CHAPTER III

RESEARCH METHODS

3.1 Overview of Research Object

PUBG (PlayerUnknown's Battlegrounds) Mobile, created by PUBG (PlayerUnknown's Battlegrounds) Studios and published by Tencent Games, is a free-to-play battle royale game available for Android and iOS platforms. The game is a mobile version of the original Player Unknown's Battlegrounds (PUBG), initially launched on PC in March 2017. PUBG (PlayerUnknown's Battlegrounds) Mobile was initially released on March 19, 2018, and continues to grow as one of the most popular mobile games globally, with over 1.8 billion downloads by April 2025.

Figure 3.1 Player Unknown's Battleground Mobile Logo
Source : PUBGMobile.com

PUBG (PlayerUnknown's Battlegrounds) Mobile offers a large-scale multiplayer mode where up to 100 players parachute onto an island and compete to be the last person or team standing. Players can choose to play solo, in pairs, or in teams of up to four. The gameplay involves scavenging for weapons, Armor, and other equipment while avoiding a shrinking play zone that forces players into closer proximity.

PUBG (PlayerUnknown's Battlegrounds) Mobile is a large-scale multiplayer mode in which up to 100 people parachute onto an island and compete to be the last individual or team surviving. Participants can choose to play individually, in pairs, or in teams of up to four members. The gameplay involves looking for weapons, armour, and other equipment while avoiding a shrinking play zone that forces players into closer proximity, resulting in battle among individuals or teams.

Figure 3.2 PUBG Mobile In-Game Interface

The game has multiple modes, such as Classic Mode, Arena Mode, and Ultimate Royale, each offering unique gameplay experiences. PUBG (PlayerUnknown's Battlegrounds) Mobile facilitates esports events, shown by tournaments such as the PUBG (PlayerUnknown's Battlegrounds) Mobile national championship (PMNC) for amateur teams in the Indonesia region, PUBG (PlayerUnknown's Battlegrounds) Mobile super League (PMSL) for the professional teams which then divided to regional leagues across the world , and also global competitive scenes that is held annually like the PUBG (PlayerUnknown's Battlegrounds) Mobile Global Open (PMGO), PUBG (PlayerUnknown's Battlegrounds) Mobile World Cup (PMWC) and PUBG Mobile Global Championship (PMGC) which all foster a competitive gaming community starting from community teams until established esports team.

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Figure 3.3 PUBG Mobile Global Championship Stage

PUBG (PlayerUnknown's Battlegrounds) Mobile functions on a freemium business model, providing in-app purchases for cosmetic goods and in-game equipment that enhances the appearance of the in-game characters. The player base revenue declined in late 2024, reaching a low of $29.7 million in October. The game's worldwide penetration is obvious, but declined in downloads with 8,010,343 as of December 2024, where during its peak their monthly downloads are above 9.5 million downloads. It has been localized in other locations, including India, where it was rebranded as Battlegrounds Mobile India (BGMI) because to regulatory issues.

Figure 3.4 PUBG Mobile In-Game Cosmetics

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PUBG (PlayerUnknown's Battlegrounds) Mobile represents a significant subject of research across various fields, including game design, user experience (UX), social interaction within gaming communities, and the influence of mobile gaming on behaviour and society. Research has examined elements including game mechanics, player involvement, and the social dynamics of its gaming community. Overall, PUBG (PlayerUnknown's Battlegrounds) Mobile illustrates the merging of entertainment, technology, and social interaction in the digital era, making it a significant topic for research within mobile gaming and its broader implications.

3.2 Research Design

A research design is a blueprint for the gathering, measurement, and analysis of data, formulated to answer your research questions (Sekaran & Bougie, 2016). While Leedy & Ormrod (2018) described research design as a general strategy for addressing a research problem. The research design provides the overall structure for the processes undertaken by the researcher, the data collected, and the analysis performed. In simple terms, research design refers to the planning process. Nunan et al. (2020) also discussed research design and defines it as a structured framework for conducting a marketing research project. It outlines the processes required to acquire the information necessary for structuring or resolving a marketing research problem.

