284 (Stickiness) + 0.203 (Attitude) + 0.115 (Interactivity)

From this equation

If Stickiness value increased by 1 point while other factors remained the same, Customer Loyalty would be increased by 0.284 points.

If Attitude value increased by 1 point while other factors remained the same, Customer Loyalty would be increased by 0.203 points.

If Interactivity value increased by 1 point whiles other factors remained the same, Customer Loyalty would be increased by 0.115 points.

From table 4.4 used to test the following hypothesis.

Hypothesis 9: By using Multiple Regression Analysis, the result showed that Stickiness, Attitude and Interactivity have positive affect on Customer Loyalty at statistical significant level of .01. On the contrary Entertainment Gratification, Connectedness, Satisfaction, Social Norm, and Social Identification have no positive affect on Customer Loyalty at .01 statistical significant.

In statistics, Multicollinearity is a circumstance of a very high relationship among the independent variables (Statistics Solutions, 2017). High multicollinearity indicated the high degree of correlation between independent variables which might cause some deviation from the true value. Likewise, multicollinearity should not occur as it could lead to incorrect interpretation of multiple regression results.

Multicollinearity can be examined by Variance Inflation Factor (VIF) value or Tolerance value. Variance Inflation Factor (VIF) value should not exceed 4 and Tolerance value should exceed 0.2 (Miles & Shelvin, 2001).

Results shown in table 4.4 indicate that Tolerance value of each independent

variables exceeded 0.2 with the lowest value at 0.380 and Variance Inflation

Factor (VIF) value of each independent variables values did not exceed 4 with the

highest value 2.629. In conclusion, there is no Multicollinearity among the

independent variables.

4.4 Summary of Hypothesis Testing

Result of Multiple Regression Analysis indicates that Stickiness, Attitude and Interactivity have positive affect on Customer Loyalty of Mobile Phone Game "A" at statistical significant level of .01. Whereas Entertainment Gratification, Connectedness, Satisfaction, Social Norm, and Social Identification have no positive affect on Customer Loyalty of Mobile Phone Game "A" at .01 statistical significant, as shown in figure 4.1

Entertainment Gratification

H1: β = 0.055, r = 0.133

Interactivity

. H2: β = 0.115*, r = 0.105

Connectedness

H3: β = 0.108, r = 0.207

Satisfaction

Customer Loyalty

H4: β = 0.047, r = 0.292

Attitude

H5: β = 0.203*, r = 353

Social Norm

H6: β = -0.077, r = 106

Social Identification

H7: β = 0.038, r = 0.168

Stickiness

H8: β = 0.284*, r = 0.366

*significant at the .01 level

→ Influence or positive relation

- - - - - → No influence or positive relation
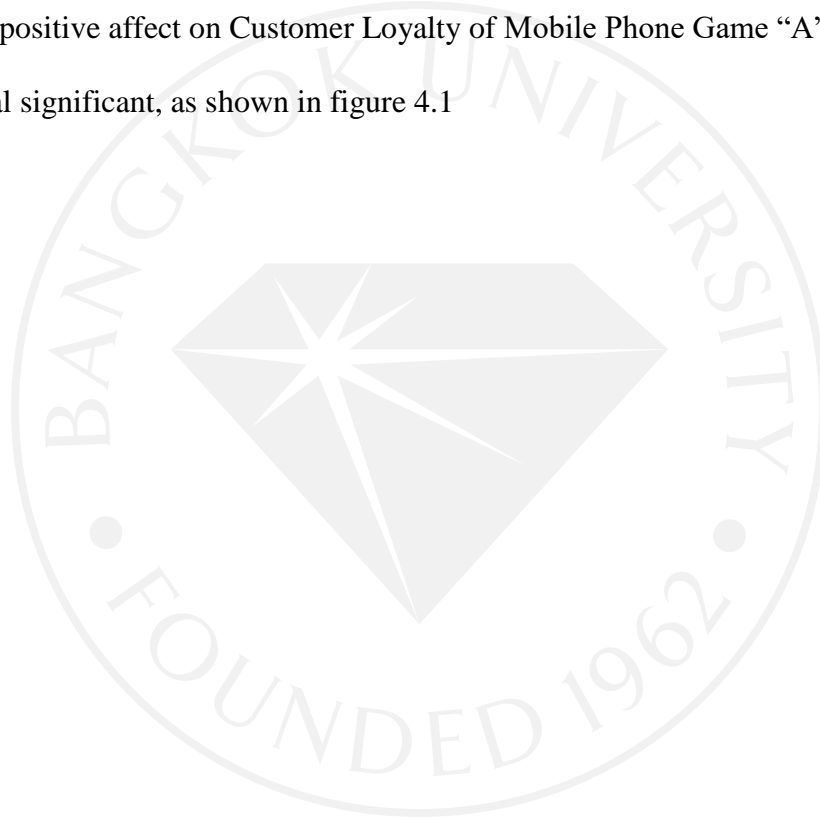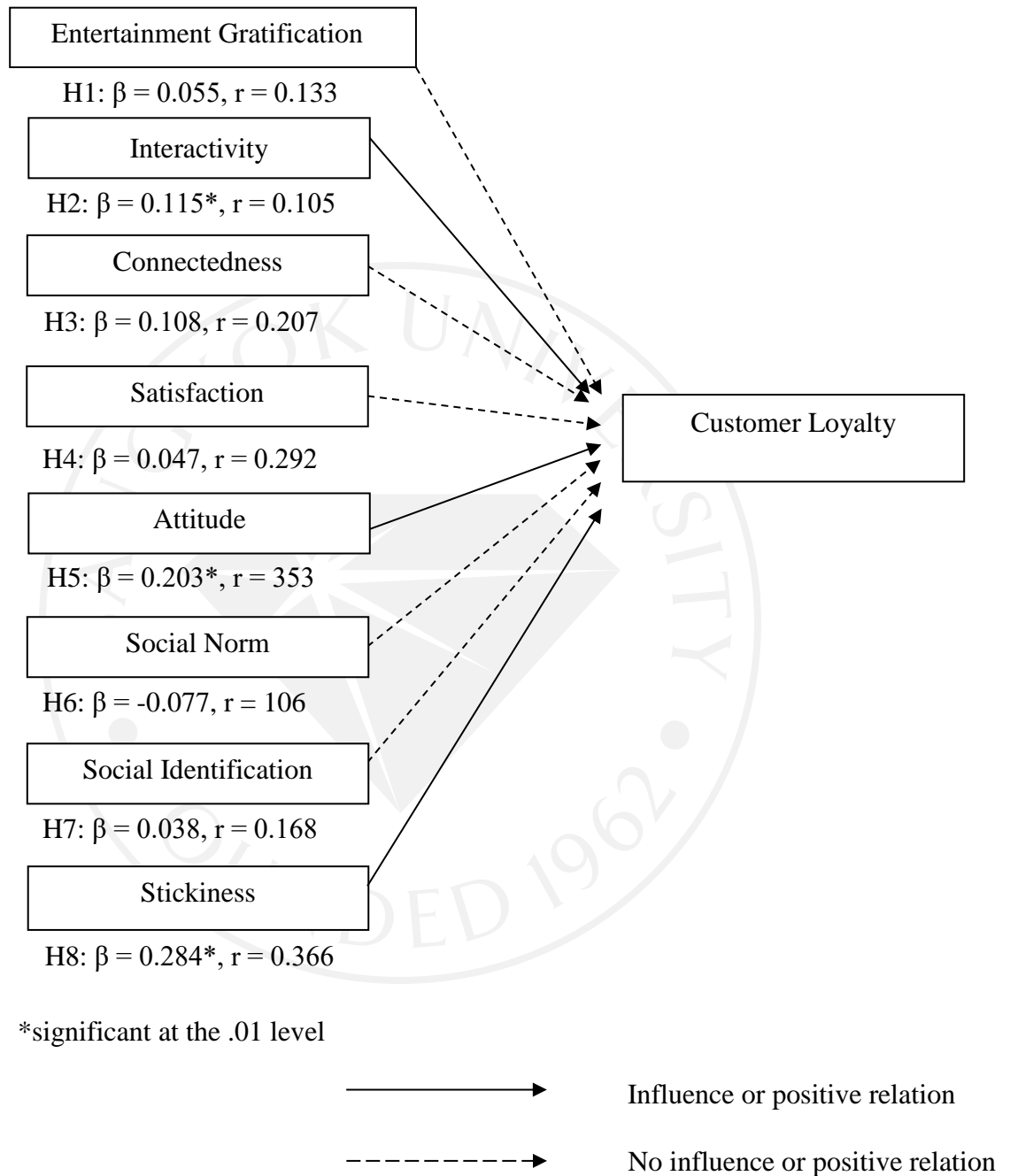
Figure 4.1: Result of Multiple Regression Analysis from scope of Research

