

**Universiti Teknologi MARA**

**Ta'lamArab: AUGMENTED REALITY FOR  
ARABIC LEARNING**

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## ABSTRACT

Islamic studies as a discipline were a favourite course taken in Malaysia by many Muslims, at least in greater educational establishments. Arabic has been made compulsory for all learners taking the classes in all the classes provided. Most of students said that the use text book in Arabic learning makes them easily frustrated and bored. As a result, they could not pay attention fully on their studies. Therefore, this project focused on Augmented Reality mobile application for Android platform. Using augmented reality in the classroom can turn the students into an engaging learning experience. AR technology provides virtual examples to support textbook materials. The methodology used to develop Ta'lamArab application is Mobile Application Development Lifecycle (MADLC) with C# language is used to make sure that the development of the application run efficiently. In this project, there are only five phases are implemented which are identification, design, development, prototyping, and testing. Marker based augmented reality is a technique used to overcome the problem. When a smartphone with a display screen and a camera is pointed at a page in the book for which 3D image has been created, an app installed on the smartphone reads the page and displays that 3D images on the screen of the device. This 3D images could be something like a simple set of moving images or an animation in real world. Using AR in education for example animated images may help the children more understand and remember the content easier. Besides that, the student may learn and enjoy the learning process in the classroom. For future recommendation, the application also available for iOS platform as it can be used either android or iOS. Besides, more alphabets will be applied in the application with more animated 3D model images which make more interactive learning.

**Keywords:** Augmented Reality, 3D model, Arabic words, Interactive learning, Mobile Application Development Lifecycle (MADLC), C# language, Marker based Augmented Reality

## TABLE OF CONTENTS

<b>CONTENT</b>	<b>PAGE</b>
<b>SUPERVISOR APPROVAL</b>	<b>ii</b>
<b>STUDENT DECLARATION</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT</b>	<b>iv</b>
<b>ABSTRACT</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF FIGURES</b>	<b>x</b>
<b>LIST OF TABLES</b>	<b>xi</b>

### **CHAPTER ONE: INTRODUCTION**

1.0 Introduction .....	1
2.0 Project Background .....	1
3.0 Problem Statement .....	2
4.0 Project Objectives .....	3
5.0 Scope and Limitations .....	4
6.0 Project Significance .....	6
7.0 Organization of Report .....	6

### **CHAPTER TWO: LITERATURE REVIEW**

2.0 Introduction .....	8
2.1 Mobile Learning .....	8
2.1.1 Definition .....	8
2.1.2 Mobile Learning Design Guidelines .....	8
2.1.3 Advantages .....	10

# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

This chapter review about the background of the proposed project. This includes project background, problem statement, project objectives, scope and limitations and project significance.

### 2.0 Project Background

The study of Islam was not only offered by experts and scholars in the field. Islamic studies as a discipline is a favourite course taken in Malaysia by many Muslims, at least in higher learning institutions. Arabic has been made compulsory for all learners taking the classes in all the classes provided (Mat, 2016). Arabic language learning was officially introduced in the country's education system through the Jawi, Quran, Arabic, and Fardu Ain (j-QAF) programs in 2005, in stages. It directly makes Arabic a foreign language subject that must be learned just like English in primary school (Mohamad, 2017).

Mobile learning can be defined as the use of small and compact mobile gadgets such as cell phones, PDAs, smartphones, PCs and small tablet PCs to achieve adaptability and intelligence (Bukharaev, 2017). Portable learning refers to the use of versatile or remote gadgets to learn while moving (Kumar S. , 2013).

Augmented reality (AR) is a type of immersive, reality-based display environment that takes the computer-generated image, sound, text, and effect capabilities to enhance the real-world experience of the user. Augmented reality is incorporates actual and computer-based scenes and pictures to provide a cohesive yet enhanced world view (Techopedia, 2019). AR is a helpful perception system and can be utilized in numerous areas, for example, medical, robotics, military, navigation, traveling, education, entertainment, marketing, tourism,