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MOBILE APPLICATION FOR EDUCATING SCHOOL CHILDREN ON THE ENDANGERED SPECIES IN MALAYSIA

SABRINA ZAHRA

Project Submitted in Partial Fulfillment of the Requirements for the Degree of Bachelor in Creative Multimedia (Hons.) in the Faculty of Information Sciences and Engineering

June 2023

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MOBILE APPLICATION FOR EDUCATING SCHOOL CHILDREN ON THE ENDANGERED SPECIES IN MALAYSIA

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ABSTRACT

Knowledge about endangered species is an urgent knowledge for us human to learn about it for the balance of nature. It is very important to have the knowledge on the endangered species from the very early age to give awareness and prevent species to go on extinction. Identified on a study that students still lack of understanding towards wildlife conservation even more some applications fail to assist and increase children knowledge on the subject they studied. The urgencies of studying about the endangered species also comes from the rate of extinction occurring 1,000 to 10,000 times faster because of human activity. Therefore, this research was made to educate the school children on endangered species with developing a mobile game application. This aims to fill the gap by create visual interface that suitable with the target audience in children education mobile application. Data were collected using quantitative method targeting parents from Malaysia and Indonesia specifically in Shah Alam and Jakarta. A significant percentage of surveyed children lacked prior knowledge or education about endangered species, yet the majority recognized the importance of learning about them and believed that a mobile game could generate greater interest in the topic. The researcher recommends including a pre-game learning section, conducting thorough testing and debugging, and ensuring the absence of bugs and glitches. This study concludes that learning through a mobile game could be more efficient and engaging, fostering awareness among school children about endangered species.

Keywords: Endangered Species, Awareness, Children Education, Mobile Game Application.

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ABSTRACT

Pengetahuan tentang spesies terancam adalah pengetahuan yang mendesak untuk kita manusia mempelajarinya untuk keseimbangan alam. Pengetahuan tentang spesies terancam itu amat penting sejak dari awal lagi bagi memberi kesedaran dan mencegah spesies daripada terus pupus. Kajian mendapati bahawa pelajar masih kurang kefahaman terhadap pemuliharaan hidupan liar lebih-lebih lagi beberapa aplikasi gagal membantu dan meningkatkan pengetahuan kanak-kanak mengenai subjek yang mereka pelajari. Kedekatan kajian tentang spesies terancam juga datang daripada kadar kepupusan yang berlaku 1,000 hingga 10,000 kali lebih cepat kerana aktiviti manusia. Oleh itu, kajian ini dibuat untuk mendidik murid-murid sekolah tentang spesies terancam dengan membangunkan aplikasi permainan mudah alih. Ini bertujuan untuk mengisi kekosongan dengan mewujudkan antara muka visual yang sesuai dengan khalayak sasaran dalam aplikasi mudah alih pendidikan kanak-kanak. Data dikumpul menggunakan kaedah kuantitatif yang mensasarkan ibu bapa dari Malaysia dan Indonesia khususnya di Shah Alam dan Jakarta. Peratusan besar kanak-kanak yang dikaji tidak mempunyai pengetahuan atau pendidikan terdahulu tentang spesies terancam, namun majoriti menyedari kepentingan mempelajari tentang mereka dan percaya bahawa permainan mudah alih boleh menjana minat yang lebih besar dalam topik tersebut. Penyelidik mengesyorkan memasukkan bahagian pembelajaran pra-permainan, menjalankan ujian dan penyahpepijatan yang menyeluruh, dan memastikan ketiadaan pepijat dan gangguan. Kajian ini menyimpulkan bahawa pembelajaran melalui permainan mudah alih boleh menjadi lebih cekap dan menarik, memupuk kesedaran di kalangan murid sekolah tentang spesies terancam.

Keywords: Spesies Terancam, Kesedaran, Pendidikan Kanak-kanak, Aplikasi Permainan Mudah Alih.