CHAPTER 5

DISCUSSION

The purpose of this research is to study positive factors which influence customer loyalty in mobile phone games. Entertainment Gratification, Interactivity, Connectedness, Satisfaction, Attitude, Social Norm, Social Identification, and Stickiness are the chosen variables and the chosen mobile phone game is "A". A quantitative research method was used for this research through questionnaires surveys for data collection.

Research participants consist of "A" player who are employees from various companies in Khlong Toei district, mutual friends, as well as patrons and employees at the Gateway Ekkamai shopping mall, and BTS commuters at Prompong, Thong lo, Ekkamai, and Phra Khanong station. The data analysis was completed by SPSS version 23, and the results could be concluded as the following.

5.1 Research Findings and Conclusion

The majority of the participants were single male aged 23-29 years old, with the biggest income range of 15,000 – 50,000 Baht per month as private company employees. Most of them have more than 3 months of experience with

"A", commonly install 2-3 games on their mobile phone, and their preferred

gaming platforms were computer and mobile phone.

Regarding the analysis results based on the hypothesis, there were three accepted

hypothesis: Stickiness (β = 0.284), Attitude (β = 0.203), and Interactivity (β =

0.115). From this result, we could conclude that Stickiness, Attitude, and

Interactivity have positive effect on Customer Loyalty at statistically significant

level 0f .01. In addition, these three factors contribute to 23.1% of positive effect

on Customer Loyalty, while the rest 76.9% were influenced by other variables

which were not in used in this research. The standard error was ±0.406 by the

following equation

Y (Customer Loyalty) = 0.986 + 0.284 (Stickiness) + 0.203 (Attitude) + 0.115

(Interactivity)

5.2 Discussion

Hypothesis 1: Entertainment Gratification has a positive relationship

toward Customer Loyalty or not. The result from Pearson's Correlation analysis

revealed that Entertainment Gratification has no positive relationship toward

Customer Loyalty at .01 significant level. The researcher suspected that this is due

to the fact that this research is based on a Mobile Battle Arena game, where

players start playing a new game every 10 to 15 minutes, and different game, with different teammates, can feel very different. A game when the player overwhelmingly winning against the opponent would be perceived as much more fun than a game when you struggle mightily. It also would not achieve a long "online flow" like role-playing game (Huang & Hsieh, 2011).

Hypothesis 2: Interactivity has a positive relationship toward Customer Loyalty or not. The result from Pearson's Correlation analysis revealed that Interactivity has a positive relationship toward Customer Loyalty at .01 significant level. Interactivity has the least affect among the three positive variables, there were three questions in the questionnaire about interaction between the player and the game interface, and one question about interaction between player and other players in the game, however, since the game is an online, real-time game, it is possible that unpleasant interactions between players and the interface could be caused by mobile internet connection, the game server, and/or mobile phone limited specification. It is also worth noting that the degree in which people sense unpleasant response would differ from one another. Moreover, the nature of the game which is competitive and require high teamwork and understanding between players could be the cause of some difference in replies for interaction between players. (Huang & Hsieh, 2011)

Hypothesis 3: Connectedness has a positive relationship toward Customer Loyalty or not. The result from Pearson's Correlation analysis revealed that Connectedness has no positive relationship toward Customer Loyalty at .01 significant level. It is unavoidable in battle arena games to get bad teammates and some players who are not willing to cooperate. People who are older would have more or less understood this fact and brushes it off. One other inspection is that when games have become massively popular, players would feel less attached to the community and feel less included because so many people are playing, and therefore do not strongly feel like they share a bond with other players. (Hsiao & Chen, 2016)

Hypothesis 4: Satisfaction has a positive relationship toward Customer Loyalty or not. The result from Pearson's Correlation analysis revealed that Satisfaction has no positive relationship toward Customer Loyalty at .01 significant level. Although satisfaction seems like a factor that will contribute to Customer Loyalty, the result shows otherwise. Satisfaction could lead to positive attitude and stickiness (Hsu & Lin, 2016), the factor itself has no positive affect and this could be a result of the participants encountering a bad day with random teammates, or feeling bad with recent game updates.

Hypothesis 5: Attitude has a positive relationship toward Customer Loyalty or not. The result from Pearson's Correlation analysis revealed that Attitude has a positive relationship toward Customer Loyalty at .01 significant

level. Attitude is perceived as the reflection of the customer impression on the mobile phone game (Hsu & Lin, 2016). This means that whenever the attitude towards the game drops, the loyalty should also drops, and therefore shows a positive relationship between the two variables at the time that the participants answer the questionnaire. The result showed that there really is a positive relationship between Attitude and Customer Loyalty at .01 significant level.

Hypothesis 6: Social Norm has a positive relationship toward Customer Loyalty or not. The result from Pearson's Correlation analysis revealed that Social Norm has no positive relationship toward Customer Loyalty at .01 significant level. Although it is believe that social influence play a big part in purchase intention because people often are cautious of what their social circle thinks of them (Hsu & Lin, 2016), the result indicates that Social Norm has no positive effect on Customer Loyalty. Since all of the participants are employees, they would obviously be less dependent on their family members and friends, and even though their answer to this group of questions could be positive, there are other factors that contribute more weigh to loyalty, rendering this variable insignificant.

