

**STUDY ON BARTLE'S TAXONOMY BASED ON THE  
DEVELOPMENT OF SERIOUS GAME.**



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STUDY ON THE BARTLE'S TAXONOMY BASED ON THE  
DEVELOPMENT OF SERIOUS GAME

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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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## ABSTRACT

Aim of this project is to do a research on type of player in Bartle's taxonomy by developing a serious game called Pangaea. The taxonomy is based on a four character theory which are achiever, explorers, socializers and killers. Besides that Pangaea is a serious game that will develop by Unity 5 game engine. This game is an adventure game that focusing on 13 until years old student. This game consist of seven level which represent those seven continents in the world. There will be three types of mini game which is memory game , quizzes and simple adventure game. This game was inspired from the 'Continents and Ocean' online games and 'Sheppard Software's geography learning games' which there is mainly to educate player and there is lots of fun element. The objective of this project are to identify the type of player based on Bartle's Taxonomy. Next to develop serious game (Pangaea) based on continents. Lastly, to test the effectiveness of Bartle's Taxonomy through Pangaea. This project has four phase which is Concepting Phase, Pre-Production Phase, Production Phase, and Post - Production. The expected result is to let people know more about continents. Besides that, focusing on the research we know the type of player based on Pangaea.



## ABSTRAK

Matlamat projek ini adalah untuk melakukan penyelidikan mengenai jenis pemain dalam taksonomi Bartle dengan membangunkan permainan serius yang dipanggil Pangaea. Taksonomi ini berasaskan kepada empat teori watak yang merupakan pencapai, penjelajah, sosialis dan pembunuh. Selain itu Pangea adalah permainan yang serius yang akan dibangunkan dengan menggunakan enjin permainan Unity 5. Permainan ini adalah permainan pengembaraan yang memberi tumpuan kepada pelajar berusia 13 tahun hingga 15 tahun. Permainan ini terdiri daripada tujuh peringkat yang mewakili tujuh benua di dunia. Akan ada tiga jenis permainan mini yang merupakan permainan ingatan, kuiz dan permainan petualangan mudah. Permainan ini diilhamkan dari permainan dalam talian 'Continents and Ocean' dan permainan pembelajaran geografi 'Sheppard Software' yang mana ttujuan utamanya untuk mendidik pemain supaya mempunyai unsur yang menyeronokkan. Objektif projek ini adalah untuk mengenal pasti jenis pemain berdasarkan Taksonomi Bartle. Seterusnya membangunkan permainan serius (Pangaea) berdasarkan benua. Seterusnya, menguji keberkesanan Taksonomi Bartle melalui Pangea. Projek ini mempunyai empat fasa iaitu Fasa Konsep, Fasa Pra Pengeluaran, Fasa Pengeluaran, dan Pengeluaran Selepas. Hasil yang diharapkan adalah untuk memberi tahu lebih banyak orang tentang benua. Selain itu, memberi tumpuan kepada penyelidikan yang kami tahu jenis pemain berdasarkan Pangea.

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## CHAPTER I

### INTRODUCTION

#### 1.1 Introduction

Bartle's taxonomy of player types is a classification of gamers by Richard Bartles. The taxonomy is based on a character theory which consist of four characters . Those four characters are achiever, explorers , socializers and killers. Achievers are competitive and enjoy to gain power , level up and other rewards. The more challenging the goal , the most rewarded they tend to feel. Explorers want to explore the world, build mental maps of the different areas in their head. These player know all the mechanics, short-cuts, tricks, and glitches that there are to know in the game. Socializers use the game as social medium to have relations with the other player than playing the game it self. They help to spread knowledge and involved in the community aspect of the game. Killers derive their fun by ruining other people's fun. Trolls, hackers, and cheaters belong in this category.

The purpose of this project is to do a research on type of player in Bartle's taxonomy by developing a serious game called Pangaea.

Pangaea is a serious game that developed by Unity 5 game engine. The word Pangaea is actually means supercontinent. Supercontinents is a combination of seven continents before they break apart . This game is an adventure game that focusing on 13 until 15 years old student . This game consist of seven level which represent those seven continents in the world. There will be a simple adventure game where player have to collect star and avoid from the animal on that continent. This game help student to know better about the continents.

## 1.2 Problem Statement

People nowadays lack of information about geography . Based on report from Ofsted's school inspections from 2004 to 2005 a specific surveys of geography has been conducted by Her Majesty's Inspectors(HMI) in primary and secondary school. The report highlighted the weakness in geography and have some decline in the overall quality of provision.(Roberts, 2008)

Next, student are hardly being taught but social studies have been moved to the curriculum sidelines to clear the way for intense , test-driven instruction in reading, writing and mathematics, by Walter Parker (Roberts, 2008).

Therefore, this game created to help student learn more about geography rather than giving notes.

### 1.3 Objective

- i. To identify the type of player based on Bartle's Taxonomy.
- ii. To develop serious game(Pangaea) based on continents.
- iii. Test the effectiveness of Bartle's Taxonomy through Pangaea.



