Chapter 4
PERFORMANCE ANALYSIS

4.1 Introduction

The proponents of the IT Special Project entitled "HULA-WHO? (Inventions and Discoveries from Past to Present)"conducted an evaluation in order for the proponents to test the reliability of the game with regards to the game's content, platform and technical aspect. The proponents conducted the performance analysis of the system through questionnaire evaluation form (Refer to Appendix C).

The proponents used the Random Sampling Method to determine the 30 samples out of the population. The questionnaire includes ten (10) statements to be rated as (1) poor, (2) average and (3) excellent.

4.2 Experimental

In a world where technology is thriving and prospering, android games are becoming more popular that is why the population for the survey is large.

One of the best ways to achieve unbiased results in a study is through the use of Random Sampling Method. Through random sampling, the proponents have been able to identify the 30 samples out of the population through unpredictable means.

The system reliability testing was conducted last September 12-13, 2013. Upon distribution of evaluation forms (Refer to Appendix C), the proponents also considered the respondent's age, since the target age is sixteen (16) to twenty-two (22) years old. Fifteen (15) respondents per day is given a chance to play the game from the loading until he/she had accomplishes the entire game. After playing the game, the respondents then filled-up the questionnaire evaluation form.

4.3 Results and Analysis

The IT Special Project, HULA-WHO? (Inventions and Discoveries from Past to Present) was evaluated by 30 respondents and has attained the following results through the questionnaire evaluation form computed utilizing the weighted arithmetic mean formula (Refer to Appendix D).

Table 1. Shows the result on the statement: The instructions on how to play the game are clear.

Option	Frequency
1 - Poor	0
2 - Average	6
3 - Excellent	24

$\overline{X}$= 2.8 (Excellent)

Table 2. Shows the result on the statement: The game is suitable for game player ages 16 to 22 years old.

Option	Frequency
1 – Poor	0
2 - Average	7
3 - Excellent	23

$\overline{X}$= 2.8 (Excellent)

Table 3. Shows the result on the statement: The game is fun and informative.

Option	Frequency
1 - Poor	0
2 - Average	5
3 - Excellent	25

$$\overline{X}= 2.8 \text{ (Excellent)}$$

Table 4. Shows the result on the statement: The sounds used in the game are appropriate.

Option	Frequency
1 - Poor	2
2 - Average	10
3 – Excellent	13

$$\overline{X}= 2.0 \text{ (Average)}$$

Table 5. Shows the result on the statement: The hints are helpful to guess the image in order for the payer to proceed to the next trivia.

Option	Frequency
1 - Poor	0
2 - Average	10
3 – Excellent	20

$$\overline{X}= 2.7 \text{ (Excellent)}$$

Table 6. Shows the result on the statement: The graphics of the game are well designed and are suitable for the gamers.

Option	Frequency
1 - Poor	0
2 - Average	7
3 - Excellent	23

$$\overline{X}= 2.8 \text{ (Excellent)}$$

Table 7. Shows the result on the statement: The game aids the gamers to learn new information about Inventions and Discoveries in order to accomplish the stages of the game.

Option	Frequency
1 - Poor	0
2 - Average	6
3 – Excellent	24

$\overline{X}$= 2.8 (Excellent)

Table 8. Shows the result on the statement: The interface is user-friendly that the gamers can adapt easily to the environment of the game.

Option	Frequency
1 - Poor	0
2 - Average	9
3 - Excellent	21

$\overline{X}$= 2.7 (Excellent)

Table 9. Shows the result on the statement: The game buttons functions well.

Option	Frequency
1 - Poor	0
2 - Average	2
3 - Excellent	28

$\overline{X}$= 2.9 (Excellent)

Table 10. Shows the result on the statement: The storyline of the game is interesting to read.

Option	Frequency
1 - Poor	0
2 - Average	6
3 - Excellent	24

$\overline{X}$= 2.8 (Excellent)

Based on the results (refer to Appendix D), the system was designed a success since it has met the objectives of the proponents in designing and developing this IT Special Project, those are both fun and educational, learn information about Inventions and Discoveries, user friendly and easily adapt to the environment of the game. The tables above displays a high mean on the "excellent" option for the ten (10) statements which only designates that the game's platform, content and technical aspect were appropriate to gamer's choice.

4.4 Summary

Evaluation of the system's reliability base on the game's content, platform, and technical aspect using Weighted Arithmetic Mean as the statistical tool,

$$X = \frac{f_1x_1 + f_2x_2 + f_3x_3}{f_1 + f_2 + f_3}$$

Where:

$\overline{X}$ = Weighted Average mean

f = Frequency

x = Weighted of each operation

Options:

1 – Poor

2 – Average

3 – Excellent

formulated that HULA-WHO? (Inventions and Discoveries from Past to Present) has an excellent rating to the gamers. Also the proponents had met the objectives stated. [BORR2002]