# UNIVERSITI TEKNOLOGI MARA

# LEARNING TAJWEED FOR PRIMARY SCHOOL CHILDREN BASED ON AUGMENTED REALITY APPROACH

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*"In the name of Allah, the most Gracious and the most Merciful May His blessing be upon the Prophet Muhammad S.A.W."*

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# ABSTRACT

Learning process in traditional approach such as in class learning session could be boring and less attractive to children. In learning Tajweed, children especially in range 7-12 years old are easily bored thus pay less attention toward their teacher. In order to overcome this problem, this project is intend to help the children to learn tajweed in interactive and attractive way. The selected rule of tajweed is Idgham; Idgham Bil Ghunnah and Idgham Bi La Ghunnah. Therefore, the objective of this project are to design and develop an Augmented Reality (AR) approach to help primary school children in learning tajweed, hence test the effectiveness of the application. The augmented reality approach is the combination of virtual world such as 3D environment and the real environment. In order to create the augmented reality environment, the application used are Unity3D and Vuforia that works together. Blender software is used to create the 3D objects such as the Hijaiyyah alphabets. In designing the layout and the tracked images, Adobe Photoshop is been used. Based on the user testing for effectiveness, this project shows 90% of successes rate in attracting children to learn Tajweed and trigger them to explore more about tajweed; Idgham Bil Ghunnah an Idgham Bi La Ghunnah that highlighted in this project. In conclusion, this project; Learning Tajweed for Primary School Children Based on Augmented Reality Approach has been successfully achieved the objective.

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# CHAPTER 1

# INTRODUCTION OF THE PROJECT

## 1.0 Introduction

This chapter provides the overview of the project and discuss about the problem statement of this project, objectives, scope and project significant.

## 1.1 Overview of the topic of the project

Tajweed is a set of rules which dictates how the Quran should be recited. Reciting Quran with incorrect tajweed will affected the meaning of the verse. Many children have difficulties to learn tajweed due to lack of proper way to fit the adventurous children nowadays that always keen on new technology be it for learning or playing. This project is an alternative way to attract primary school children to learn tajweed in an interactive way.

## 1.2 Problem Statement

During this current time, there are still many students who are unable to learn tajweed properly due to the failure of teachers to apply suitable pedagogical tools that fit learner needs since children at young age are easily bored with the traditional approach of learning. Traditional approach are refer to static classroom teaching and learning, face-to-face learning between student and teacher, and more. According to Ismail et al (2011) children at young age are easily bored with just reading book, especially in learning tajweed. Moreover, children do not really