3.2.1 Research Type

There are two types of research design according to Nunan (2020), which are exploratory design and conclusive design. Figure 3.5 below provides an illustration of the research design framework.
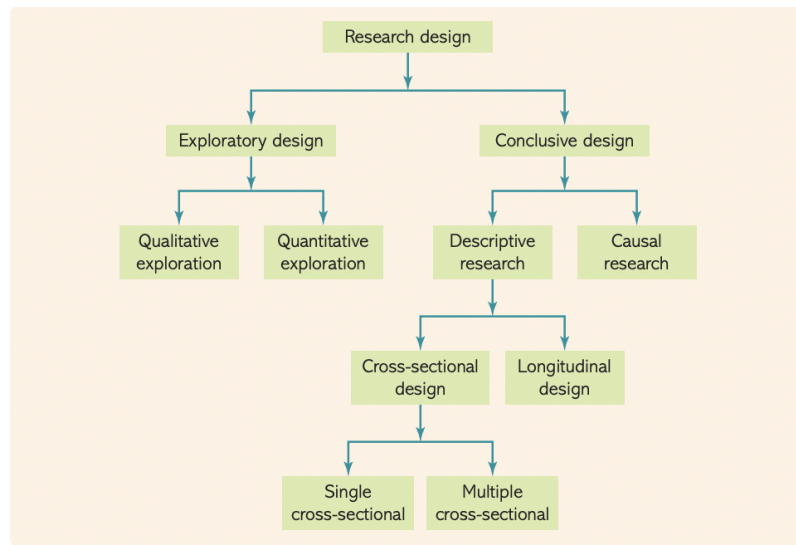
Figure 3.5 Research Design Framework
Source: Nunan et al., 2020

1. **Exploratory research** defined by Nunan et al. (2020) is a research design defined by a flexible and adaptive methodology for understanding marketing events that are naturally challenging to measure. The objective is to offer insights and comprehension of the characteristics of marketing phenomena. It is used in situations where the study's subject cannot be quantitatively measured, or where the assessment procedure fails to accurately reflect specific characteristics. Exploratory research can be used to more accurately describe the problem, identify appropriate steps of action, or acquire more insights before validating findings through a conclusive design. Example of exploratory design are Expert surveys, Pilot surveys, Secondary data and Qualitative interviews.

2. **Conclusive research** defined by Nunan et al. (20202) is a research design defined by the measurement of clearly specified marketing phenomena. The objective of conclusive research design itself is to test and measure specific hypothesis and examine relationships between to variables. This research design needs a clearly defined information, and it has a research process that is formal and structured. Conclusive research design is mainly done by quantitative data analysis, and it uses a large sample size. The findings can be

used to set a context to exploratory findings. Conclusive research design itself can be divided into two types, which are descriptive research and casual research.

a. Descriptive research described by Nunan et al. (2020) as conclusive research aimed to describe something, usually something related to market characteristics. This type of research uses the formulation of specific research questions and hypotheses. Thus, the information necessary for this research must be precisely defined in advance. Descriptive research itself can be divide into two classification, which are cross-sectional design and longitudinal design.

    I.   **Cross-sectional design** is described as a classification of descriptive research, which the process of the information gathering is conducted only once from a sample of a population (Nunan et al., 2020) . Cross sectional design itself can also be divided into two categories, which are single cross-sectional design and multiple cross-sectional design.

        - **Single cross-sectional design** is described as research design that only obtain one sample from the target population, and the process of information gathering from the specific sample is conducted only once (Nunan et al.,2020).

        - **Multiple cross-sectional design** is described as a research design in which two or more samples are drawn from the target population, but each sample's information is only collected once (Nunan et al.,2020).

