Chapter 3

Research Methodology

This research is qualitative research. The details about the research method as follows:

1. Research design
2. Population and sample size
3. Research instruments
4. Data collection
5. Data analysis

Research Design

In the course of research, the paper mainly adopts the following research methods:

1．Literature research review

Through the past authoritative research results and website search and collection, we can get a large number of secondary data, organize and analyze the literature, and use the induction method to study the relevant theories. This paper involves marketing strategy, new media marketing，digital marketing and integrated marketing, which summarizes the current situation of domestic research and the marketing model worthy of reference in the mobile game industry where F company is located.

2．Questionnaire survey method

A survey method widely used at home and abroad. It is a survey method to collect information. Make comments or suggestions to the respondents by online or send out a concise questionnaire to the respondent.

Through the marketing research for F Company, it is intended to understand gamers' decision with the current marketing methods and gamers' needs, and to clarify the problems of enterprise marketing, so as to be the basis for the adjustment of the future marketing strategy of enterprises. The questionnaire was designed to measure various factors that influence the decision to play mobile games, such as game quality, social factors, and price.And Chinese gamers behavior for playing mobile games.

Population and Sample Size

This is a quantitative study. The data comes from F Company's gamers. This study used a random sampling technique to select participants. The study population was F Company's gamers, with about 10,000 gamers who have played F's mobile games (This data comes from: F company's internal game average online audience statistics for the month ,September 2023).The data collected included a questionnaire with both validity and reliability. The results were analyzed using the Yamane formula, maintaining 95% confidence intervals, and determining a final sample size of about 385 respondents to ensure that the sample was representative of the population.

TARO YAMANE METHOD

Below is the mathematical illustration for the Taro Yamane method:

$$n = N / (1 + N*e^2)$$

Where:

n: signifies the sample size

N : signifies the population under study

e : signifies the margin error (it could be 0.10, 0.05 or 0.01)

We will illustrate with the above formula to determine the sample size from a given population.

$$n= 10000/ (1+10000*0.052)$$
$$n= 10000/ (1+ 10000*0.0025)$$
$$n= 10000/ (1+25)$$
$$n= 10000/26$$
$$n\approx 384.62$$

We can see from the result above that the sample size is 385 from the total population about of 10000 which is the lower number of responses from the respondents to maintain a 95% confident interval.

Research Instruments

This is quantitative research.

Depending on the research objective and the type of data to be collected, the following research tools may be used:

Questionnaire: This is a common research tool used to collect data through self-reported responses. A questionnaire could be designed to collect information about the factors influencing Chinese gamers' decision to play mobile games. These questions can cover different areas.

The research instruments for this study consisted of a structured questionnaire divided into six parts. The questionnaire was designed to gather data on various aspects related to gamers' decision-making processes and their perceptions of mobile games. Prior to implementation, the questionnaire underwent content validity testing by three professors and reliability assessment using Cronbach's alpha.

Part 1: Basic Information This section aimed to collect demographic data and gaming habits of the participants. It included questions regarding the participants' sex, age, education level, frequency of gameplay, and preferred types of games.

Part 2: Gamer Behavior This section focused on understanding the participants' general gaming behavior, such as the duration of gaming sessions, preferred gaming platforms, and social interactions within the gaming community.

Part 3: There are three dimensions in this section.

Factors Influencing Decision to Play Mobile Games (Based on 6Ps Theory) : This part of the questionnaire was designed to assess the impact of the marketing mix (6Ps) on gamers' decision to play mobile games. The questions explored participants' perceptions of factors related to product features, pricing strategies, distribution channels, promotional activities, personalized services, and privacy concerns.

The Social Interaction : this part of the questionnaire assessed the influence of the Social Interaction on gamers' decision to play mobile games. It included questions related to the Social Norms, Social Identity, and Social Interaction and Communication.

The Self-Determination : this part of the questionnaire assessed the influence of self-determination on gamers' decision to play mobile games. It included questions related to the sense of autonomy, competence, and relatedness experienced during gameplay.

Part 4: Decision to play a mobile game.This section combined the investigation of F company's existing games' operational status with the motivation and decision-making processes of gamers playing mobile games. Questions were designed to understand the participants' motivations for playing mobile games and their decision-making criteria.

Content Validity and Reliability Prior to implementation, the questionnaire underwent content validity testing by verify Item Objective Congruence Analysis (IOC) to ensure that the questions effectively measured the intended constructs.

The Panel of 3 Experts

Expert 1 - Pornladda Dathratwibul, Chief Executive Officer Genie Service Company Limited and Genie Insurance (Thailand) Public Company Limited

Expert 2 - Nuanphan Kaewpanukrangsi, Phd., Lecturer of 3D-Based Communication Design & Integrated Media, Architecture Arts and Design School, King Mongkut's Institute of Technology Ladkrabang

Expert 3 - Mongkol Tiamtanom, Lecturer of Marketing, Faculty of Management Science, Dhonburi Rajabhat University

Additionally, the reliability of the questionnaire was assessed using Cronbach's alpha, with values of 0.7 or higher indicating acceptable internal consistency. Cronbach's alpha was calculated for the Likert scale questions included in the questionnaire to determine the reliability of the measurement instrument. After conducting the study and collecting data, the calculated Cronbach's alpha value can be reported to determine the internal consistency of the questionnaire.

For this research questionnaire the validity test revealed that the average score of each item had consistency value (IOC≥0.50) and the reliability test revealed that the value of α was 0.7 or above (Rovinelli & Hambleton, 1977). This suggested that the validity and reliability of this questionnaire was at an acceptable level as the following table.

Table 3.1 The Result of Item Objective Congruence (IOC) and Reliability Testing

Variable	Number of Question	Questions	IOC	Cronbach's Alpha
marketing mix (6Ps)	9	Q1-Q9	1,1,1,0.67,1,0.67,0.67,1,1	0.838
social interaction	3	Q10-Q12	1,1,0.67	0.812
self-determination	5	Q13-Q17	0.67,0.67, 0.67,0.67, 0.67	0.833
decision to play mobile games	7	Q18-Q24	1,0.67,1,0.67,0.67,1, 1	0.847

Data Collection

Data was collected through social media platforms on September 2023. Before starting the survey, participants are informed about the purpose of the study and obtain consent forms, and their responses will be collected anonymously.

Data Analysis

The collected data collected will be analyzed using statistical methods such as multiple regression analysis to identify the factors most closely related to Chinese gamers' decision to play mobile games. At the same time, the open survey responses were analyzed to determine the gamers' attitudes towards mobile games and the common themes and modes in the experience.

The analysis will include descriptive statistics and inferential statistics to examine the relationship between dependent variables (i. e., the decision to play mobile games) and various independent variables (i. e., factors that influence the decision to play mobile games).

For Part 1 of the questionnaire, which collects demographic data , the data analysis would involve descriptive statistics. Such as frequencies and percentages. Calculate the distribution of participants' sex, age, education level, and other relevant demographic variables to understand the sample characteristics.

In Part 2, the focus is on understanding participants' general gaming behavior then calculating the frequencies and percentages.

In Part 3 and Part 4 of questionnaire use multiple regression statistics. The aim of regression statistics is to assess the correlation between the factors including the 6Ps theory, social interaction, self-determination and the decision to play a mobile game and examine hypothesis.