Simulation Game-Based Governance System Education

Glenn Hariyanto Putra[1], Erdhi Widyarto Nugroho[2], T. Brenda Chandrawati[3]

[1,2,3] Department of Information Systems, Computer Science Faculty Soegijapranata Catholic University

[1,2,3]Jl. Pawiyatan Luhur IV No.1, Bendan Duwur, Kota Semarang, Jawa Tengah 50234

[1]maxchievouse@gmail.com

[2]erdhi@unika.ac.id

[3]brenda@unika.ac.id

Abstract— Democratization is a process of people's participation in the country's political activities, but this process is quite difficult because the public's perception of the government tends to be negative. One way to increase public awareness about government is to use educational games such as "Governman" which teach about the government system through simulation and make players think critically and creatively. The game "Governman" is made using the waterfall method and has gone through all the stages in that method. Research has been conducted to show that this game is effective in encouraging the player's intention to learn about the government system. It is hoped that this game will be an interesting and easy-to-understand way for players to learn about the government system. Research has been conducted to evaluate the effectiveness of this game and the results show that this game has a valid correlation between Performance Expectancy, Effort Expectancy, Hedonic Motivation and Behavioral Intention. This shows that this game is effective in encouraging players' intentions to learn and understand the government system.

Keywords: Critical, Government System, Simulation Game.

I. INTRODUCTION

Democratization is a transition towards a more democratic political system. The process of democratization is not easy to process, because the people must express their opinion through the People's Representative Council or the DPR, or must participate in community and state activities, without differentiating the rights and obligations of the entire community. With this democratization, people can freely carry out their activities in their country, and also people can freely express their opinions in that country. This change influenced Indonesian society in building public awareness about governance. Public demand for government policies is increasing, it is caused by significant changes in this life. The public's perception of the government is increasingly negative because of these demands [1]. This public trust cannot be supported if the government does not act wisely under these conditions. The public beliefs of today's adults influence the behaviour of today's youth [2]. Many young people join in because their parents often insult or even oppose the government because it doesn't live up to their expectations.

The influence of today's adults often gives a dilemma to today's young audience, so there are still large negative perceptions, even in 2019 which was recorded on Twitter with a total of 145 million active users, 58% had negative perceptions while 18% had positive perceptions and positive perceptions. neutral with 31% higher than positive perception. [3] In this data, it has been proven that there are still many Indonesian people who doubt the performance of the existing government. Although in the election there were fewer negative perceptions than in the previous year due to factors like rebellion, corruption and many more. However, the influence of the family also has an effect in reducing or increasing interest in choosing.

Many games provide various kinds of education with different methods. For example the games "Civilization" and "Age of

Empire". simulation but the game "Governman" is broken down into several different stages with different difficulty levels. Besides that, the game "Governman" is more centred on education than its simulation gameplay.

II. LITERATURE REVIEW

2.1 Government System

The system of government is the division of power between two state bodies, namely between the legislature and the executive body of the state, from this separation there are two models of government systems, namely the parliamentary system and the presidential system. The presidential system is a system that is only centred on one person, namely the president. [4]

2.2 Simulation

Simulation is a training method that displays something in an artificial form that is almost the same as the actual situation. The definition of simulation itself is the design and implementation of a model as a test to examine a system. [5]

2.3 Simulation Games

Simulation games are a combination of game characteristics such as competition, teamwork, rules, participation and role-play combined with simulation characteristics such as models in the real world. Models in simulation games are more focused on achieving the objectives of the simulation. [6]

2.4 Unity

Unity is a game engine created by Unity Technologies which was released in 2005. Unity itself is an ideal first-build application for game development, with many premium features and the ability to build on multiple platforms. [7]

2.5 Democracy

Democracy conveys the understanding that resources are people and that humans create rules that promote and protect their rights [8].

2.6 Game System of Government

The government system game is a game that provides education about the government system. The games "Civilization" and "Age of Empire" provide education on the government system with simulation gameplay. The game "Governman" is made with a simulation gameplay that has different stages and levels of difficulty.

III. RESEARCH METHODOLOGY

3.1 Data Sources

1. Primary Data Source

The primary data source was taken from a questionnaire on voters in the election with a total of 50 (fifty) respondents. Data collection was carried out for people aged 15-26 years, there was no location specification for data collection because data collection was done online.

2. Secondary Data Sources

Secondary data sources are taken and obtained from journals or references from the internet with topics related to government systems and simulation games.