    II.   **Longitudinal design** is described as descriptive research that uses a fixed sample of the population that is measured repeatedly falls into this category. This classification enables the sample selected for the study to be used and examined over the course of the investigation, enabling it to

characterize any situations and changes that take place (Nunan et al., 2020).

b. Causal research is defined as conclusive research designed to provide evidence of the cause-and-effect relationship of a phenomenon (Nunan et al., 2020). Causal research needs a planned and structured design. This research aims to identify the independent variables or causes and the dependent variables or effects in a study about a marketing phenomenon. This research may clarify the relationship between cause-and-effect variables in a marketing phenomenon and assess research hypotheses (Nunan et al., 2020).

In this research, the researcher uses a conclusive research design, more specifically descriptive research design. This is because the study aims to describe the phenomenon of the continuance use intention on PUBG (PlayerUnknown's Battlegrounds) Mobile by testing several research hypotheses based on previous research. This study involves the use of primary data, which is collected through single cross-sectional design survey as the data collecting method.

3.2.2 Research data

Data in a research study can be categorized as main data and secondary data. Primary data refers to information gathered directly by the researcher to address a particular research issue. In contrast, secondary data refers to information that has been previously gathered for purposes apart from the research issue being investigated in a specific study (Nunan et al., 2020).

3.3 Research Approach

Research can be divided into two categories based on the use of primary data: qualitative research and quantitative research (Nunan et al., 2020).

1. Based on Nunan et al. (2020), **Qualitative research** is a flexible and exploratory approach that utilizes small sample to gain deep insights and understanding.

2. Based on Nunan et al. (2020) **Quantitative research** is an approach that involves gathering data and frequently includes statistical analysis and measurement (Nunan et al., 2020).

A quantitative research methodology is implemented in this investigation, which prioritises the systematic measurement and statistical analysis of data obtained through a structured survey instrument. The selection of quantitative research was based on its capacity to generate objective, measurable, and generalisable results, which are indispensable for comprehending the motivational factors and behavioural patterns that influence the intention of players to continue using PUBG (PlayerUnknown's Battlegrounds) Mobile in Indonesia. This method enables the researcher to analyse large volumes of data in a structured and replicable manner, thereby guaranteeing that the insights garnered from the responses are not only statistically valid but also reliable.

The structured survey is intended to collect comprehensive data on critical variables, including content gratification, Temporal Gratification, entertainment, social interaction, technology gratification, and game knowledge. These dimensions are essential for evaluating the factors that motivate users to maintain their engagement with the game over time. This type of investigation is particularly well-suited to quantitative research, as it allows the researcher to assess hypotheses, identify trends, and ascertain the strength and direction of relationships among variables through the use of statistical tool.

Moreover, the study's objective to generate findings that can inform broader user engagement strategies, both academically and practically, has been strengthened by the selection of a quantitative approach. It enables the comparison of various demographic groups and establishes a foundation for data-driven decision-making, which is especially beneficial for stakeholders in the mobile gaming industry. The credibility and applicability of the research outcomes are improved by the researcher's certainty of an acceptable level of objectivity and discipline through the implementation of this methodology.

3.4 Data Collection Method

In this research, the researcher obtains primary data from online survey that is distributed to the target population, to test the research hypotheses. There are several stages in the data collection process, that is explained further below :

a. The researcher gathered and collected secondary data, that includes surveys, articles, news and journal, to support the study's background and literature evaluation.

b. The researcher conducted a pilot test survey which then distributed to PUBG (PlayerUnknown's Battlegrounds) mobile players. The purpose of this pilot test was to strengthen the researcher's potential analysis that affects the continuance use intention on PUBG (PlayerUnknown's Battlegrounds) mobile.

c. The researcher collected information from previous studies to help design the research model and hypotheses for this research.

d. The researcher looked for previous studies and journals about the specific demographic of PUBG (PlayerUnknown's Battlegrounds) mobile players to set the target population for this research.

e. The researcher designed the online survey questioner using google forms as the platform.

f. The researcher distributed the online survey to 35 respondents via WhatsApp and Instagram direct message. The data obtained was used to do a pre-test, before sending the online survey to a larger sample.

