CHAPTER I

INTRODUCTION

1. 1 Background of the Study

Computers are an essential requirement for its function in contemporary times, almost every corner of the country use the computer as a tool to support effective and efficient performance in a variety ways, one of which is as a means to support education. Importance of computers in education is demanding students and teachers have ability to operate a computer to know the outside world that can not to be reached directly. However, practical in schools tend to provide the knowledge to operate it without giving knowledge about way to assemble computer. Lack of media (Personal Computer) that can be used to study the assembly in the computer directly is one of the causes, so, we need a replacement media which is flexible as well as technologies that can bring an exciting learning environment.

One way that can be used to overcome the limitation of media that necessary in learning are with combine android platform and augmented reality technology. Android is a platform that can be contemporary trends, which is owned by almost every mobile phone and used by everyone. Applications that can be get for free makes it easy for users. Build and develop applications in android platform are also facilitated with a lot of tutorials and developers, because android is open source platform. Similarly,

augmented reality technology, which is a merger between the real and the virtual world, where object virtual over layed on the real world and give effect to interesting application. Tools that can be used to build augmented reality technology also readily available.

That is the underlying thing that author want to apply a method of assembling a computer learning with android media based on mobile phone and augmented reality technology. Where the mobile phone will make it easier and more flexible to used, and with incorporate augmented reality technology that will provide interesting and fun effects when studying.

1. 2   Problem Statement

Formulation of the problem based on the background is "How to design an application that can be used as an attractive and practical media in introducing computer components and how to assemble these components to be a whole computer by android?

1. 3   Limitation of the Study

To avoid any deviation or widening of the principal problems in this research preparation, the researchers gave limitation issues, namely:

1) Applications that will be designed is a educative application in the form of an animated form that runs in the gradual assembly of computer components, using an augmented reality technology based on android.

2) Programming language use C# source language.

3) The contents of the application are:

    a. The introduction of computer components use 3D Object.

    b. Computer assembly process in the form of 3D animation video.

4) Specification of the component of the computer that demonstrate in this application only one specification.

5) Marker that used are six marker, this used as trigger to show Object 3D

6) Application can only run in mobile phone or tablet with android operating system

7) Resolution for application are landscape left

8) Using Unity 3D and Vuforia library to build application

9) Using Blender 3D to create Object 3D.

1. 4 Objective of the Study

The purpose of this research is to create an android based mobile applications as a medium of learning in computer assembly with augmented reality technology.

1. 5 Benefits of the Study

Benefits that derived of this research are:

1) For users

Help users to learn the components and way to assemble a computer with an interesting medium that is easy and flexible.

2) For researchers

Benefits for researchers are it can apply and develop science during the lecture process and the new insights gained from outside lectures.

1. 6 Writing Systematical

Systematic writing thesis contains a description from contents of the thesis outline are:

CHAPTER I INTRODUCTION

Introduction chapter describe background of the study, problem statement, limitation of the study, objective of the study, and writing systematical.

CHAPTER II OBSERVATION

Chapter II contains theories that used in research, design, and manufacturing system.

CHAPTER III RESEARCH METHOD

Chapter III Analysis point of research object, all problem, and system design in general or specific.

CHAPTER IV RESULTS AND DISCUSSION

Chapter IV exposing conclusion of the stage research result, starting from design, analysis, testing, and implementation result.

CHAPTER V CONCLUSSION

Chapter V describe the conclusion of research and suggestion for considering in the future research.