

# User Experience Evaluation of Egrang Traditional Game Application

**Abstract**— Today many children played modern mobile-based game. A Traditional game developed in Indonesia and name of game is Stilts. The development of smartphones also affects mobile game technology. Traditional games were developed in Indonesia. The intention of developing traditional games into mobile game so that when children play games simultaneously, they will learn their own cultural games. In this study, the appraisal of 7 to 13 old users of the traditional Egrang game application is discussed. User Experience Questionnaire (UEQ) will measure 6 User Experience scales, including Attractiveness, Perspicuity, Efficiency, Dependability, Stimulation, and Novelty. The results of study, perspicuity and Novelty in the Above Average, Attractiveness, Efficiency and Dependability are Below Average range, and the Stimulation scale is on the Bag range. From those data, it is understood that in the next version, more importance should be given to simulation. Perspicuity that gets the highest score. So participants said the game was easy to understand when playing the first time but got bored quickly.

**Keywords**- User Experience, UEQ, Egrang, Game Application, Traditional Game.

## I. INTRODUCTION

The age of technology is developing in all areas that make it possible to carry out all its activities digitally. One of them is the game. The game is made by hand and traditional methods before entering the age of technology [1]. Traditional games are mostly played by children in village communities. In this age, since the development of modern games, these traditional games are no longer played by many children. Today's many children play mobile-based game. Mobile games not only fun or time pass, but some games that lead to education, so children not just play but there is an education side also [2]. Using game for education purpose is right choice, using game makes learning phases more fun. Indonesia, tradition game was developed. The goal of turning traditional games into mobile apps is for kids to learn their own cultural games while playing mobile games at the same time.

Eggrang Jump is an android-based game, quite simple, and there are no levels and can be played by anyone. The user very important for the development of application, including games. User interface is the method in which people are connected to interact with the game. The user

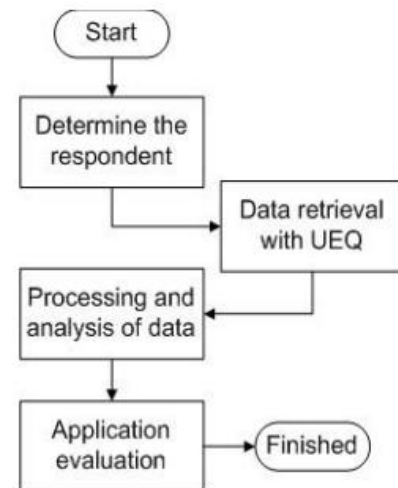
interface alone is not enough to measure whether a system is comfortable to use. The system cannot be correct even if the user interface is good looking, but user has difficulty using it. It can be done by measuring User Experience to find user comfort. Applications should make user needs compatible with the applications to provide a positive user experience.

Evaluation of user experience in games has recently been covered in previous studies. In the study, the Flow Framework approach was used to evaluate the user experience in online games. These studies help determine whether a game is user-friendly and well-design [3]. The growth of mobile game players and the expansion of the game market on this device necessitates this research. Therefore, the research findings are expected to guide the development of current mobile game applications and future games.

## II. METHOD

### A. Research Flow

The research methodology used in this work is shown in below.

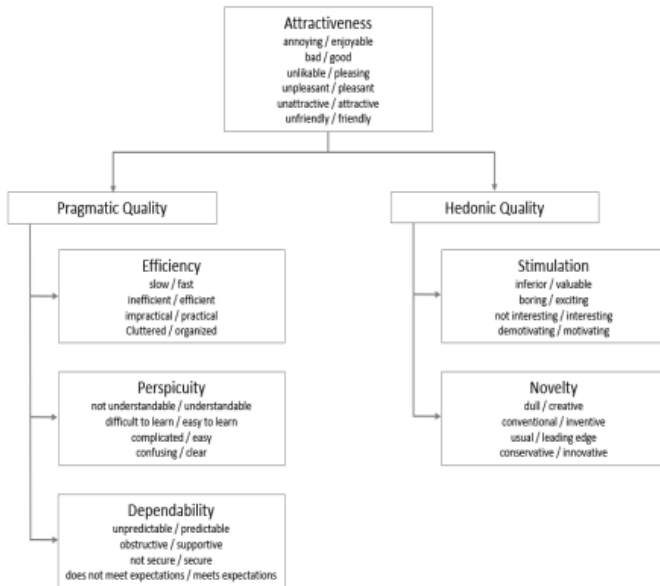


This study uses respondents from children aged 7 to 13 in the villages of Karangnom and Klaten. Data processing will then be carried out to produce the analysis's result after the data has been collected. It will create the "Egrang Jump" game app for evaluation purposes, which will examine how well children use it.

### B. User Experience Questionnaire

The User Experience consists of four elements [4]: Usability, Valuable, Adoptability, Desirability. This study will evaluate user experience using the User Experience Questionnaire (UEQ) tool.

Overall user experience is one of the topics covered by the UEQ survey scale. The UEQ questionnaire has 26 question items and six scales [5]: Attractiveness, Perspicuity, Efficiency, Dependability, Stimulation, Novelty. The Scales are grouped into three groups:



The advantages of UEQ over other tools are its completeness of aspects, specifically attractiveness, pragmatic quality, and hedonic quality.

