



2nd International Conference on Computer Science and Computational Intelligence 2017,
ICCCSI 2017, 13-14 October 2017, Bali, Indonesia

Android Based Indonesian Information Culture Education Game

Norman Kidi, Bayu Kanigoro*, Afan Galih Salman, Yen Lina Prasetyo, Indrabudhi Lokaadinugroho, Arief Agus Sukmandhani

Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta 11480, Indonesia

Abstract

As the development of the mobile gaming industry is increasing rapidly, the game today not only serves as entertainment alone. Then by increasingly the need for the sector and education purposes then motivates the development of an educational game “Merah Putih” on the Android platform that provides information on Indonesian Culture. The methodology used for development is Waterfall methodology which consists of analysis method for information gathering, system design, implementation, and testing or testing of information on Indonesian Culture presented in this educational game. Test results obtained are a lot of information provided in this set can be accepted or captured by players and considered useful for the learning of players. Besides, overall can be stated that the level of satisfaction of players against educational game “Merah Putih” is considered quite high.

© 2017 The Authors. Published by Elsevier B.V.

Peer-review under responsibility of the scientific committee of the 2nd International Conference on Computer Science and Computational Intelligence 2017.

Keywords: Game; Education; Culture; Indonesia; Android

1. Introduction

In this day and era, Technology development mainly related to a mobile device has become rapidly rising and supporting everyday needs. The event becomes everybody, from children to adults, need a device or tool that can provide easiness in finding information to support their activities. It is known that with rapidly technology development makes the awareness of art and culture become reduced¹. The development of technology can be incorporated into art and culture thus its benefits are obtained by facilitating and accelerate the search for information and add insight into the art and culture through the use of mobile gadgets. But it becomes not enjoyable if the application only provides information alone thus by combining some entertainment such as game, will make the application more attractive.

Games in the mobile devices nowadays become a rapidly growing industry. Therefore, the game is also used as a means to develop a person's interest in education. For example World Citizen games: Geography quiz², a Map quiz, and similar games like Geo Challenge³, which uses Android platform with game type using map. Besides there are

* Corresponding author. Tel.: +6221-534-5830 ext 2188.

E-mail address: bkanigoro@binus.edu

also games such as EnjoyLearning World Map Puzzle⁴ with a competition type of puzzle game where the puzzle shaped like a part of a country and labeled the name of the country.

The development of smartphones is very fast because the usage of smartphones such as sending short messages, as a tool to talk to each other, play games and various other features such as mobile phones in general like listening to music, the internet, and so forth. Besides, the smartphone also seems to be made to be able to replace the function of a computer in a smaller form so as to provide an advantage compared to the computer that can be grasped and easy to carry anywhere. As one example is Android which is currently growing rapidly compared to other smartphones. Android has advantages such as an operating system that is open (open source). Thus, easier for application developers who want to create applications for Android and have the availability of quality applications. Due to its openness, application developers are very enthusiastic to build quality applications and make things easier for others. Also, SDK (Software Development Kit) for Android is free and can be downloaded by anyone and facilitate in marketing when the application has been developed⁵.

2. Methodology

The development of the application is following Waterfall methodology⁶ which consist of system requirement, system design, implementation, and verification. System requirement is fulfilled by using questionnaires distributed to 100 respondents and observing the similar game.

From questionnaires containing 19 questions and distributed to 100 respondents, male respondents were more than female respondents, with a large percentage of male respondents was 66% and a significant proportion of women respondents was 34%.

Based on the percentage of answers obtained from each choice of solutions can be concluded that more respondents aged 18 to 21 years, with a rate of 48%. Respondents who work as students, with a percentage of 47%. Respondents use Android smartphone with a rate of 61.54% followed by Blackberry operating system of 30.77% and iPhone of 3.08%.

Based on the percentage of answers obtained from each of the answer options, it can be concluded that respondents are interested in using Android-based smartphone operating system, with a percentage of 95%. Respondents are sometimes using a smartphone as an entertainment to play games, with a percentage of 56%. Respondents who play games using a smartphone in one day for 1 to 3 hours, with a rate of 47% and respondents who like Puzzle game type, with a percentage of 21.14% followed by strategy game 16.67% and action 13.82%.

Based on the percentage of answers obtained from each response option, it can be concluded that more respondents chose Gameplay as the most critical component of a game, with a rate of 33.70%. Respondents who never played games themed Indonesian culture, with a percentage of 87%. Respondents who know the types of games genre puzzle, with a proportion of 67%.

Based on the percentage of answers obtained from each response option, it can be concluded that more respondents who do not know the game puzzle of Indonesian cultural background on Android, with a percentage of 74%. Respondents who want to play game puzzle with a cultural history of Indonesia, with a proportion of 90%, respondents who want Bahasa Indonesia as the language used when playing a game themed Indonesian culture, with a percentage of 72%.

Based on the percentage of answers obtained from each of the answer options, it can be concluded that more respondents chose to seek entertainment as the main reason to play a game, with a percentage of 41%. Respondents who want bonus points to upgrade in-game assistance after successfully completing a mission from a match, with a rate of 47%. Respondents chose too much time loading games as the shortcomings often encountered in playing a game, with a percentage of 29%, respondents require instruction to play a game, with a rate of 87% and respondents chose twisted ending as the expected ending of a match, with a percentage of 60%.

“Merah Putih” is a 2-dimensional game based on Indonesian culture. Game genres lead to various puzzle games with cultural elements in every match. This game can be played on smartphone device with Android operating system. By incorporating cultural elements, players are expected to get to know more about culture in Indonesia but in a way that is more exciting and fun than having to read a book. Table 1 shows comparison to other games.

World Citizen Geography Quiz² is developed by Lammar Group. The game is a quiz game that aims to bring knowledge about the geography of the world. The type of quiz presented in the match is in the form of matching the

Download English Version:

<https://daneshyari.com/en/article/4960431>

Download Persian Version:

<https://daneshyari.com/article/4960431>

[Daneshyari.com](https://daneshyari.com)