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CHAPTER I

INTRODUCTION

1.1 Background of Project

Endangered species is a nature conservation to categorize some species that are very likely to be almost extinct either worldwide or in a particular political jurisdiction. It is very important to have the knowledge on the endangered species from the very early age to give awareness and prevent species to go on extinction. An article said that the two main reason of the species became endangered is loss of habitat and loss of genetic variation. Habitat loss can occur naturally and intentionally (National Geographic, 2022). Habitat lost intentionally can cause from the development for housing, industry, and agriculture reduces the habitat of native organisms. Another Human activity can also lead to a loss of genetic variation. Overhunting and overfishing have reduced the populations of many animals.

The increase in the human population is also one of the contributing factors. Coupled with rapid urbanization as well as overconsumption has led to a decline in habitat and wildlife. Eventually, this makes the species endangered (Gauchan, 2021). Iconic mammal species like the Malayan tigers, Elephants, and Orangutan are now critically endangered conditions and could be wiped out in the next five to ten years (CNI Insider, 2022). Therefore, it is urgent to create awareness to the public to keep these mammals away from the extinction.

Lack of knowledge and awareness of the importance in learning about endangered species can cause the demise of its biological treasures. (Top &

Shohaimi, 2019) It is vital to allow children know about the endangered species, which can indirectly create awareness on species conservation at a young age to save and reduce the intentional extinction of species that can be done by humans.

Educating school children about the endangered species can be challenging. In order to make the children understood about the material we have to make the learning more fun by making an interactive mobile application. One of its game. Games can offer interactive learning activities and tasks that can bring more interest on children in the terms of learning. It can educate also entertaining the children. Based on a journal different forms of electronic games can be used and engaged in a variety of ways to educational practice. The use of the game as a means of delivering educational content to the student's consciousness is more effective. According to some studies, such effectiveness is almost equal for both primary and university students as well as adults (Liu, Shaikh, & Gazizova, 2020). Gamification on child learning can bring more understanding for the student especially the children. So its important to have an interactive mobile application for educating school children on the endangered species in Malaysia.

1.2 Problem Statement

1. The understanding of endangered animal for child student in Malaysia is low. Identified in this research stating that students are not familiar with most wildlife related knowledge and have lack of awareness and attitude towards wildlife conservation after a pre-test was conducted among the lower and upper secondary school students (Arumugam, Ismail, Shohaimi, & Annavi, 2019).

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This shows that the understanding of endangered animal for children is still low.

2. The poor interface in mobile application for educating school children. Mobile learning application is very useful platform for enriching the mobile experience of children education. However, some applications fail to assist and increase children knowledge on the subject they studied. Some children are not interested in mobile applications due to issues such as poor interfaces (Mkpojiogu, Hussain, & Hassan, 2016). The poor interface makes an application doesn't interesting, hard to read and understand. This makes the user wont to use the application and prefer to uninstall it.
3. The rate of extinction is occurring 1,000 to 10,000 times faster because of human activity.

   The main intentionally causes of extinction are the loss and degradation of habitat (mainly deforestation), over exploitation (hunting, overfishing), invasive species, climate change, and nitrogen pollution. The rate of extinction is occurring 1,000 to 10,000 times faster because of human activity (Cho, 2019). From this article shows the urgencies that we have to take from the very early age so that they can prevent it later and aware of the situation that happened.

1.3 Objectives

1.3.1 Research Objectives

1. To educate school children about endangered species in Malaysia through a mobile game application.

2. To create visual interface that suitable with the target audience in children education mobile application for endangered species in Malaysia.
3. To develop a mobile game application for educating school children on the endangered species in Malaysia.

1.3.2 Research Question

1. What is the importance of developing an interactive mobile application about the endangered species in Malaysia for educating school children?
2. What is the needs to create an visual interface that is suitable with target audience in children education mobile application for endangered species in Malaysia?
3. How to design or develop a mobile game application for educating school children on the endangered species in Malaysia?

1.4 Scope of Project

1.4.1 Project

This project will be in the form of a mobile game application that will insert knowledge about endangered species mainly focus only in mammal species category with Role Playing Game Type.