Hypothesis 7: Social Identification has a positive relationship toward Customer Loyalty or not. The result from Pearson's Correlation analysis revealed that Social Identification has no positive relationship toward Customer Loyalty at .01 significant level. This variable is comparatively similar to Connectedness and it revolves around the sense of belonging in a group, as well as sharing the same

interest and information about the game (Hsu & Lin, 2016). Despite social influence being observed as an important factor in some game-related research, the result shows that with a mobile phone battle arena, it does not provide significant positive relationship towards loyalty.

Hypothesis 8: Stickiness has a positive relationship toward Customer Loyalty or not. The result from Pearson's Correlation analysis revealed that Stickiness has a positive relationship toward Customer Loyalty at .01 significant level. Stickiness depicts the degree to which players re-play the game and prolong the duration of each play interval (Hsu & Lin, 2016), and on this research has the highest positive effect on Customer Loyalty. The theme of the questions from this variable is vaguely similar to that of Customer Loyalty, and people who keep coming back to use any product is a good indication of loyalty in itself.

Hypothesis 9: The result from Multiple Regression Analysis showed that there are three factors positively affecting Customer Loyalty of mobile phone game "A" which are Interactivity (Huang & Hsieh, 2011), Attitude (Hsu & Lin, 2016), and Stickiness (Hsu & Lin, 2016) at statistically significant level of .01. As oppose to traditional role-playing computer game, Entertainment Gratification, and the social aspects of people spending time together to relax and communicate in-game results to not having positive effect. While there are three variables that show positive result, they only accumulate for 23.1% of predicting the Customer

Loyalty of the game. This is most likely because different genres and platforms of games have their unique characteristics and some of them are also an experience-based type of product, therefore, it is possible for customer to change their opinion as they experience updates and uncontrollable factors within the game. Some of the questionnaire items were derived from different genres of game and as a result, there are many other potentially positive factors left out from the research.

5.3 Recommendation for Managerial Implication

The result from this research could benefit the mobile phone game industry as they can realize that each genre of games have different factors that positively affecting customer loyalty. As discussed above, the factors with most positive influence on customer loyalty of mobile phone game "A" were Stickiness, Attitude, and Interactivity.

5.3.1 Stickiness, by its definition, is very closely related to loyalty. It is the degree to which users re-use a given app and prolong the duration of each usage. As it is defined, the more people use and feel attached to a mobile phone game, the more loyalty they are. From these aspects, managerial implication can lean towards rewarding players on a daily or weekly basis with their item and currency

rewards, and also give extra bonus for those who stay online and active in the game longer than others.

5.3.2 The customers' attitude towards a product would be influential to determine whether or not they will continuously use the product, stick around, and recommend it to their friends and family members. Managers should always ensure that customers' attitude towards their product is never negative. To ensure this, they need to make sure every experience the customers are getting will be as smooth as possible, this include the gameplay, the purchase, the customer care system, the help and support procedures. They should also read a lot of feedbacks from players and act fast and be as responsive as they can. This will reinforce and maintain players' positive attitude towards the game and the company.

5.3.3 The last factor, interactivity, can be implied by allowing customer to change and customize graphic and gameplay settings so that they can play in the most suitable way. The other case with interaction between players can be improved by issuing and regulating a strict conduct code and report system for players with poor behavior. They could also implement a system where players with poor conduct score gets group together for matches, this way players with good conduct score will not get affected and player with poor behavior will realize themselves and change, or start on a fresh, new account.

5.4 Recommendation for Future Research

      This research was conducted by only reviewing a small number of existing research papers and therefore some of the questionnaire items may be too closely related such as those in the variable category of Connectedness and Social Identification. It is also important to note that the genre of the games in the research papers were different and thus there are variables which are thought to have positive effect with Customer Loyalty but would not show significant effect with the multiplayer online battle arena genre. Some of the participants commented that the questionnaire length was rather long and some questionnaire items were rather similar. The sample size and demographic distribution could also be improved and the result would be more accurate.

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APPENDIX A

Survey Questions (English)
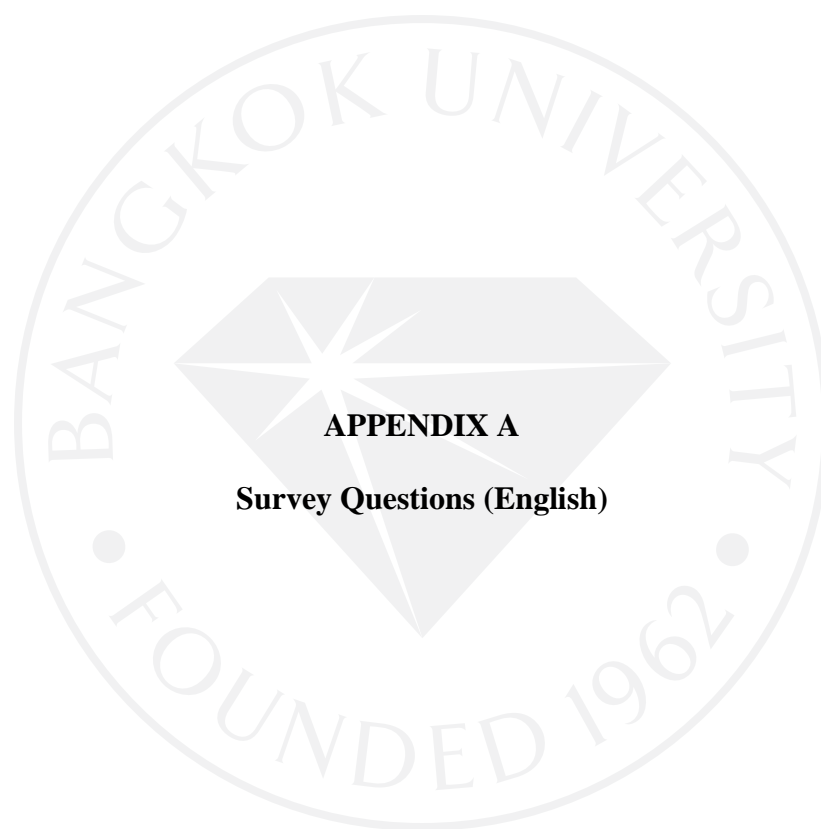
Knowledge Page

Mobile phone game "A" is a popular mobile phone game among many

people in Thailand. Garena Thailand is the game provider. The game is also

known as Arena of Valor in other countries.

มหาวิทยาลัยกรุงเทพ

BANGKOK UNIVERSITY

NO.........

Questionnaire

on

Factors Positively Affecting Customer Loyalty of "A" Mobile Game "A" of Employees in Khlong Toei District in Bangkok

Instruction: Objective of this survey is to collected data for use in Master of Business

Administration research, Bangkok University. The result of this research will benefit the

mobile game industry. In this regard, cooperation from the respondents are needed. I, Chaianan

Terdkiatkhachorn, MBA student of Bangkok University am thankful for your cooperation.

Please answer the following question by putting a √ in □ that matches you most.