g. The researcher analysed the pre-test data that is obtained from 35 respondents, by analysing the validity and reliability test. The goal was to assess on the indicators and variables in the research if it was correlated and suitable for this research. The researcher uses IBM SPSS version 29 to process the pre-test data.

h. After the pretest results met the criteria, the researcher proceeds to distribute the online survey to a larger sample. The researcher distributed the online survey to PUBG (PlayerUnknown's Battlegrounds) mobile community and gaming streamer community via discord.

i. The researcher then analysed the data collected using IBM SPSS version 29 software.
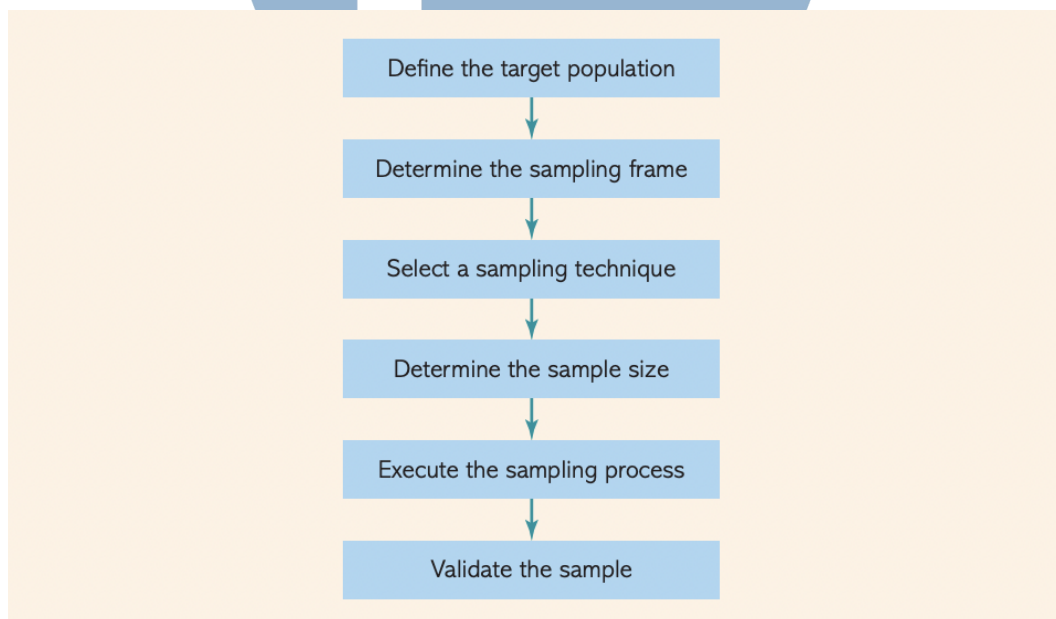
3.5 Research Scope

Figure 3.6 The Sampling Design Process
Source: Nunan et al. (2020)

Nunan et al. (2020) state that a marketing research study's sampling design process consists of six stages that are intended to determine the research's sampling. The first stage involves defining the study's target population. The second stage involves selecting a sampling frame for study. The third stage involves selecting the sampling technique to be employed. The fourth stage

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involves selecting the appropriate sample size for the investigation. The fifth stage involves executing the sampling process. Lastly, the sixth stage includes the validation of the sample that has been obtained (Nunan et al., 2020).

3.5.1 Defining Population Target

Nunan et al. (2020) define the target population as a group of elements or objects containing information that researchers will utilize to draw conclusions. To identify the target population, consider elements, sample units, boundaries, and timeframe (Nunan et al., 2020). To determine the target population for this study, the following steps that will be taken:

1. According to Nunan et al. (2020), an **element** is something that holds information for researchers to collect during a study. The target of this study is the survey respondents who will complete the questionnaire provided by the researcher. The respondents for this research are people who have played PUBG (PlayerUnknown's Battlegrounds) Mobile in the past.

