Application of the Game Experience Questionnaire and Player Experience of

Need Satisfaction in Analyzing the Level of Player Experience and

Satisfaction in Mobile Video Games

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Undergraduate Level

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LEMBAR PENGESAHAN

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MOBILE VIDEO GAMES

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Dedication Page

"Through and through, thick and thin, never back down, no matter what"

I dedicate this thesis to:

- **I, myself, Zicko Muhammad Alrizki**

- **My parents, siblings, and families**

- **Lecturers who have taught and guide me**

- **Faculty of Computer Science**

- **Sriwijaya University**

- **Fellow classmates**

- **The High Council**

Foreword

Praise to Allah SWT for grace and blessings so that the author can complete this Thesis with the title **"Application of the Game Experience Questionnaire and Player Experience of Need Satisfaction in Analyzing the Level of Player Experience and Satisfaction in Mobile Video Games"**
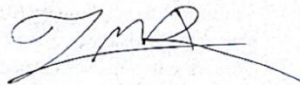
The making of this thesis is one of the requirements that must be fulfilled by Information Systems students before preparing the final project. In the preparation of this thesis as well as during the lecture, the author is inseparable from the instructions, guidance, assistance, and support of various parties, on this occasion the author would like to express his gratitude to all those who have provided morale and material assistance directly and indirectly, including:

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The author does acknowledge that this thesis is far from perfection with all of its shortcomings. Therefore, criticism and suggestions are most welcome for this thesis.

Palembang, 6 Mei 2024

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Application of the Game Experience Questionnaire and Player Experience of Need Satisfaction in Analyzing the Level of Player Experience and Satisfaction in Mobile Video Games

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Abstract

Nowadays, video games are getting popular due to the rapid growth of technology, especially mobile technology. Video games are now able to be played on mobile devices whether in single or multiplayer mode by using the internet and it's free and available everywhere. Understanding player experience in mobile video games is essential for developers and researchers. This research evaluates player experience in a mobile video game using the Game Experience Questionnaire (GEQ) and Player Experience Questionnaire (PENS). The evaluation was performed using an online questionnaire form to the participants ($N = 110$) who had played the specific mobile game. Using the Core Questionnaire from the Game Experience Questionnaire and Player Experience of Need Satisfaction module, this research found that the Game Experience Questionnaire shows high scores values in the aspects of Immersion (4.22), Competence (3.25), and Positive Aspects (4.38) which indicates a good player experience, and the Player Experience of Need Satisfaction shows a rather balanced yet high score for each value that indicates a satisfying player experience.

Keyword: Blue Archive, Mobile Video Game, Game Experience Questionnaire, Player Experience of Need Satisfaction, Player Experience

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CHAPTER I

BACKGROUND

1.1 Background

Video games are a part of almost every children's and adults' lives, with 97% playing for at least one hour per day. (Granic et al, 2014). Many computers functions have been moved to mobile devices, such as iPads, smartphones, tablets, etc. due to rapid growth of mobile technology, especially in the case of game applications. Video games played on mobile devices can be played in single player or multiplayer by using internet. These games are available everywhere and free, making it popular and well-liked (Wang et al, 2019).

In order to effectively apply game design ideas, create captivating video games, and comprehend the effects of playing video games, an accurate and precise measurement of player experience is important. There are many kinds of player experiences available. Two of the most commonly used scales are the Player Experience of Need Satisfaction (PENS) and the Game Experience Questionnaire (GEQ) (Johnson et al, 2018).

IJsselsteijn et al, 2013. theorized that immersion, flow, tension, competence, negative affect, positive affect, and challenge are important elements of gameplay experience and developed a Game Experience Questionnaire (GEQ). (Nacke et al, 2010). Game Experience Questionnaire (GEQ) has been widely applied by games researchers and practitioners to a broad scope of game genres, user groups, gaming environments, and purposes, these can be anything from a single player using a joystic

k to play a console game via a co-located social game on a multi-touch tabletop for senior citizens, to MOBA (Massive Online Battle Arena) games for competitive gamers, and immersive virtual learning environments for students. (Law et al, 2018).

In four separate research, Ryan, Rigby, and Przybylski developed the PENS by applying the CET (Cognitive Evaluation Theory) motivational model to video games (Ryan et al, 2006). Ryan et al, 2006, Developed measures of in-game satisfaction for Presence, Autonomy, Relatedness, and Intuitive Control throughout the game play with the aim in predicting the game enjoyment and persistence (Ijaz et al, 2020). The players' emotional, physical, and narrative involvement in the game was assessed and evaluated in order to determine presence. PENS examined the players' motivations towards video games using the well-established psychological theory of motivation known as Self-Determination Theory (SDT). SDT is mainly focused on how social situations and environments can provide experiences to fulfill people's basic needs of satisfaction.(Johnson et al, 2014).

From the results of the background description, the researcher found that there was an influence of sensory and imaginative immersion, tension, competence, flow, negative affect, positive affect, and challenge which is found in GEQ (Högberg et al, 2019), then with the influence of competence, autonomy, intuitive controls, relatedness, and presence (physical, emotional and narrative presence) in PENS (Högberg et al, 2019), in the player experience and need for satisfaction in playing mobile video game.

Therefore, researcher will use the GEQ (Game Experience Questionnaire) and PENS (Player Experience of Need Satisfaction) as methods to measure the level of experience and satisfaction of players in playing mobile video games.

Based on the explanation described above, the researcher wants to raise this issue as research material and prepare a thesis report with the title "Application of the Game Experience Questionnaire and Player Experience of Need Satisfaction in Analyzing the Level of Player Experience and Satisfaction in Mobile Video Games"

1.2 Problem Statements

Based on the background that has been described, the problem formulated is the involvement of player experience and satisfaction needs in the popularity of mobile video games. However, it is not yet known exactly what the experience and factors of player satisfaction needs for the game are.

1.3 Research Questions

The research questions that arise after the exposure of the problem formulation above are:

1. How to measure the level of satisfaction and player experience in mobile video games?

2. What are the factors that most influence the experience and satisfaction needs of players when playing mobile video games?

1.4 Research Objectives

Based on the problem formulation and research questions that have been explained, the results to be achieved in this study are as follows:

1. Measuring the player experience level of mobile video game players.

2. Knowing the experience that players feel when playing mobile video games.

3. Knowing the level of player satisfaction needs when playing mobile video games.

4. Knowing the factors that most influence the experience or feelings of players when playing mobile video games.

1.5 Problem Limitations

Based on the problem formulation that has been described, the problem restrictions in this study are as follows:

1. This research will only use a combination of the Core Questionnaire of Game Experience Questionnaire (GEQ) and Player Experience of Need Satisfaction (PENS).

2. This research will only assess the player experience of the Blue Archive players.

3. The scope of this research is Blue Archive players who play on mobile platforms.

4. The target respondents of this research are the members of the Blue Archive Palembang Community.

1.6 Research Benefits

1. The results of this study can be used as an alternative reference material for research related to player experience on games.

2. This research can be used as reference material related to player experience in making games.

3. The results of this study can be used for future game developers to accommodate the variables from the results of research using the GEQ and PENS methods.

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