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MYTRADISI: THE DEVELOPMENT OF TRADITIONAL CLOTHES APPLICATION USING AUGMENTED REALITY (AR) FOR SECONDARY SCHOOL

TAN KANG YONG

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TAN KANG YONG

FINAL YEAR PROJECT REPORT SUBMITTED TO MEET THE REQUIREMENTS FOR ACQUISITION OF BACHELOR DEGREE (SOFTWARE ENGINEERING (EDUCATIONAL SOFTWARE)) WITH HONOR

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PERAKUAN KEASLIAN PENULISAN

Nama Pelajar: TAN KANG YONG

No. Pendaftaran: D20191087044

Nama Ijazah: Ijazah Sarjana Muda Pendidikan (Kejuruteraan Perisian (Perisian Pendidikan)) dengan Kepujian

Bidang Pengkhususan: Software

Tajuk Projek: MyTradisi: The Development of Traditional Clothes Application Using Augmented Reality (AR) For Secondary School

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ABSTRAK

Matlamat projek ini adalah membina satu aplikasi yang berkaitan dengan topik pakaian tradisional di malaysia dalam buku teks seni visual tingkatan tiga dengan menggunakan teknologi Augmented Reality demi menyelesaikan masalah semasa yang dihadapi oleh guru dan murid proses pembelajaran dilaksanakan. Metodologi atau Reka Bentuk Sistem Instruksional (ISD) yang digunakan dalam projek ini ialah model ADDIE. Model ADDIE ini mengandungi lima langkah iaitu analisis, reka bentuk, pembangunan, pelaksanaan dan penilaian. Kaedah analisis projek ini ialah analisis jurnal atau aplikasi yang telah ada dalam pasaran, menganalisis masalah yang dihadapi dan cara penyelesaian yang wajar demi bersedia untuk membangunkan aplikasi projek ini.

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Kata kunci: pendidikan seni visual, pakaian tradisional, Alat pengajaran, Augmented Reality

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ABSTRACT

The goal of this project is to build an application related to the topic of traditional clothing in Malaysia in the 3rd grade visual arts textbook by using Augmented Reality technology to solve the current problems faced by teachers and students in the learning process. The methodology or "Instructional System Design (ISD)" used in this project is the ADDIE model. The ADDIE model contains five steps namely analysis, design, development, implementation and evaluation. The analysis method of this project is the analysis of journals or applications that are already in the market, analyzing the problems encountered and the appropriate solution in order to prepare for developing the application of this project.

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Keyword: Visual Arts Education, Traditional clothing, Teaching tools, Augmented Reality (AR)

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LIST OF ABBREVIATIONS

AR	Augmented Reality
SRS	Software Requirement Specification
UI	User Interface
JAVA	Programming language used for android studio
Flutter	Application Development tool
Android studio	Application Development tool
Lens Studio	Camera Filter Development tool
mixamo	Camera Filter Development tool

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BAB 1

PENGENALAN

1.1 Introduction

Mobile devices are now considered to be the norm in our period, and their introduction has improved the convenience and comfort of people's lives. Criollo-C, S. et al (2021), states that nowadays the information and knowledge is available online and it is free and can be accessed anyway, but there needs to be some necessary skill to read, share and listen to the online information. Mobile devices have become a supporting tool to support education. One of the features of mobile devices that makes people's life simple and easy is application software, and many different types of application software have been produced to improve people's lives. Hoi, V. N. (2020), states that the nowaday everyone has mobile devices and wider network coverage provides a lot of convenience for learning and teaching. The research aim is to develop a mobile application that makes the learning process of students easier and act like teaching tools to support the teaching process of the educator. The objective of this research is to focus on solving the problem of the educator and learner when the learning process is going on using the new advice technology which is Augmented Reality (AR) technology.