2. According to Nunan et al. (2020), a **sampling unit** is a collection of elements available for selection at different phases of the sampling process. Based on the explanation below, the sampling unit for the target population in this research are:
   A. Generation Z (ages 17-26)
   B. Have ever actively played PUBG Mobile.

3. According to Nunan et al. (2020), extent refers to the study's geographical boundaries. In this research, the geographic boundaries defined by the researcher in determining the target population are PUBG (PlayerUnknown's Battlegrounds) Mobile players in Indonesia.

4. According to Nunan et al. (2020), time is an important factor to consider when performing a study. Thus, the researcher will conduct the study across three months, from March to May 2025, with data collection in April 2025.

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3.5.2 Defining Sampling Frame

A sampling frame is a representation of the target population's elements that includes a set of guidelines for identifying the target population. (Nunan et al., 2020). This study does not contain a list or direction for the intended population. Consequently, this investigation lacks a sampling frame. This study is unable to employ probability sampling due to the uneven possibility of selecting samples in the absence of a database of the research population. Nonprobability sampling is implemented to select samples that satisfy the researcher's criteria and judgements.

3.5.3 Defining Sampling Size

In this study, the researcher utilized GPower 3.1.9.7 to determine the appropriate sample size for investigating the influence of six independent variables—content gratification, Temporal Gratification, entertainment, social interaction, technology gratification, and game knowledge on continuance use intention in gaming. The statistical test selected was "Linear multiple regression: Fixed model, R^2 deviation from zero" under the F-test family, using the a priori type of power analysis. This method computes the required sample size based on the specified alpha level, power, and effect size before data collection, which is strongly recommended for empirical research to avoid post hoc limitations.

Following standard parameters in social science research an effect size of 0.15 (medium), significance level (α) of 0.05, and power of 0.80 the GPower analysis concluded that a minimum of 98 respondents was needed for this model. These input values are supported by Cohen's (1988) guidelines and widely endorsed in the literature for ensuring reliable statistical outcomes. Power analysis is considered one of the most robust approaches for sample size estimation, especially in studies using

regression analysis, as it accounts for model complexity and maximizes the likelihood of detecting true effects.

Importantly, maintaining sufficient statistical power (typically 0.80 or higher) helps reduce the risk of Type II error, which occurs when a researcher fails to reject a false null hypothesis essentially concluding that there is no effect when, in reality, there is one. This is also known as a false negative, where the researcher overlooks a genuine effect due to insufficient sample size or low statistical power. Thus, applying G*Power in this study ensures that the model is adequately powered to detect the hypothesized relationships with greater confidence and rigor.
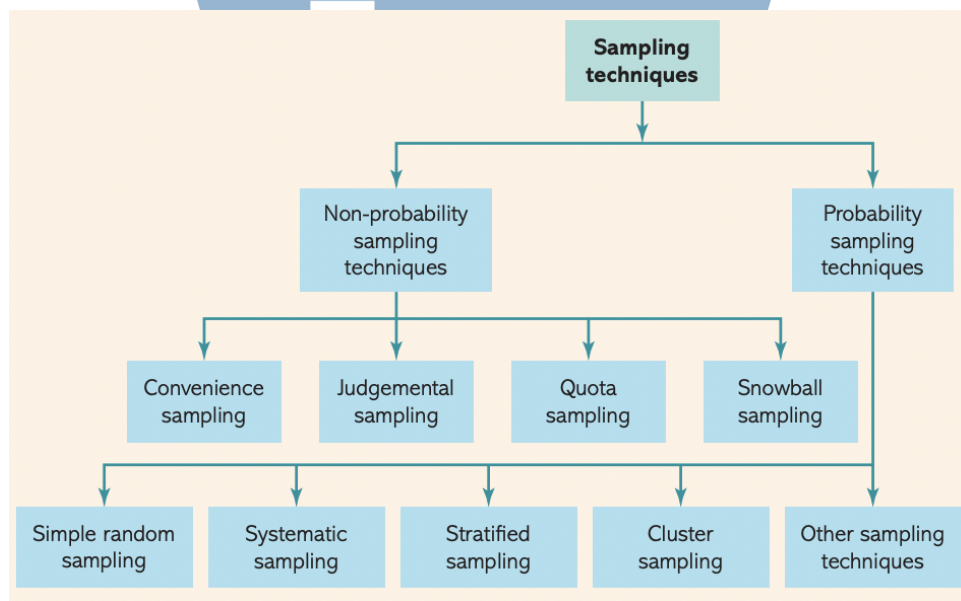
3.6 Sampling Technique