1. Gender

      □ 1) Male   □ 2) Female

2. Age

☐ 1) Under 23 years old ☐ 2) 23-29 years old

☐ 3) 30-39 years old ☐ 4) 40-49 years old

☐ 5) 50 years old or more

3. Status

☐ 1) Single ☐ 2) Married

☐ 3) Divorced/ Widowed/ Separated

4. Level of Education

☐ 1) Under Bachelor Degree ☐ 2) Bachelor Degree

☐ 3) Master Degree ☐ 4) Doctorate Degree

☐ 5) Others_____

5. Monthly Income

☐ 1) 15,000 baht or less ☐ 2) 15,001-30,000 baht

☐ 3) 30,001-50,000 baht ☐ 4 50,001-100,000 baht

☐ 5) More than 100,000 baht

6. Occupation

☐ 1) State enterprise employee ☐ 2) Private employee

☐ 3) Self-Employed ☐ 4) Others, please specify

_____

7. Experience with mobile phone game "A"

☐ 1) Less than 1 month ☐ 2) 1-3 months

☐ 3) Over 3 months to 6 months ☐ 4) Over 6 months to 12 months

☐ 5) More than 12 months

8. Amount of Money Spent on mobile phone game "A"

☐ 1) 0 baht (never spent) ☐ 2) 1-200 baht

☐ 3) 201-1000 baht ☐ 4) 1001- 3000 baht

☐ 5) 3001- 5000 baht ☐ 6) 5001 baht or more

9. Number of Game(s) Installed on Your Mobile Phone Right Now

☐ 1) 1 game ☐ 2) 2-3 games

☐ 3) 4-6 games ☐ 4) 7-10 games

☐ 5) More than 10 games

10. **Gaming Platform Preference (Can select more than one)**

☐ 1) Personal Computer ☐ 2) Mobile Phone

☐ 3) Nintendo ☐ 4) PlayStation

☐ 5) Other, Please Specify _____

Please mark every question with only one √ in the box that most corresponded to your opinion.

		Agreeable Level				
		Highest 5	High 4	Moderate 3	Low 2	Lowest 1
Entertainment Gratification						
1	I play mobile phone game "A" as a diversion.					
2	I play "A" as an entertainment.					
3	I play "A" for fun.					
4	I play "A" to fill times.					
Interactivity						
1	In game interaction is fast and pleasant.					
2	"Pages" of "A" game usually load quickly.					
3	I do not experience lagging response while playing "A". (Changed to positive sentence)					
4	I like the interaction with people in "A".					
Connectedness						
1	Players of "A" share their experience and feelings with others through this mobile game.					

2	Players of "A" benefit from the user community using this mobile game.					
3	Players of "A" share a common bond with other players.					

4	Players of "A" like to participate in community events and communication.					
Satisfaction						
1	Playing "A" makes me feel very satisfied.					
2	Playing "A" gives me a sense of enjoyment.					
3	Playing "A" makes me feel very contented.					
4	Playing "A" makes me feel very delighted.					
Attitude						
1	My attitude towards "A" is favorable.					
2	I like playing "A".					
3	I feel good about playing "A".					

4	I feel that the developer and customer service team try to meet customer needs.					
Social Norm						
1	People who are important to me would approvee of me playing "A".					
2	People who are important to me think that I should play "A".					
3	People who influence my behavior encourage me to play "A".					

4	People I know influent how much time I spend with "A".					
Social Identification						
1	Playing "A" game would enhance my chance to meet people with whom I share common interest.					
2	I am proud to be an "A" player and a member of its community.					
3	Playing "A" gives me a strong feeling of belonging to a group.					
4	"A" community allows players to maintain close ties and share information.					
Stickiness						

1	I would stay longer on "A" game than other games.					
2	I intend to spend more time playing "A".					
3	I play "A" game as often as I can.					
4	I play "A" game every time I have free time and my mobile.					
Customer Loyalty						
1	"A" is my first choice in mobile games.					
2	I will continue to play "A".					
3	I am willing to say positive things about "A" to others.					
4	If people I know want to play a mobile game, I will recommend "A".					

Please recommend other factors that might affect customer loyalty on mobile games

_____

_____

_____

_____

_____

_____

Thank you for your cooperation

Mr. Chaianan Terdkiatkhachorn

E–Mail: chitty6559@gmail.com

62
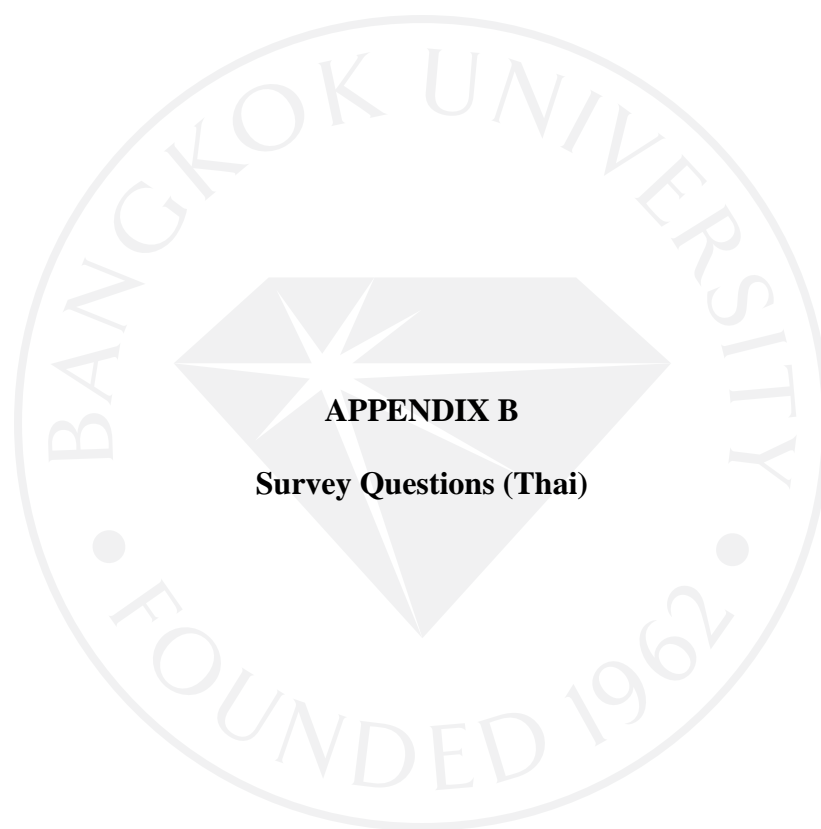
APPENDIX B

Survey Questions (Thai)

ใบความรู้

"A" เป็นเกมออนไลน์บนโทรศัพท์เคลื่อนที่ซึ่งได้รับความนิยมอย่างมากในหมู่คนไทย ผู้ให้บริการ

ของเกมคือบริษัท การีนา ออนไลน์ ประเทศไทย จำกัด

ในประเทศอื่นๆ เกมนี้มีชื่อเรียกอีกชื่อว่า Arena of Valor (อารีน่า ออฟ วาเลอร์)

มหาวิทยาลัยกรุงเทพ
BANGKOK UNIVERSITY

NO..........

