Android Based Educational Game Application to Introduce Cultureand Tribes in West Sulawesi

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Abstract

The aim of this research is to find out how to design and implement an Android-based educational game application to introduce culture and ethnicity in West Sulawesi which is expected to contribute to motivating students to get to know culture and ethnicity in West Sulawesi. This application or system was created using the Java and MySQL programming languages, where this application is used to facilitate learning that is full of modern education by following current technological developments. And based on the results of the implementation, it has been successful and has had an influence on motivation to learn about culture and ethnicity in West Sulawesi.

Keywords: Educational Games, Android, Cultural, Ethnic

Abstrak

Tujuan pada penelitian ini adalah mengetahui cara merancang dan mengimplementasikan aplikasi *Game* edukasi berbasis android untuk memperkenalkan budaya dan suku di Sulawesi Barat yang diharapkan dapat berkontirbusi dalam memotivasi peserta didik dalam mengenal Budaya dan Suku di Sulawesi Barat. Aplikasi atu sistem ini dibuat mengunnakan bahasa pemrograman java dan *MySQL*, Dimana aplikasi ini digunakan untuk menfasilitasi pembelajaran yang penuh dengan edukasi yang modern dengan mengikuti perkembangan teknologi saat ini. Dan berdasarkan hasil implementasi telah berhasil dan memberi pengaruh terhadap motivasi pembelajaran tentang kebudayaan dan Suku yang ada di Sulawesi Barat.

Kata Kunci**:** *Game Edukasi, Android, Budaya, Suku*

Introduction

Indonesia is a country that is rich in culture, various tribes, traditional ceremonies and traditional clothing. However, as technology advances, the younger generation's concerns are increasingly fading. They are more interested in the influence of foreign culture. Therefore, the materials carried by these devices are the culture of the country of origin. West Sulawesi (abbreviated as Sulbar) is the 33rd province of Indonesia which was formed in 2004. In 2021, the population of West Sulawesi will be 1,436,842 people with a density of 85.59 people/km. The formation of the province of West Sulawesi was the result of the expansion of the province of South Sulawesi which was based on Law Number 26 of 2004 which was ratified in a plenary meeting between the government and the DPR RI and was inaugurated by the Minister of Home Affairs on behalf of the President of the Republic of Indonesia on October 16 2004. One of the information technology products that dominates West Sulawesi is Android-based devices. Initially the applications that could be downloaded came from abroad, it is not surprising that the young generation's thinking concept was heavily influenced by foreign culture. To cope with influx, it needs to be developed. Applications that specifically contain Indonesian culture. One of them is a game about

culture and ethnicity in Indonesia.

This is important to do to educate about traditional clothing at an early age. It is necessary to create fun educational facilities so that users enjoy the teaching process. Apart from the internal factors of society itself which often ignores its own culture. Some of the cultural heritage in question is traditional clothing, other traditional games. The word Game comes from English. In Indonesian the term "Game" is a game. In this case, the game refers to the notion of intellectual agility which can also be interpreted as an arena for players' decisions and actions, usually in a non-serious context or with the aim of refreshing (Suryadi, 2018). Game applications are structured or semi-structured activities that contain interesting and fun elements. Generally, for entertainment purposes. Based on the type, there are three types, namely Role Play Game (RPG), Real Time Strategy (RTS) and FPS or First Person Shooter (Effendi, 2018). The presence of games can help to regenerate learning motivation in children whose enthusiasm for learning has decreased because they contain certain threats to stimulate children's interest in learning about the subject matter.

According to Ratnasari, Qur'ani and Apriani, (2018), Android is an operating system for Linux-based mobile devices that includes an operating system, middleware and applications. Android provides an open platform for developers to create applications. At the time of Android's first release. Android together with the Open Handset Alliance states that it supports open source development on mobile devices. Google releases Android code under the Apache license, an open platform and software license for mobile devices. According to Setiawan and Nita, (2019), education is a process of self-learning which aims to hone and develop one's potential in order to realize better learning and knowledge. In the learning process there are several things that are the goals of learning, namely; morals, personality, skills, and intelligence or intellect. Education in everyday terms is better known as education, and the educational process lasts from early childhood to lifelong.

According to Koenojoningrat (2015), saying that custom is a form, we can call it customary code of conduct. This can be proven by the existence of traditional clothing and certain meanings in its use which can be seen from the decorative motifs. There are several traditional clothes scattered in West Sulawesi. The traditional Mandar clothing is Pattuqduq Towaine. Mandar tribe traditional clothing is usually used for weddings, as bridal clothing, then Kalumpang traditional clothing. Kalumpang traditional clothing is kayaq bei which is one of the cultural heritages that is still sustainable, and Mamasa tribe traditional clothing for nobles is called tana traditional clothing, Bulawan.

