AUGMENTED REALITY MODULE FOR ADAPTIVE PHYSICAL EDUCATION

ABSTRACT

In this century, Augmented Reality technology is growing in various fields, especially in education, which has shown significant movement in the last five years, from 2016 to 2020 (Garzón, 2021). The most common uses of AR technology in education are biology, engineering, and medical training, whereas **physical education is still lacking** (Calabuig-Moreno et al., 2020; Sirkaya & Alsancak Sirkaya, 2018; Krause, 2017).

According to Abdul Nasir and Erman Efendi (2016), Adaptive Physical Education class in Malaysia faces several challenges, including a lack of **facilities**, **preparation, resources,** and **teaching materials**. As a result, disability students will not have the same access to education as other students.

This project created a module as a marker for AR applications that can be used as assisting tools for learning disability students when learning physical education in classrooms. This module also has been adapted to the needs of the students, which is also adapted from the physical education book, level 4 for special education.

Usability testing has been done and it is shows no problem with the content on the module and by using the app, the student are interested and motivated to do the exercises.

OBJECTIVES

These modules aim to help learning disability students on visualizing the 2D image of the exercises in the textbooks in physical education classrooms to increase student's engagement and motivation in classrooms.

USABILITY

In physical education class, students will have two phases of learning the first is learning the theory in the classroom, and later will do sports or exercises on the field. Previous research shows that the **involvement** of students with learning disabilities **is very low in physical education classes,** and also children often feel **bored** learning in class.

Learning disability students also need a demo in each exercise picture shown in the textbook to help them visualize the exercises that must be done. Therefore, this research builds a module that can then be scanned by students to **help** them **visualize** the exercises in each picture. It can also help children who do not understand with just one explanation by the teacher.

VALUE

This project can provide ideas and opportunities for the personal development or education sector for researchers or other stakeholders to help and support the provision of learning facilities for children with disabilities.

COMMERCIAL POTENTIAL

This module can be used as a learning tool for students to increase interest in learning and engagement in the classroom. In the future, this tool can be a suggestion for the government to augment textbooks to make it more interactive for students and in accordance with technological developments.

RECOGNITION

None.

SCAN HERE FOR THE DEMO

Created By:

Ts. Dr. Nur Azlina Mohamed Mokmin

Regania Pasca Rassy