แบบสอบถาม

เรื่อง ปัจจัยที่มีอิทธิพลบวกต่อความภักดีของลูกค้าต่อเกมในโทรศัพท์มือถือ"A" ในหมู่พนักงานบริษัทในเขตคลองเตย กทม.

คำชี้แจง: แบบสอบถามนี้มีวัตถุประสงค์เก็บรวบรวมข้อมูล เพื่อนำไปประกอบการศึกษาระดับปริญญาโท บริหารธุรกิจมหาบัณฑิต มหาวิทยาลัยกรุงเทพ และสามารถนำผลการวิจัยไปใช้ประโยชน์ได้อย่างมีประสิทธิภาพต่อธุรกิจฟิตเนส ดังนั้นจึงใคร่ขอความร่วมมือจากท่านในการตอบแบบสอบถามให้ตรงตามความเห็นของท่านมากที่สุด โอกาสนี้ผู้ศึกษาวิจัยนาย ไชยอนันต์ เทิดเกียรติขจร นักศึกษาปริญญาโท สาขาวิชาเอกบริหารธุรกิจ คณะบริหารธุรกิจ มหาวิทยาลัยกรุงเทพ ขอขอบคุณในความร่วมมือของท่านเป็นอย่างสูง

คำชี้แจง: โปรดทำเครื่องหมาย ✔ ลงในช่องที่ตรงกับความคิดเห็นของท่านมากที่สุดในแต่ละข้อ เพียงข้อละหนึ่งคำตอบและโปรดทำให้ครบทุกข้อ

1. เพศ

☐ 1) ชาย   ☐ 2) หญิง

2. อายุ

☐ 1) ต่ำกว่า 23 ปี   ☐ 2) 23-29 ปี

☐ 3) 30-39 ปี   ☐ 4) 40-49 ปี

☐ 5) มากกว่า 50 ปี

3. สถานภาพ

☐ 1) โสด   ☐ 2) สมรส   ☐ 3) หย่าร้าง/ หม้าย/ แยกกันอยู่

4. ระดับการศึกษา

☐ 1) ต่ำกว่าปริญญาตรี   ☐ 2) ปริญญาตรี

☐ 3) ปริญญาโท   ☐ 4) ปริญญาเอก

☐ 5) อื่น ๆ...

5. รายได้ต่อเดือน

☐ 1) น้อยกว่าหรือเท่ากับ 15,000 บาท   ☐ 2) 15,001–30,000 บาท

☐ 3) 30,001–50,000 บาท   ☐ 4) มากกว่า 50,000 บาท

6. อาชีพ

☐ 1) พนักงานรัฐวิสาหกิจ/ รับราชการ   ☐ 2) พนักงานบริษัทเอกชน/ รับจ้าง

☐ 3) ธุรกิจส่วนตัว/ ค้าขาย   ☐ 4) อื่นๆ, โปรดระบุ
....

7. ประสบการณ์ในการเล่นเกม "A"

☐ 1) น้อยกว่า 1 เดือน   ☐ 2) 1-3 เดือน

☐ 3) มากกว่า 3 เดือน ถึง 6 เดือน   ☐ 4) มากกว่า 6 เดือน ถึง 12 เดือน

☐ 5) มากกว่า 12 เดือน

8. จำนวนเงินที่ใช้จ่ายไปกับเกม "A"

☐ 1) ไม่เคยจ่ายเงินเลย   ☐ 2) 1-200 บาท

☐ 3) 201-1000 บาท   ☐ 4) 1001-3000 บาท

☐ 5) 3001-5000 บาท   ☐ 6) 5001 บาทขึ้นไป

9. จำนวนเกมที่ท่านติดตั้งบนโทรศัพท์เคลื่อนที่ของท่าน

☐ 1) 1 เกม   ☐ 2) 2-3 เกม

☐ 3) 4-6 เกม   ☐ 4) 7-10 เกม

☐ 5) มากกว่า 10 เกม

10. เครื่องเล่นเกมที่ท่านชอบ (สามารถตอบได้มากกว่า 1 ข้อ)

☐ 1) คอมพิวเตอร์   ☐ 2) โทรศัพท์เคลื่อนที่

☐ 3) เครื่องนินเท็นโด้   ☐ 4) เครื่องเพลย์สเตชั่น

☐ 5) อื่นๆ, โปรดระบุ ....

โปรดทำเครื่องหมาย √ ลงในช่องที่ตรงกับความคิดเห็นของท่านมากที่สุดในแต่ละข้อเพียงข้อละ

หนึ่งคำตอบและโปรดทำให้ครบทุกข้อ

		ระดับความเห็นด้วย				
		มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
การได้รับความบันเทิง						
1	ฉันเล่นเกม "A" เป็นกิจกรรมนันทนาการ					
2	ฉันเล่นเกม "A" เพื่อความบันเทิง					
3	ฉันเล่นเกม "A" เพื่อความสนุก					
4	ฉันเล่นเกม "A" เพื่อฆ่าเวลา					
ด้านปฏิสัมพันธ์						
1	ปฏิสัมพันธ์ในเกม "A" รวดเร็วและน่าพอใจ					
2	หน้าเมนูต่างๆของเกม "A" โหลดอย่างรวดเร็ว					
3	ฉันไม่รู้สึกว่าเกม"A" มีความช้าในการตอบสนอง					

4	ฉันชอบที่จะมีปฏิสัมพันธ์กับผู้เล่นอื่นใน เกม "A"					
ความผูกพันธุ์						
1	ผู้เล่นเกม "A" แบ่งปันประสบการณ์ และความรู้สึกกับผู้เล่นอื่นผ่านเกม "A"					
2	ผู้เล่นเกม "A" ได้รับประโยชน์จาก ชุมชนผู้เล่นที่เล่นเกมนี้					
3	ผู้เล่นเกม "A" มีความรู้สึกว่าผูกสัมพันธุ์ ต่อกันและกัน					
4	ผู้เล่นเกม "A" ชื่นชอบการร่วมกิจกรรม และสนทนาในชุมชนกลุ่มผู้เล่น					

ความพึงพอใจ						
1	การเล่นเกม "A" ทำให้ฉันรู้สึกพึงพอใจ					
2	การเล่นเกม "A" ทำให้ฉันรู้สึกได้ความ บันเทิง					
3	การเล่นเกม "A" ทำให้ฉันรู้สึกสบายใจ					

4	การเล่นเกม "A" ทำให้ฉันรู้สึกดีเยี่ยม					
ทัศนคติ						
1	ทัศนคติของฉันต่อเกม "A" เป็นไปในแง่ดี					
2	ฉันชอบเล่นเกม "A"					
3	ฉันรู้สึกดีที่ได้เล่นเกม "A"					
4	ฉันรู้สึกว่าผู้พัฒนาเกม "A" และทีมงานพยายามตอบสนองความต้องการของลูกค้า					
บรรทัดฐานทางสังคม						
1	เพื่อนหรือคนรู้จักของฉันให้การยอมรับที่ฉันเล่นเกม "A"					
2	เพื่อนหรือคนรู้จักคิดว่าฉันควรเล่นเกม "A"					
3	คนที่มีอิทธิพลต่อฉันสนับสนุนให้ฉันเล่นเกม "A"					
4	เพื่อนหรือคนรู้จักของฉันมีอิทธิพลต่อปริมาณในการเล่นเกม "A" ของฉัน					
อัตลักษณ์ทางสังคม						