Furthermore, apart from clothing, culture and ethnicity as well as other things such as traditional houses, traditional events and others are also of concern, Triwibisono and Aurachman (2021), define an ethnic group as a social group in a larger cultural and social system that is given status. special because they show different characteristics. An ethnic group is a group of people who have race, origin, religion or a combination of various things that are tied to a cultural value system. All of these things are packaged in Mobile learning which can be defined as a facility or service that provides general electronic information to students and educational content that helps achieve knowledge without considering location and time (Heriyanti et al., 2017). According to Armanda and Rizqi (2020), games are classified into two large parts, namely physical games and electronic games. Games are a form of entertainment that can be used to refresh the mind from fatigue resulting from busy daily activities. Video games or electronic games are a type of interactive entertainment that uses electronic devices. Games are an inseparable part of children's daily lives. Physical games in everyday life, for example, are jumping rope and hide and seek.

Java in computer science, is an object-oriented programming language introduced in 1995 by Sun Microsystem Inc., which when Java was created, was led by James Gosling. The Java programming language was created when the company Sun Microsystems wanted to create a programming language that could run on all devices without having to be tied to the platform used by the device. A project spearheaded by Patrick Naughton, James Gosling, Mike Sheridan and Bill Joy was implemented. In 1991, the Java programming language was created, which was originally called "Oak". Java is a technology where this technology includes Java as a programming language which has its own syntax and programming rules, it also includes Java as a platform where this technology has a virtual machine and libraries needed to write and run programs written in the Java programming language, the biggest reason In creating the Java programming language, the desire is to create a programming language that can run on various devices without having to be tied to a platform, so that Java is portable and platform independent (not dependent on the machine or operating system) (Maiyana, 2018)

Materials and methods

The research method used by the author in this research is the waterfall method. The waterfall method is software development that is created sequentially, by carrying out work from top to bottom, which helps make application work easier.

Results

The resulting designs include the main menu, game categories, questions, as well as several other additional menus which have been designed to be more attractive so that it can be an educational, fun, effective and efficient application. The following is a display of the design results, the first is the main menu:
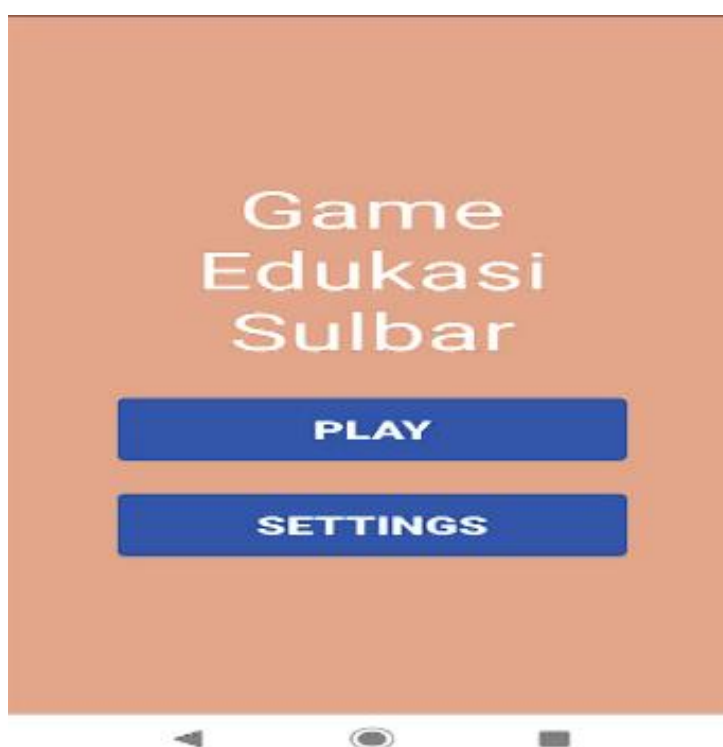

Figure 1
Main Course

GAME CATEGORY

The game category is a page that displays several game menus

Figure 2
Game Category

4.1.1 Questions

The question page is a question of the game when played.

Gambar 3
Question Menu

Figure *4*
Questions with Pictures

Application Testing Analysis
Application form testing is carried out to find out whether the form in the designed Android application is in accordance with the design that has been created. After testing, the results obtained are explained in the following table:

Test Results Table

No.	Description	Expected results	Result
1.	Main Menu Form	Able to display information when the application is accessed.	Succeed
2.	Category Form	Able to display games according to the selected category	Succeed
3.	Game Form	Able to display the game when the game page is accessed.	Succeed

After testing each form, it can be concluded that each form was successful in meeting the expected results.

Implementation of an Android-based educational game application. Based on research instruments, it was found that this application is useful for users or teaching staff and also cultural figures to teach the types of culture that exist in West Sulawesi because apart from being easy because it can be accessed directly on smartphones, it is also supported by an attractive appearance.

Conclusion
The Android-based educational game application design can be used by downloading directly on the Google Play store platform. The system can be accessed and functions well.

The results of the implementation after testing several games on the application show that the game runs well and has an effect in increasing people's motivation, especially in terms of teaching about culture in West Sulawesi.

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