Figure 3.7 Classification Of Sampling Techniques
Source: Nunan et al., 2020

Sampling technique can be classified into probability sampling and non-probability sampling (Nunan et al.,2020). Probability sampling is an approach where each element of the population has a fixed probability of being chosen as part of the study sample. Several methods can be put into the category of probability sampling are:

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A. Simple random sampling is a method of probability sampling in which the chance of each part being chosen is known and equal. Each element is chosen separately from the others, and the sample is chosen at random from a sampling frame (Nunan et al.,2020).

B. Systematic Sampling is a strategy in which a sample is chosen by first choosing a random starting point and next selecting every subsequent element in a systematic way from the sampling frame used for the investigation (Nunan et al.,2020).

C. Stratified sampling is a technique using a two-step procedure to categorize the population into consecutive subpopulations, or strata. Then, elements are chosen from each stratum by a random process (Nunan et al.,2020).

D. Cluster sampling is a method that firstly segments the target population into similar categories known as clusters, from which elements are then selected at random (Nunan et al.,2020).

In the other hand, non-probability sampling is a technique that does not use random selection processes, relying instead on the researcher's judgment. Several methods can be put into the category of non-probability sampling are:

A. Convenience sampling is a technique that tries to get a sample of elements that are convenient. Where the interviewer is mostly in charge of choosing the sampling units. This method is the quickest and most cost-efficient to implement in a research (Nunan et al.,2020).

B. Judgmental sampling is a technique where population elements are selected intentionally based on the researcher's judgment. The researcher uses this method because they believe the chosen samples accurately reflect the study's target population (Nunan et al.,2020).

C. Quota sampling is a restricted judgment sampling method that involves two stages. Creating control categories or quotas of population elements is the first step. The selection of sample elements in the second stage is done based on judgment or convenience of the researcher.

D. In a snowball sampling a group of participants is chosen, usually aimed at a small number of people who are known to have the desired traits of the target population, though sometimes chosen at random. After their interview, these participants are invited to name other members of the target group. The referrals are used to choose subsequent participants. This procedure can be carried out in waves by getting referrals from referrals, which could result in a snowballing effect.

This study adopted a **non-probability** sampling method, specifically **judgmental sampling**, as the most appropriate technique for targeting individuals who met the specific criteria aligned with the study's objectives. Judgmental sampling is a type of purposive sampling where the researcher selects participants based on informed judgment and pre-established criteria. This approach was selected to ensure that the sample included only those respondents with relevant experiences and characteristics necessary for exploring the factors influencing continuance use intention in playing PUBG (PlayerUnknown's Battlegrounds) Mobile.

To further refine the sampling process, the researcher implemented a screening mechanism using trap questions embedded within the survey. These trap questions were critical to ensuring data validity and the inclusion of only the most relevant respondents. First, participants were required to answer "yes" to a question verifying whether they had ever played PUBG Mobile. Secondly, they needed to indicate that their current playing intensity was either "1–2 times a week" or "not playing anymore." This helped exclude overly frequent players whose motivations might differ substantially from the target demographic.

Additionally, to avoid bias from highly engaged or loyal players, respondents were expected to answer "no" when asked whether PUBG Mobile was the game they played most often. This ensured that responses would reflect more casual or past user experiences, which are central to understanding varied levels of continuance use intention. Given the inclusion of social interaction as a

key variable, it was also necessary that participants had friends or colleagues who played PUBG Mobile, providing them with valid social contexts for evaluating the game's social features. These rigorous screening criteria contributed to a more focused and representative sample. Although this technique limits generalizability to the broader gaming population, it enhances the reliability and internal validity of the data by ensuring that only relevant and contextually appropriate participants were included in the analysis.