3.2 Data Collection Techniques

1. Questionnaire or Questionnaire

This technique is carried out by creating a questionnaire on Google form and distributing it to certain people who are considered qualified to become resource persons. The questionnaire will be distributed via social media so that everyone who has a link or link to access the form can reach it. The survey will use a Likert rating with a scale of 1 (one) to 5 (five). Scale 1 for strongly disagree and scale 5 for strongly agree.

3.3 Testing

1. Game Testing

To get valid data, it is necessary to test the game "Governman". The method of testing this game is by distributing questionnaires and

links to download the game so that testing of the game will occur. Games that have been made and have passed the verification stage will be uploaded or uploaded on Google Drive then the download link will be distributed via a questionnaire from the Google Form.

2. Questionnaire Testing

The questionnaire test that was applied was to test the validity and reliability tests as well as the correlation test to obtain valid results.

3.4 The method used

The method used in this research is the waterfall method. This method must pass through several stages and have a systematic nature, each stage must be completed sequentially to proceed to the next stage.
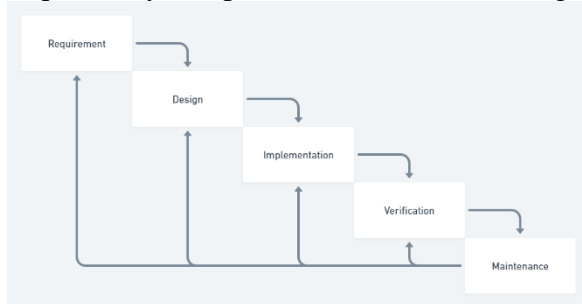

Figure 3.1 Waterfall method

IV. RESEARCH RESULTS AND DISCUSSION

4.1 Implementation of Government System

In the game "Governman", the main purpose of making the game is to introduce users to the system of government in Indonesia. To achieve this goal, it is necessary to carry out a design process that must include the concept of a government system in Indonesia. In developing the game "Governman" the developer will take the basic concept and implementation of the government system. The provision of education in the game "Governman" has several points, the first is the basic system of government, the second is the system of government in Indonesia and the last is problem-solving.

4.2 Game Design.

The game "Governman" is a 2D game with a simulation system as the main system, to provide learning about the government system. "Governman" itself is divided into several stages with the same system but different levels of difficulty, using a taping system to complete the stages.

4.3 Manufacturing Implementation

1. Tutorial Implementation

At the start of the game, players are given instructions on how to play "Governman". The display of these instructions is in the form of different scenes, these instructions or tutorials show how to play and also tell the problems that exist in the city that the player is playing**.**
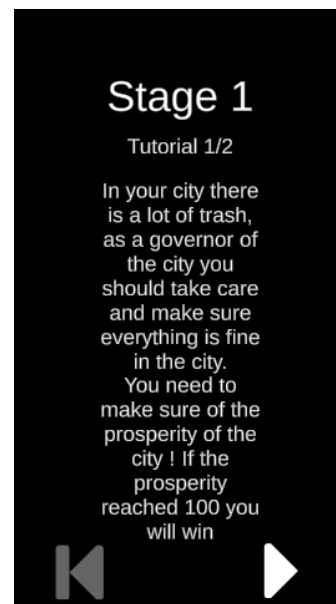

Figure 4.1 Tutorial Tab

2. Gameplay Implementation

In the "Governman" gameplay, several existing systems are implemented, the first is an item generator, then the second is an item

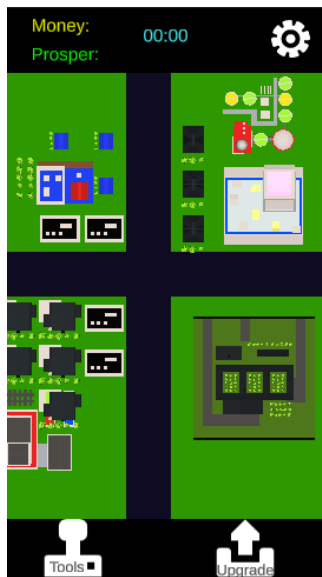disabler in the game manager, then the last is the system for picking up items.