1.2 Project Background

Teaching tools is a software or courseware that is produced by the developer to solve or overcome the problem faced by the teacher when teaching. K.Y.Chin (2018), has mentioned that the quick progress made in the area of mobile technologies has led to an increase in the number of new tools in the classroom in this recent year. One of the well-known technologies that is constantly being used in the classroom in recent years is augmented reality technology. As a teacher-supporting

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tool, teaching aids improve or speed up the learning process for students and instructors alike. Nowadays mobile is in every pocket and the students nowaday will spend a lot of time on social media such as Facebook, instagram etc. So, the current teaching tools are to develop more mobile applications, websites, social media, etc. Stathopoulou, A. et al (2019), states that social media has a beneficial effect on students' profound learning experience and involvement as well as their development of collaborative and organizational skills, educators and students agree that social media should be used to distribute and evaluate classes. Augmented reality is a novel technology that combines digital information with the actual world. .Augmented Reality (AR) teaching tool is one of the most famous current teaching tools in recent years. Using AR technology to develop teaching tools able to improve student engagement and motivate students to learn about the traditional clothes in virtual arts education. Ardiny, H. et al (2018), states that Augmented Reality technology has a big potential in helping students to increase their knowledge. Dorota et al (2019), have mentioned that Augmented Reality is an effective technology that assists and facilitates the learning and teaching process. It can support student's learning process by increasing student's motivation and engagement in learning, while teaching can use Augmented Reality to explain complex information in interesting ways.

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1.3 Problem Statement

From the research of introduction and background study, we found that traditional clothes are gradually being forgotten by students, although that traditional clothes topic still appears in many textbooks and we also found some factor causing it to happen. The Factor is list below:

1.3.1 Material/Costume Accessibility Issue

Teachers have limited teaching material when teaching traditional clothing topics. Juliana Maffea (2020), has highlighted that students and teachers may experience severe distress due to a lack of resources or teaching materials. In addition to being in distress, the kids and instructors are unable to learn to the maximum extent possible since they are not being provided with the necessary resources. The two biggest reasons are that the materials for making traditional clothing and traditional clothing manufacturers are hard to find in Malaysia. After all, in this era the technique of making traditional clothing is all but lost. This has caused the price of traditional clothing to skyrocket, indirectly making it unaffordable for many schools. This will cause most of the teachers

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to also introduce a little bit about traditional topics, because there are no real objects in the school that can be shown to the students, it leads to the traditional costumes being gradually forgotten by students.

1.3.2 Learning Engagement Issues

Students appear to be unable to engage and inattentive when studying the topic of traditional clothing because they have no interest in traditional clothing at all. The main reason is that the modern aesthetic is very different from before and there is no tool or application that motivates students to study this topic. Other than that, students can face problems that they don't understand because it is too hard for them to memorize all the traditional clothing in Malaysia, it will cause students don't engage in study and the traditional learning process and method cannot attract student engagement to study more in this topic. Bouwmeester et al (2019) have mentioned that the lack of student motivation cannot be resolved by using traditional teaching methods. So, we are doing this project to develop a supporting educational tool using AR technology to support the teaching process of traditional clothing topics in visual arts education secondary school. It will help teachers by making the teaching process of traditional clothing topics easier and stimulate students' intrinsic motivation to learn about traditional clothing topics.

1.4 Project Objectives

The main objective of this project as follow:

i. To develop free education tools to support the teaching process of traditional clothing topics.

ii. To increase the interest of students such as intrinsic motivation in learning the traditional clothing topic by combining traditional clothes with modern technology which is a camera filter, Students can engage in learning activities at more engaged levels when the virtual world is more interactive. (Christopoulos al., 2018).

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1.5 Scope of Project

Project Module:

1. Camera filter module: In camera filter module will provide 2 camera filter filters to the users to select, that is Cheongsam and SamFu camera filter.
2. Photo and video module: This module is mainly to store photo or video taken
3. Noted Module: This module will include the video and information about the cheongsam and SamFu.

Target Users:

1. Secondary school students
2. Art & Visual Teachers
3. Visual art education Traditional clothing topic students

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Type of clothes:

1. Samfu
2. CheongSam

1.6 Conclusion

The goal that we need to accomplish for the project's finished result is covered in this chapter. Discuss the necessity to solve the problem as well as the justification for this application becoming a product in this chapter. To ensure that the project's final output can address every issue and support instructors or teachers in their teaching of visual arts education form 3 as well as help students learn more effectively, all of the project's objectives, purposes, and scope must be me

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