3.7 Research Procedures

This study was conducted approximately for 3 months, starting from late February 2025 and concluding in early June 2025. The research started with identifying the research phenomenon, then formulating the research background and problem statement. Afterwards, the researcher reviewed previous research that is related to gain a firmer knowledge on the research subject. Then, the researcher collected and processed data that is obtain and lastly analysed the data to draw conclusions from the findings that is obtained from the data.

3.8 Operationalization of Variable

This study examines seven key attributes of gaming experiences that are hypothesized to influence the continuance use intention of PUBG (PlayerUnknown's Battlegrounds) Mobile players. These variables include content gratification, temporal gratification, entertainment, social interaction, technology gratification, and game knowledge. The measurement items for each construct were generated based on established scales and validated findings from prior research to ensure theoretical consistency and content validity. Where necessary, indicators were refined and adapted to align with the specific context of PUBG Mobile and the Indonesian gaming population. A total of 23 indicators were selected from multiple academic sources to comprehensively capture the constructs while avoiding redundancy. To ensure the reliability and clarity of the measurement items, a pilot test was conducted prior to the full data collection. Feedback from the pilot participants was used to improve the wording and

relevance of several items. Reliability was assessed through Cronbach's alpha, and construct validity was evaluated using confirmatory factor analysis (CFA) during the main analysis stage. Ethical considerations were also observed throughout the research process. Participation in the survey was voluntary, informed consent was obtained from all respondents, and confidentiality of participant responses was strictly maintained. The operationalization of all variables and corresponding indicators is summarized in **Table 3.1** below.

Table 3.1 Operationalization of Variable

No	Variable	Operational Definition	Code	Indicator	Original	Measurement Source	Scale
1	Content Gratification	Content gratification is the fulfillment of information expectation (Cutler and Danowski, 1980)	CG1	1. I generally play PUBG Mobile to improve my rank	1. I generally play Pokémon Go to catch Pokémon monsters	(Jang and Liu, 2020)	Likert 1-7
			CG2	2. I generally play PUBG Mobile because in game rank are valuable for me	2. I generally play Pokémon Go because Pokémon monsters are valuable for me		
			CG3	3. I generally play PUBG Mobile because I feel happy when I move up in my in game rank	3. I generally play Pokémon Go because I feel happy when I catch Pokémon monsters		

No	Variable	Operational definition	Code	Indicator	Original	Measurement source	Scale
2	Temporal Gratification	Temporal Gratification" is a human activity aimed at spending leisure time with no apparent aim or objective (Khang et al., 2013).	PT 1	1. PUBG Mobile helps me when I'm bored	1.Passes time when bored	(Papacharissi,2000)	Likert 1-7
			PT 2	2. I Play PUBG Mobile when I have nothing to do	2.When I have nothing better to do		
			PT3	3. I Play PUBG Mobile to occupy my time	3.To occupy my time		

No	Variable	Operational definition	Code	Indicator	Original	Measurement source	Scale
3	Entertainment	"Entertainment" involves with the need for humans to keep themselves entertained (Amiel and Sargent, 2004; Ellison et al., 2007; Hsu and Lu, 2007; Khang et al., 2013)	ENT1	1. I just like to play PUBG Mobile	2.I just like to surf the Internet	(Ko et al, 2013)	Likert 1-7
			ENT2	2. I find playing PUBG Mobile is enjoyable	3.It's enjoyable		
			ENT3	3. I find playing PUBG Mobile is entertaining	4.It's entertaining		
			ENT4	4. I find playing PUBG Mobile is a habit	5.It's a habit		