1	การเล่นเกม "A" ทำให้ฉันมีโอกาสพบเจอคนที่มีความสนใจเหมือนฉันมากขึ้น					
2	ฉันภูมิใจที่เล่นเกม "A" และเป็นส่วนหนึ่งของสังคมเกม"A"					
3	การเล่นเกม "A" ทำให้ฉันรู้สึกได้อย่างมากว่าเป็นส่วนหนึ่งของกลุ่มผู้เล่นเกม "A"					
4	สังคมเกม "A" ทำให้ผู้เล่นได้กระชับความสัมพันธุ์และแบ่งปันข้อมูลซึ่งกันและกัน					
ความเหนียวแน่น						
1	ฉันใช้เวลาเล่นเกม "A" นานกว่าเกมอื่นๆ					
2	ฉันตั้งใจจะใช้เวลามากขึ้นในการเล่นเกม "A"					
3	ฉันเล่นเกม "A" บ่อยมากเท่าที่ฉันจะทำได้					
4	ฉันเล่นเกม "A" ทุกครั้งที่มีเวลาว่างและมีโทรศัพท์มือถือของฉัน					

ความภักดีของลูกค้า						
1	เกม "A" เป็นตัวเลือกแรกของฉันใน บรรดาเกมที่เล่นโดยใช้โทรศัพท์มือถือ					
2	ฉันจะเล่นเกม "A"ต่อไปเรื่อยๆ					
3	ฉันยินดีที่จะพูดถึงเกม "A" ในแง่ดีกับ คนรู้จัก					
4	หากคนรู้จักของฉันอยากเล่นเกมโดยใช้ โทรศัพท์มือถือ ฉันจะแนะนำให้เล่นเกม "A"					

ขอให้ท่านแนะนำเพิ่มเติมสำหรับปัจจัยอื่นๆ ที่มีผลต่อความซื่อสัตย์ของลูกค้าที่มีต่อเกมใน โทรศัพท์มือถือ

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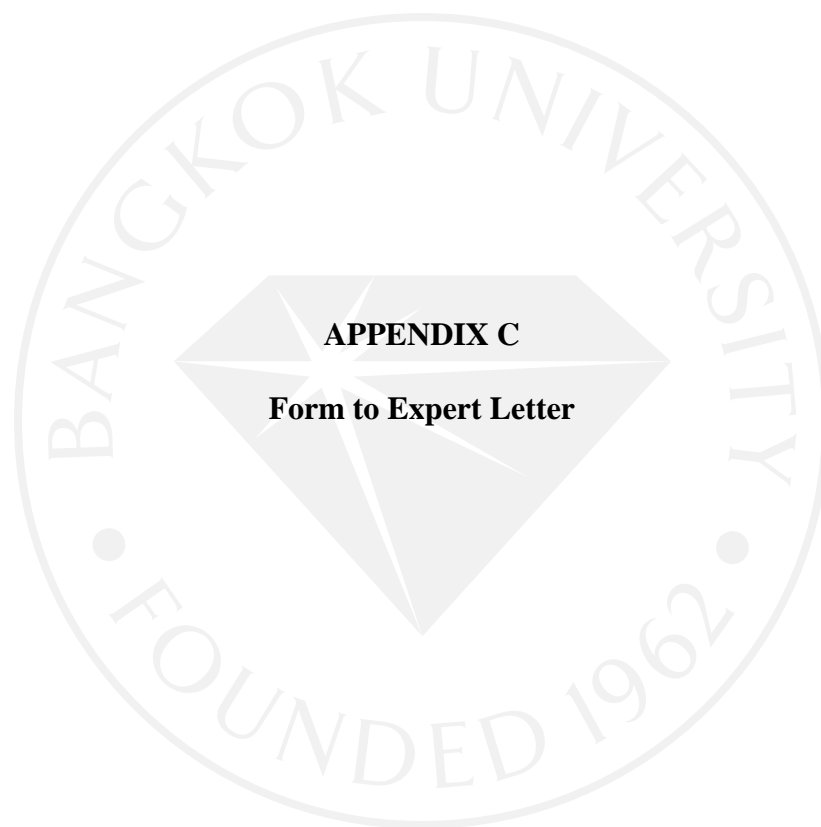
....โอกาสนี้ผู้ศึกษาวิจัยขอขอบคุณในความร่วมมือของท่านเป็นอย่างสูง

นาย ไชยอนันต์ เทิดเกียรติขจร

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APPENDIX C

Form to Expert Letter

Form to Expert

Factors Positively Affecting Customer Loyalty of mobile phone game "A" of Employees in Khlong Toei District in Bangkok

Factors	**Original Eng v.**	**Adjusted Eng. v.**	**IOC**	**Comments from the expert**	**Total points**
Entertainment Gratification (Huang & Hsieh, 2011)	EG1: Gaming is a diversion to me.	EG1: I play "A" as a diversion.			
	EG2: I play games as an entertainment.	EG2: I play "A" as an entertainment.			
	EG3: I had fun playing the games.	EG3: I play "A" for fun.			
	EG4: I play game to fill time.	EG4: I play "A" to fill time.			
Interactivity (Huang & Hsieh, 2011)	IT1: Interacting with online games is slow and tedious.	IT1: In game interaction is fast and pleasant.			
	IT2: Pages on the online games I play usually load	IT2: Features of the "A" game usually load quickly.			

	quickly.				
	IT3: I experience lagging response when playing games.	IT3: I do not experience lagging response while playing "A". (Changed to positive sentence)			
	IT4	IT4: I like the interaction with people in "A".			
Connectedness (Hsiao & Chen, 2016)	CN1: Players of Tower of Saviors share their experience and feelings with others through this mobile game.	CN1: Players of "A" share their experience and feelings with others through this mobile game.			
	CN2: Players of Tower of Saviors benefit from the user community using this mobile game.	CN2: Players of "A" benefit from the user community using this mobile game.			
	CN3: Players of Tower of Saviors share a common bond	CN3: Players of "A" share a common bond with other			

	with other players.	players.			
	CN4	CN4: Players of "A" like to participate in community events and communication.			
Satisfaction (Hsu & Lin, 2016)	ST1: Using the app makes me feel very satisfied.	ST1: Playing "A" makes me feel very satisfied.			
	ST2: Using the app gives me a sense of enjoyment.	ST2: Playing "A" gives me a sense of enjoyment.			
	ST3: Using the app makes me feel very contented.	ST3: Playing "A" makes me feel very contented.			
	ST4: Using the app makes me feel very delighted.	ST4: Playing "A" makes me feel very delighted.			
Attitude (Hsu & Lin, 2016)	AT1: My attitude toward using the app is favorable.	AT1: My attitude towards "A" is favorable.			
	AT2: I like	AT2: I like			