### III. RESULT AND DISCUSSION

#### A. User Interface

The game “Egrang Jump” is a mobile-base game and only for android device and this game no levels and no rating system.



#### B. Data Retrieval

After being asked to play the game, children were given a series of questions consisting of 26 expression items. When these questions were asked, children rated between -3 and 3, depending on how they felt the time.

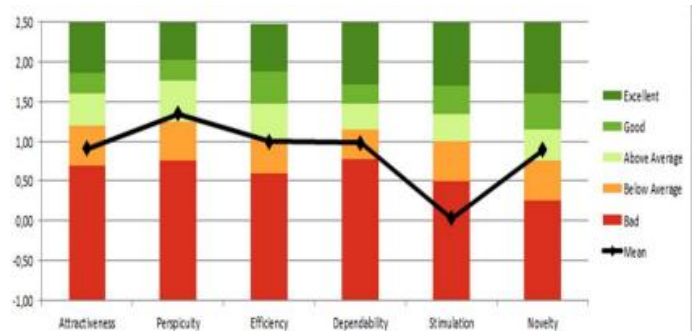
	1	2	3	4	5	6	7		
annoying	○	○	○	○	○	○	○	enjoyable	1
not understandable	○	○	○	○	○	○	○	understandable	2
creative	○	○	○	○	○	○	○	dull	3
easy to learn	○	○	○	○	○	○	○	difficult to learn	4
valuable	○	○	○	○	○	○	○	inferior	5
boring	○	○	○	○	○	○	○	exciting	6
not interesting	○	○	○	○	○	○	○	interesting	7
unpredictable	○	○	○	○	○	○	○	predictable	8
fast	○	○	○	○	○	○	○	slow	9
inventive	○	○	○	○	○	○	○	conventional	10
obstructive	○	○	○	○	○	○	○	supportive	11
good	○	○	○	○	○	○	○	bad	12
complicated	○	○	○	○	○	○	○	easy	13
unlikable	○	○	○	○	○	○	○	pleasing	14
usual	○	○	○	○	○	○	○	leading edge	15
unpleasant	○	○	○	○	○	○	○	pleasant	16
secure	○	○	○	○	○	○	○	not secure	17
motivating	○	○	○	○	○	○	○	demotivating	18
meets expectations	○	○	○	○	○	○	○	does not meet expectations	19
inefficient	○	○	○	○	○	○	○	efficient	20
clear	○	○	○	○	○	○	○	confusing	21
impractical	○	○	○	○	○	○	○	practical	22
organized	○	○	○	○	○	○	○	cluttered	23
attractive	○	○	○	○	○	○	○	unattractive	24
friendly	○	○	○	○	○	○	○	unfriendly	25
conservative	○	○	○	○	○	○	○	innovative	26

#### C. Data Analysis

The data is processed so that the results are ready for analysis when all survey responses from the respondents are collected.

UEQ Quality	UEQ Scale	Variable	UEQ Scale
Attractiveness	0,906	Attractiveness	0,906
Pragmatic quality	1,109	Perspicuity	1,344
		Efficiency	1,000
		Dependability	0,984
Hedonic quality	0,461	Stimulation	0,031
		Novelty	0,891

Finding from processing respondent data using UEQ’s Data Analysis Tool version 8. The UEQ scale indicates a negative result if less than -0.8, positive if greater than 0.8, and a neutral result between -0.8 and 0.8.



### IV. CONCLUSION

According to the user’s impression, according to the discussion of the results of data analysis, the technical capabilities and convenience of the game

bored. Perspicuity and Novelty scale values are above average when compared to dataset results from benchmark analysis. Scales of attractiveness, effectiveness and reliability are below average. The stimulation scale, by comparison, is in the wrong range. As a result, more emphasis needs to be placed on incentives when creating gaming apps.

## REFERENCES

1. N.R. Siregar, and M. Ilham, "Traditional Game As a Way for Healthy in Bajo's Children," UGM Annual Scientific Conference Life Sciences, 2016.
2. N. Kidi, B. Kanigoro, A.G. Salman, Y.L. Prasetio, I. Lokaadinugroho, and A.A. Sukmandhani, "Android Based Indonesian Information Culture Education Game," 2nd international Conference on Computer Science and Computational Intelligence, 2017.
3. M.L. Adhitama, E.M.A. Jonemaro, and W.S Wardhono, "Evaluasi User Experience Gim defense of The Ancients 2 (DOTA 2) Menggunakan Metode Flow Framework," Jurnal Pengembangan teknologi Informasi dan Ilmu Komputer, vol. 4, no. 1, pp. 17-24, Feb. 2020.
4. F. Guo, "More Than Usability: The Four Elements of User Experience, Part II," UXmatters, 06-Aug-2012. [Online]. Available: <https://www.uxmatters.com/mt/archives/2012/08/more-than-usabilitythe-four-elements-of-user-experience-part-ii.php>. [Accessed: 23-Aug2020].
5. M. Schrepp, User Experience Questionnaire Handbook, 31-Dec-2019. [Online]. Available: <https://www.ueqonline.org/Material/Handbook.pdf>. [Accessed: 16-Aug-2020].