Figure 4.2 Game Area

3. Game Flow

The gameplay of the game "Governman" focuses more on the stage, at the beginning, namely the menu section, it is made very simple with start and exit buttons. Tutorials for players will be given when the players have chosen the stage they want to play.
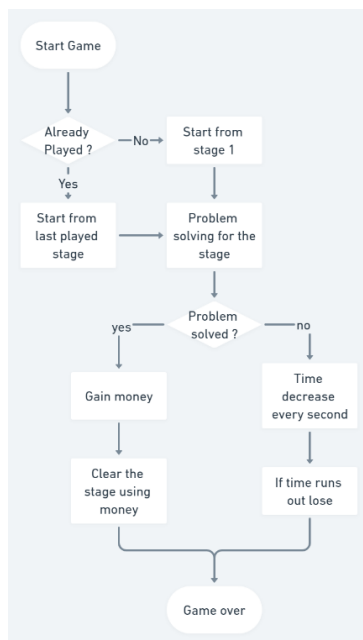

Figure 4.3 Game Flow

4.4 Respondent Data

1. Gender

In Figure 4.4, out of a total of 50 respondents, 26 respondents were male, then 22 respondents were female and the last 1 person was the other sex.
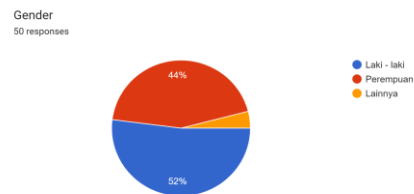

Figure 4.4 Gender Chart

2. Educational Status

In Figure 4.5, out of a total of 50 respondents, 19 respondents were students, 18 respondents were undergraduates, 9 respondents were others and the last 4 respondents were high school equivalents.
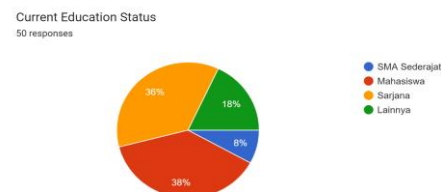

Figure 4.5 Status Pendidikan

3. Age

In Figure 4.6, out of a total of 50 respondents. 20 respondents with an age range of 18-22 years. 14 respondents have an age range of 23-26 years. 8 respondents have an age range of more than 26 years. 5 respondents have an age range of 13-17 years. And finally 3 respondents with an age range of fewer than 13 years.
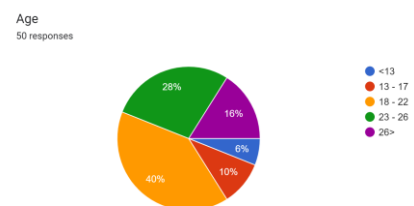

Figure 4.6 Age Chart

4.5 Reliability Test

In Table 4.1, it can be concluded that the PE variable has an excellent value while EE, HM and BI have a good value.

Table 4.1 Reliability Test Results

Variable	Cronbach's Alpha	Internal Consistency
PE	0.903	Excellent
EE	0.833	Good
HM	0.835	Good
BI	0.873	Good

4.6 Correlation Test

In Table 4.2, the results of the correlation test can be concluded with a sign. With so it can be concluded that.

1. PE and BI correlate with values above 0.4 and are marked.

2. EE and BI correlate with values above 0.4 and are marked.

3. HM and BI correlate with values above 0.4 and are marked.

Table 4.2 Correlation Test Results

Correlations

		RPE	REE	RHM	RBI
RPE	Pearson Correlation	1	.554**	.793**	.764**
	Sig. (2-tailed)		.000	.000	.000
	N	50	50	50	50
REE	Pearson Correlation	.554**	1	.650**	.688**
	Sig. (2-tailed)	.000		.000	.000
	N	50	50	50	50
RHM	Pearson Correlation	.793**	.650**	1	.869**
	Sig. (2-tailed)	.000	.000		.000
	N	50	50	50	50
RBI	Pearson Correlation	.764**	.688**	.869**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	50	50	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

V. CONCLUSION

1. The game "Governman" is a game that aims to educate the public related to the democratic process. The game tutorial section is a form of education for the government system. The gameplay design aims to make players think critically, and creatively and have problem-solving skills to complete the stage, from the gameplay game "Governman" itself players will be faced with problems that exist in the city, players must take items to get money and prosperity that can buy upgrades to complete the stage. Overall, the game "Governman" requires players to solve existing problems in their city, by using different tools players are faced with situations where several problems must be solved in different ways. Making the game "Governman" itself enabled it to provide such learning.

2. Making the game "Governman" using a simulation strategy model and system, where players have to think of a way to finish the game. Players are also faced with a simulation model to give the impression that players are actually in the game and exert influence on the city in "Governman". In addition, players are also given lessons about the democratic system in Indonesia. The lessons given are the basis of democracy, the implementation of democracy, and the influence of democracy.

3. The game "Governman" is easy to understand, interesting and also useful to play, this can be proven by the correlation test between the variables PE (Performance Expectancy), EE (Effort Expectancy) and HM (Hedonic Motivation) on the BI variable (Behavioral Intention). With each value, PE with BI has a value of 0.764, EE with BI has 0.689 and the HM variable with BI has a value of 0.869.

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