

EDUCATIONAL GAME: STAR HUNT!

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DECLARATION

I hereby declare that this project report entitled
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is written by me and is my own effort and that no part has been plagiarized without citations.

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DEDICATION

I dedicate special thanks to my family who gives me support and motivation upon completing my PSM. This dedication are also to my PSM supervisor, Dr Sazilah Binti Salam for the consultation, advices, comments and support just to make sure that I can finish my final year project successfully and on time. I also want to thanks to all my friends that always by my side as I completing this project.

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Last but not least, very much thanks to all of my fellows that always supporting me and help me in whatever problem I faced during this period. Thanks again.

ABSTRACT

This project is about a development of an educational game entitled Star Hunt! This game is developed using Adobe flash CS3. It is a Two (2) Dimensional game that can be played on personal computer. Star Hunt is a game that is developed intentionally to educate primary school students' ages from ten years old until twelve years old. This game will cover the Constellations topic which being taught in school. Star Hunt is also developed to become one of teaching tool aid for teachers. Hopefully with this game, students can memorize the constellations in a unique way and easy as they will gain the knowledge while having fun.

ABSTRAK

Projek ini adalah mengenai pembangunan sebuah permainan berasaskan pendidikan yang diberi gelaran Star Hunt. Permainan ini dibangunkan menggunakan perisian Adobe Flash CS3. Ianya merupakan permainan dua (2) dimensi yang boleh dimainkan di dalam komputer persendirian. Ianya adalah sebuah permainan yang direka khas untuk kanak – kanak sekolah rendah berumur 10 sehingga 12 tahun. Permainan ini meliputi bab Buruj yang mereka pelajari di sekolah. Permainan ini juga dibangunkan sebagai alat bantuan mengajar. Ianya direka untuk membantu para pelajar mengingat buruj menggunakan teknik yang unik, mudah dan seronok dengan cara meningkatkan motivasi dalaman dan pencapaian di dalam pelajaran.

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LIST OF ABBREVIATION

IMI	- Intrinsic Motivation Inventory
UPSR	- Ujian Penilaian Sekolah Rendah
PSM	- Projek Sarjana Muda
2D	- 2 Dimensional

LIST OF APPENDICES

APPENDIX A: GANTT CHART

APPENDIX B: PRE TEST QUESTION

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**APPENDIX E: TESTING FORM (PRE TEST, POST TEST, IMI TEST FOR
GAME BASED LEARNING GROUP)**

CHAPTER I

INTRODUCTION

1.1 Project Background

Nowadays, computer games are very common among children. It is just like some sort of activities that is preferred by most of the children all over the world. Other than that, due to safety issues that really worrying today, most of the parents also prefer their children to do indoor activities. This result games industry to be demanded. Many genres of games can be easily found today. The arising issue towards this is that children spend a lot of their time on playing the game, which is really not so good towards their educational aspect.

Based on this situation, a game that can provide both fun and educational aspect to the children is chosen to be developed. It is known as an educational game. From Wikipedia (2008), educational game is defines as: *Educational games are games that have been specifically designed to teach people about a certain subject, expand concepts, reinforce development, understand an historical event or culture, or assist them in learning a skill as they play*[1]. This define that educational game is

a game that is purposely developed for learning purposes which the content is focusing on thing that need to be taught through the game.

An educational game that will be developed in this project is entitled “Star Hunt!” This game will be developed with an intention to make it as one of teaching aid material for teachers in Science subject that will cover Constellations topic. The idea of this project is to prove that game is an efficient technique that can be used as teaching aid material. This game basically will be divided into 3 main parts, which is the story of the game, the game itself, and the reward when the player manages to complete the game. This project will be focusing on finding suitable techniques to cover the Constellations topic which can result the students that play this game can fully understand about constellations.

1.2 Problem Statement

In Malaysian education, children at school learning through courseware is not a new thing, it is being used one of the teaching aid material. But, the effectiveness of this method can be doubt. As we know, the courseware is basically like a new representation of text book in an electronic way with great animation, and sound. However for children ages from 10 until 12 years old, they might easily getting bored when using the courseware as they still need to listen to what the electronic teacher in the courseware teach them.

Thus, an approach of a teaching method that didn't seem like a teaching lessons need to be developed for the children, so that they can learn while they didn't feel like they are actually taking lessons like in class. This way might be efficient as the children can learn the topic indirectly while they are having fun. To conclude, an educational game that can give fun to the children while they are playing and at the same time will teach them indirectly is needed to be developed.

1.3 Objective

- i. To develop a game that is fun enough for children ages from 10 until 12 years old. The purpose of developing game is to give fun to the players.
- ii. To develop a game that can give constellations knowledge towards children through games. The content of the game will be based on the UPSR scope.
- iii. To develop a game that can teach students indirectly while they are playing.
- iv. To develop a game that applying Visual and Kinesthetic Learning style in the gameplay.

1.4 Scopes

1.4.1 Modules

Modules that will be developed in this game are consist of 3 major parts. The first part is the story of the game. It will cover the game story, the mission for the player need to accomplish. The story will be a presented in a simple linear animation. The second part is about the game, the content of the game will cover only about constellations knowledge that range from year 4 until year6. The last part of this game is the reward when the player manages to accomplish the mission. The reward part will also contain simple animation that shows the player what will be when they manage to complete all task given.

1.4.2 Target user

The target user for this game is only for children ages from 10 until 12 years old. This is due to the Science syllabus they are using at school where constellations is being taught for students' year 5. Other than that, children ages from 10 years old are old enough to know how to use computers. They also can understand the basic English that will be used in the game.

1.4.3 Game Content

The game content will focus on the constellations topic. The player will gain knowledge about constellations that can be seen through different seasons. Other than that, they will get to know the basic shape of the constellations. To conclude, the content of this game will give the player knowledge about constellations that will be asked in UPSR exam.

1.5 Project Significance

This project will give benefit to students range from year 4 until year 6 where they can get knowledge about constellations while playing this game. They will gain the knowledge about constellations in different technique from school. Students that play this game can enjoy the game as well as gaining science knowledge at the same time. The most important things are that they will be able to learn about constellations while enjoying playing the game.

1.6 Conclusion

This educational game is a good method as an additional teaching kit. It will give the teacher variety method to teach the students. This will avoid students from being bored just by assessing the courseware provided. It is a very efficient approach to teach children about constellation through analogy like this game. It will result the children to have fun without they notice that they actually is learning something that same with what they learn in school.

CHAPTER II

LITERATURE REVIEW & PROJECT METHODOLOGY

2.1 Introduction

This chapter will explain about literature review and project methodology. Before the explanation being made, the definition of literature review will be explained first. From Wikipedia (2009), literature review can be defined as a body of text that aims to review the critical points of current knowledge and or methodological approaches on a particular topic. Literature reviews are secondary sources [2].

2.2 Domain

The word 'game' that is defined by Elliot Avedon and Brian Sutton-Smith stated that games are an exercise of voluntary control systems, in which there is a contest between powers, confined by rules in order to produce a disequilibria outcome [3]. That definition is simplified by Jesse Schell in his book entitled 'The