	using the app.	playing "A".			
	AT3: I feel good about using the app.	AT3: I feel good about playing "A".			
	AT4	AT4: I feel that the developer and customer service team try to meet customer needs.			
Social Norm (Hsu & Lin, 2016)	SN1: People who are important to me would approvee of me using the app.	SN1: My friend or family would approvee of me playing "A".			
	SN2: People who are important to me think that I should use the app.	SN2: My friend or family thinks that I should play "A".			
	SN3: People who influence my behavior encourage me to use the app.	SN3: My friend or family encourages me to play "A".			
	SN4	SN4: My friend or family			

		influents how much time I spend with "A".			
Social Identification (Hsu & Lin, 2016)	SI1: Using the app would enhance my chance to meet people with whom I share common interest.	SI1: Playing "A" game would enhance my chance to meet people with whom I share common interest.			
	S2: I am proud to be a member of this app community.	SI2: I am proud to be an "A" player and a member of its community.			
	SI3: Using the app gives me a strong feeling of belonging to a group.	SI3: Playing "A" gives me a strong feeling of belonging to a group.			
	SI4: This app is a communication channel, allowing users to maintain close ties and share information.	SI4: "A" community allows players to maintain close ties and share information.			
Stickiness (Hsu & Lin,	SK1: I would stay longer on	SK1: I would stay longer on			

2016)	this app than other apps.	"A" game than other games.			
	SK2: I intend to spend more time on this app.	I intend to spend more time playing "A".			
	SK3: I use this app as often as I can.	SK3: I play "A" game as often as I can.			
	SK4: I use this app every time I am online.	SK4: I play "A" game every time I have free time and my mobile.			
Customer Loyalty (Hsiao & Chen, 2016)	LY1: This mobile game is my first choice.	LY1: "A" is my first choice in mobile games.			
	LY2: I will continue to play this mobile game.	LY2: I will continue to play "A".			
	LY3: I am willing to say positive things about this mobile game to others.	LY3: I am willing to say positive things about "A" to others.			

	LY4: If others want to play a mobile game, I will recommend this mobile game.	LY4: If people I know want to play a mobile game, I will recommend "A".			

References

Hsu, C., & Lin, J. (2016) Effect of Perceived Value and Social Influences on

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Huang, L., & Hsieh, Y. (2011) Predicting Online Game Loyalty Based on Need

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Form to Expert

ปัจจัยที่มีอิทธิพลบวกต่อความภักดีของลูกค้าต่อเกมในโทรศัพท์เคลื่อนที่"A"ในหมู่พนักงานบริษัทในเขตคลองเ

กทม.

Factors	**Adjusted Eng. v.**	**Adjusted Thai v.**	**IOC**	**Comments from the expert**	**Total points**
Entertainment Gratification (Huang & Hsieh, 2011)	EG1: I play "A" as a diversion.	ฉันเล่นเกม "A" เป็นกิจกรรมนันทนาการ			
	EG2: I play "A" as an entertainment.	ฉันเล่นเกม "A" เพื่อความบันเทิง			
	EG3: I play "A" for fun.	ฉันเล่นเกม "A" เพื่อความสนุก			
	EG4: I play "A" to fill time.	ฉันเล่นเกม "A" เพื่อฆ่าเวลา			
Interactivity (Huang & Hsieh, 2011)	INT1: In game interaction is fast and pleasant.	ปฏิสัมพันธ์ในเกม "A" รวดเร็วและน่าพอใจ			
	INT2: Features of the "A" game	หน้าเมนูต่างๆของ			

	usually load quickly.	เกม "A" โหลดอย่างรวดเร็ว			
	INT3: I do not experience lagging response while playing "A". (Changed to positive sentence)	ฉันไม่รู้สึกว่าเกม"A" มีความช้าในการตอบสนอง			
	INT4: I like the interaction with people in "A".	ฉันชอบที่จะมีปฏิสัมพันธ์กับผู้เล่นคนอื่นๆ ในเกม "A"			
Connectedness (Hsiao & Chen, 2016)	CN1: Players of "A" share their experience and feelings with others through this mobile game.	ผู้เล่นเกม "A" แบ่งปันประสบการณ์และความรู้สึกกับผู้เล่นอื่นผ่านเกม "A"			
	CN2: Players of "A" benefit from the user community using this mobile game.	ผู้เล่นเกม "A" ได้รับประโยชน์จากชุมชนผู้เล่นที่เล่นเกมนี้			
	CN3: Players of "A" share a common bond with other players.	ผู้เล่นเกม "A" แบ่งปันความผูกพันร่วมกันกับผู้เล่นคนอื่นๆ			

	CN4: Players of "A" like to participate in community events and communication.	ผู้เล่นเกม "A" ชื่น ชอบการร่วมกิจกรรม และสื่อสารระหว่าง กันในชุมชนกลุ่มผู้ เล่น			
Satisfaction (Hsu & Lin, 2016)	ST1: Playing "A" makes me feel very satisfied.	การเล่นเกม "A" ทำ ให้ฉันรู้สึกพึงพอใจ			
	ST2: Playing "A" gives me a sense of enjoyment.	การเล่นเกม "A" ทำ ให้ฉันรู้สึกได้ความ บันเทิง			
	ST3: Playing "A" makes me feel very contented.	การเล่นเกม "A" ทำ ให้ฉันรู้สึกสบายใจ			
	ST4: Playing "A" makes me feel very delighted.	การเล่นเกม "A" ทำ ให้ฉันรู้สึกดีเยี่ยม			
Attitude (Hsu & Lin, 2016)	AT1: My attitude towards "A" is favorable.	ทัศนคติของฉันต่อ เกม "A" เป็นไปใน แง่ดี			
	AT2: I like playing "A".	ฉันชอบเล่นเกม "A"			
	AT3: I feel good	ฉันรู้สึกดีที่ได้เล่นเกม			

	about playing "A".	"A"			
	AT4: I feel that the developer and customer service team try to meet customer needs.	ฉันรู้สึกว่าผู้พัฒนา เกม "A" และ ทีมงานพยายาม ตอบสนองความ ต้องการของลูกค้า			
Social Norm (Hsu & Lin, 2016)	SN1: My friend or family would approvee of me playing "A".	เพื่อนหรือคนรู้จัก ของฉันให้การยอมรับ ที่ฉันเล่นเกม "A"			
	SN2: My friend or family thinks that I should play "A".	เพื่อนหรือคนรู้จักคิด ว่าฉันควรเล่นเกม "A"			
	SN3: My friend or family encourages me to play "A".	เพื่อนหรือคนรู้จัก ของฉันสนับสนุนให้ ฉันเล่นเกม "A"			
	SN4: My friend or family influents how much time I spend with "A".	เพื่อนหรือคนรู้จัก ของฉันมีอิทธิพลต่อ ปริมาณในการเล่น เกม "A" ของฉัน			
Social	SI1: Playing "A" game would	การเล่นเกม "A" ทำ			