1.4.2 Target audience

The target audience of this project will be primary school children age around 6-12 years old with the assistance of parents and teachers.

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1.4.3 Demographic

In the term of demographic of this research is plan for targeting the primary school children in Shah Alam.

1.4.4 Geographic

Primary school in Shah Alam (Not yet finding the primary school).

1.5 Significance of Project

The significance reason to make this project happen is to give awareness and knowledge from the very young age so later can create educated humans who can maintain and also provide solutions start from endangered species specifically mammals to go from the extinction in Malaysia. It is tremendously important to start early on a child's education, as there is a long-term benefit that can have an impact on their future. It also can encourage conservation actions with young people. Learning from the very early age can give them courage to save these animals from the extinction and have more concern about the balance of nature.

Using mobile game-based application on the endangered species materials hopefully can create the new education technology for children that are appropriate, educative and more fun. Role Playing Game type can bring children more into the game and give more interaction between the app and the children. Hopefully with this type of game can create an interactive application for the children so that they can understand the materials better.

By successfully creating the interactive mobile game application for educating school children about the endangered species in Malaysia can be an

early start to give education for children about endangered species to the world. Also this game application can be used as a reference for the future researcher to make a better platform for educating school children on the endangered species in Malaysia.

1.6 Assumption and Limitation

1.6.1 Assumption

Mobile game is will be a useful platform for children to study about the endangered species in Malaysia. Mobile game can provide these children a fun way to learn something new. Also, with mobile game children can be more attract to the materials that given because they will feel like they are just playing game when actually the materials that they read will become attach to their brain. Assessment can be done by giving them quiz in every mission to see if they understand about the materials or not. With the good interface and element of multimedia can make them understand the materials more easily.

1.6.2 Limitation

There are some limitations on the project that researcher will might be facing while developing the Role Play Game or RPG Mobile game. First researcher has to create a education mobile game that suit for 6-12 years old to understand about endangered animal more specific to mammals in Malaysia. The application about the endangered animal for children is still very minimum and the interface was very poor. Researcher also has to understand and provide the accurate materials about the endangered mammals in Malaysia. The last, limitation that the researcher might face is time.

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CHAPTER V

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Summary

Endangered species mobile game application for school children must be considered. The current lack of engaging and informative learning resources for children to explore the subject is concerning. Early education on endangered species is essential to instill environmental awareness from a young age. This project aims to address the importance of educating school children in Malaysia about endangered species through the development of a mobile game application. Providing an engaging and interactive platform for children to learn about endangered species can be one of an option to educate school children to learn about the endangered species in Malaysia. By incorporating game elements, such as quizzes, and rewards, the application encourages active participation and knowledge retention. Designing a visually appealing interface that resonates with the target audience is important to make the children more interest in learning process. This includes vibrant colors, captivating graphics, and intuitive navigation, ensuring that the interface is user-friendly and enjoyable for school children users.

5.2 Conclusion

After carefully examining the collected data and completing the implementation phase, the researcher is now prepared to provide conclusive insights based on the research findings. The questionnaire responses have valuable information, confirming the effectiveness of the mobile game application. The satisfaction level among the users is an outstanding 100%,

indicating their high level of contentment. Additionally, there is unanimous agreement among the audience regarding the application's ability to enhance the learning process for school children. This consensus further strengthens the evidence supporting the application's positive impact and its significance in educational settings. The positive feedback received from the audience serves as a testament to the successful of the research objectives, emphasizing the potential of the mobile game application as an invaluable tool for education.

5.3 Recommendation

Considering the development process, the researcher would like to offer recommendations to other researchers who may be conducting similar studies. Firstly, it is advisable to include a learning section within the game that provides instructional content before the actual gameplay. This will enhance the educational aspect of the application and provide users with essential knowledge before engaging in the game itself. Additionally, it is crucial to ensure thorough testing and debugging of the application to guarantee a seamless user experience. The absence of bugs and glitches is essential to ensure that the application is reliable and suitable for public release.

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