No	Variable	Operational definition	Code	Indicator	Original	Measurement source	Scale
4	Social Interaction	Social interaction includes meeting new people during the gameplay (Ellison et al., 2007; Chang et al., 2014).	SI1	1. I play PUBG mobile because I wonder what other people said	1. I wonder what other people said	(Ko et al, 2013)	Likert 1-7
			SI2	2. I play PUBG Mobile to keep up with what's going on	2. To keep up with what's going on		
			SI3	3. I play PUBG Mobile to express myself freely	3. To express myself freely		
			SI4	4. I play PUBG Mobile to meet people with the same interest	4. To meet people with my interests		

No	Variable	Operational definition	Code	Indicator	Original	Measurement source	Scale
5	Technological Gratification	Technology gratification refers to the fulfillment of playing a mobile game as a technically innovative gaming platform.	TG1	1. I like playing PUBG Mobile because I am satisfied with the in game graphics	1. I like Pokémon Go because I can capture computer-generated monsters in real-world environment	(Jang and Liu, 2020)	Likert 1-7
			TG2	2. I like playing PUBG Mobile because the in game controls are suitable for me	2. I like playing Pokémon Go because I enjoy the interaction of computer game and surrounding physical environment		
			TG3	3. I like Playing PUBG Mobile because it has a good in game voice chat	3. Pokémon Go is more appealing with its augmented feature		

No	Variable	Operational definition	Code	Indicator	Original	Measurement source	Scale
6	**Game Knowledge**	"Game knowledge" refers to a player's mobile AR game-relevant experience that influences his or her abilities to play the mobile AR game and perform game tasks successfully (Alba and Hutchinson, 1987; Hsiao and Chiou, 2012).	GK1	1. As compared to other people, I have a lot of gaming knowledge about PUBG Mobile	1.As compared to other people, I have a lot of gaming knowledge about Pokémon Go	(Jang and Liu, 2020)	Likert 1-7
			GK2	2. As compared to other people, I know a lot about PUBG Mobile	2. As compared to other people, I know a lot about Pokémon Go		
			GK3	3. Overall, I well understand how to play PUBG Mobile	3. Overall, I well understand how to play Pokémon Go		

No	Variable	Operational definition	Code	Indicator	Original	Measurement source	Scale
7	Continuance use intention	Continuance use intention can be defined as a player's belief, formed from their previous experiences, that they will continue to play a particular mobile augmented reality (AR) game. This belief is momentary and reflects the player's intention to persist in using the game based on their past interactions and enjoyment (Wu et al., 2007; Wu and Liu, 2007).	CI1	1.I plan to play PUBG Mobile in the future.	1. I plan to play online games in the future.	(Chang et al. ,2014)	Likert 1-7
			CI2	2.I intend to continue playing PUBG Mobile in the future	2. I intend to continue playing online games in the future		
			CI3	3.I expect my play of PUBG Mobile to continue in the future.	3.I expect my play of online games to continue in the future.		

3.9 Data Analysis Technique

In this research, IBM SPSS 29 will be employed to perform pre-test and main test data processing.

3.9.1 Validity and reliability testing

The validity and reliability analysis employs IBM SPSS 29 software to test the validity and reliability of the data. The analysis is valid if it meets the criteria that is mentioned in **Table 3.2**.

Table 3.2 Criteria for Passing Validity and Reliability Test

Test conducted		Standard of result that is used in the pre-test analysis
Validity	KMO (Kaiser Mayer-Olkin)	This measure the sampling adequacy which is used as a diagnostic tool to assess the suitability of the data factor analysis. The ideal KMO value to be adequate is > 0.5. (Malhotra, 2020)
	Bartlett's Test of Sphericity	This is to confirm whether the correlations among variable are significant (Malhotra,2020) The significant value < 0.05 indicates that a factor analysis may be significance and pass the Bartlett's Test of Sphericity (Shrestha, 2021)
	Anti-Image Correlation Matrix	This is to measure the correlation between each variables involved in an analysis Each indicator must be > 0.5 to be considered pass the anti-image correlation matrix test (Field,2005).