Identification (Hsu & Lin, 2016)	enhance my chance to meet people with whom I share common interest.	ให้ฉันมีโอกาสพบเจอ คนที่มีความสนใจ เหมือนฉันมากขึ้น			
	SI2: I am proud to be an "A" player and a member of its community.	ฉันภูมิใจที่เล่นเกม "A" และเป็นส่วน หนึ่งของสังคม เกม"A"			
	SI3: Playing "A" gives me a strong feeling of belonging to a group.	การเล่นเกม "A" ทำ ให้ฉันรู้สึกได้อย่าง มากว่าเป็นส่วนหนึ่ง ของกลุ่มผู้เล่นเกม "A"			
	SI4: "A" community allows players to maintain close ties and share information.	สังคมเกม "A" ทำให้ ผู้เล่นได้กระชับความ สัมพันธุ์และแบ่งปัน ข้อมูลซึ่งกันและกัน			
Stickiness (Hsu & Lin, 2016)	SK1: I would stay longer on "A" game than other games.	ฉันใช้เวลาเล่นเกม "A" นานกว่าเกม อื่นๆ			
	I intend to spend more time playing	ฉันตั้งใจจะใช้เวลา มากขึ้นในการเล่น			

	"A".	เกม "A"			
	SK3: I play "A" game as often as I can.	ฉันเล่นเกม "A" บ่อยมากเท่าที่ฉันจะ ทำได้			
	SK4: I play "A" game every time I have free time and my mobile.	ฉันเล่นเกม "A" ทุก ครั้งที่มีเวลาว่างด้วย โทรศัพท์เคลื่อนที่ ของฉัน			
Customer Loyalty (Hsiao & Chen, 2016)	LY1: "A" is my first choice in mobile games.	เกม "A" เป็น ตัวเลือกแรกของฉัน ในบรรดาเกมที่เล่น โดยใช้ โทรศัพท์เคลื่อนที่			
	LY2: I will continue to play "A".	ฉันจะเล่นเกม "A"ต่อไปเรื่อยๆ			
	LY3: I am willing to say positive things about "A" to others.	ฉันยินดีที่จะพูดถึง เกม "A" ในแง่ดีกับ คนรู้จัก			
	LY4: If people I know want to play a mobile game, I will recommend	หากคนรู้จักของฉัน อยากเล่นเกมโดยใช้			

	"A".	โทรศัพท์เคลื่อนที่ ฉัน จะแนะนำให้เล่นเกม "A"			

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January 21, 2017

Reference: Acceptance to be the Advisor in reviewing questionnaire items for the research as a part of Independent Study of M.B.A student at Bangkok University

To Dr. Penjira Kanthawongs, Advisor, Bangkok University

I, Chaianan Terdkiatkhachorn, a Master of Business Administration's student majoring in Business Administration (English Program) at Bangkok University am conducting a research as a part of Independent Study titled, Factors Positively Affecting Customer Loyalty of Realm of Valor Mobile Game (ROV) of Employees in Klongtoei District in Bangkok. Due to your expertise in research, I would like to ask you to review the questionnaire items in terms of wordings and content validities by using Index of Item Objective Congruence: IOC with +1 as comprehensible, O as uncertain, or -1 as incomprehensible by the target group of this research. I greatly appreciated your kind assistance.

Best Regards,

Signature.   Signature……………………
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To Mr. Pattarawut Udomyan, Section Manager at INI3 Digital PLC.

I, Chaianan Terdkiatkhachorn, a Master of Business Administration's student majoring in Business Administration (English Program) at Bangkok University is conducting a research as a part of Independent Study titled, Factors Positively Affecting Customer Loyalty of Realm of Valor Mobile Game (ROV) of Employees in Klongtoei District in Bangkok. Due to your expertise in your business, I would like to ask you to review the questionnaire items in terms of wordings and content validities by using Index of Item Objective Congruence: IOC with +1 as comprehensible, O as uncertain, or -1 as incomprehensible by the target group of this research. I greatly appreciated your kind assistance.

Best Regards,

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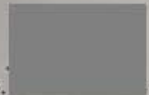
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To Mr. Natthawong Limsuwan, Project Manager at INI3 Digital PLC.

I, Chaianan Terdkiatkhachorn, a Master of Business Administration's student majoring in Business Administration (English Program) at Bangkok University is conducting a research as a part of Independent Study titled, Factors Positively Affecting Customer Loyalty of Realm of Valor Mobile Game (ROV) of Employees in Klongtoei District in Bangkok. Due to your expertise in your business, I would like to ask you to review the questionnaire items in terms of wordings and content validities by using Index of Item Objective Congruence: IOC with +1 as comprehensible, O as uncertain, or -1 as incomprehensible by the target group of this research. I greatly appreciated your kind assistance.

Best Regards,

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(Mr. Natthawong Limsuwan)
Expert

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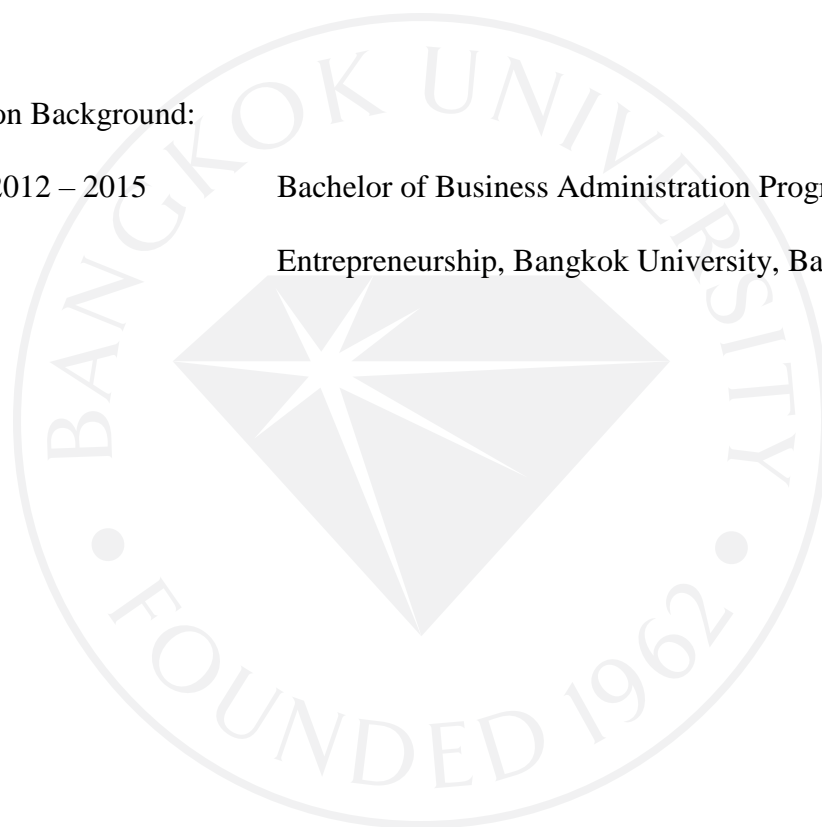Name-Surname: Chaianan Terdkiatkhachorn

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