## 1.4 Scope

Pangea will be developed using Unity 5 engine and deliverable into standalone PC. This game is a serious game because it more into educational. The target audience for this game are 13 –15 years old children.

## 1.5 Project Significance

Bartle's taxonomy help player knowing more about their characteristic in games. Which consists of four character through Pangea. Pangea will give benefits for 13 – 15 years old children in form of geographic. This game not cover up all the geographical theory but it cover up the knowledge about continents. When the project is successfully developed, I hope the project will contribute to the school syllabus.

## 1.6 Conclusion

As a conclusion, Pangea is a simple 2d serious game that developed by using Unity 5. The platform of this game is PC with keyboard arrows and computer mouse as the input controller. The target audience is the children in age between 13 to 15 years old. The core mechanics in this game is to let player know about continents. Based on this game, we will do a research to identify type of player in Bartle's taxonomy. Next, proceed with chapter two that showed about literature review and project methodology.



## CHAPTER II

### LITERATURE REVIEW AND PROJECT METHODOLOGY

#### 2.1 Introduction

This chapter will describe about the related literature review to support the project title. Literature review is collection of report of information related to your research topic. The review should describe, summarize, evaluate and clarify this literature.



#### 2.2 Player Types (Bartle's Taxonomy)

Over the past two decades, a popular classification of gamers comes from designer Richard Bartle (Quick, Atkinson, & Lin, 2012). One of earliest classifications done by Richard Bartle is MUD (Multi-User Dungeon), the text based adventure game and also precursor to today's MMORPGs (Bartle, 2004). MUD are kind of like grandparents of our MMORPGs today it is because MUD were not constrained by game engine. Over the year, so many MUDs expanded to include more features until it become MMORPGs. Bartle's research ended up by splitting the players into four different categories which are Achievers, Explorers, Socializers and Killers. In 1996 , Bartle assigned each type of

players a symbol resembling those in card games. He characterized achievers as “Diamond”, explorers as “Spades”, socializers as “Hearts” and killers as “Clubs” (Wei, 2011).

i. **Achievers** are competitive and enjoy beating difficult challenges. These type of player prefer to gain points, power up, levels and other rewards to succeeding in a game. Player really focusing to complete the goal before others do. They love explorers and hate killers.

ii. **Explorers** like to explore the world, not just in geography but the details of the game mechanics. They like to learning about hidden places, knowing tips and tricks about the games. Explorer hated by killers but loved by achievers.

iii. **Socializers** love to interact with others. The game is a place for them to know new people other than real life. They help spread knowledge and involved in the community aspect of the game. Socializers hate killers and love other socializers.

iv. **Killers** like to fight with other players rather than kill NPC (Non-Player Character). Killers like to provoke and cause drama in the virtual world. They hate explorers and love achievers.

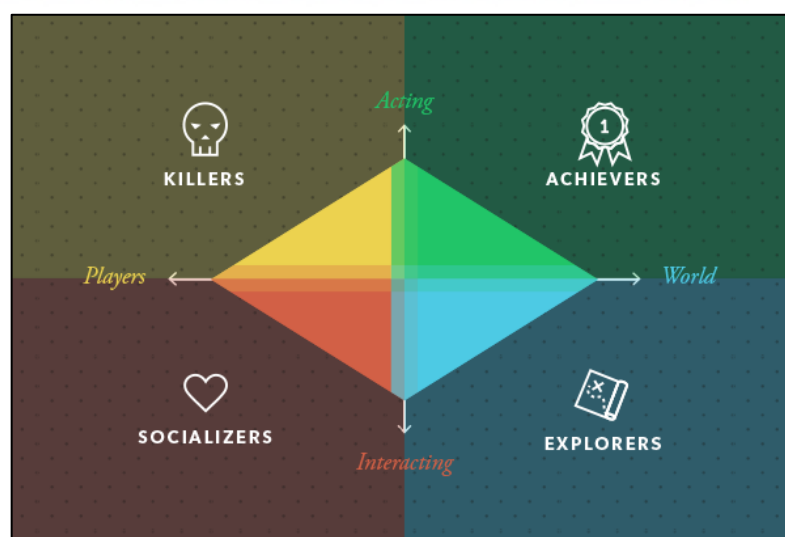


Figure 2.1 Bartle's Taxonomy of Player Types.

Bartle claimed that each type of players belong to a primary category but significantly different from other because of the way they play the games (Wei, 2011).

### 2.3 Learning Content (Geography)

Geography can include a wide range of topics. One of those topics is learning about continents. Learning geography can be more fun with games. A great of geography education can be effectively taught through geography games and map games.

Geography is the daily news that determines the future. Now more than ever, geographic is necessary for us to understand global and cultures (Canada Council, 2015). Canada council distribute a questionnaire to college student. The questionnaire is more about problem faced in Canada that linked with other country. The following pie chart shows the percentage of correct answer for the question about their own country.

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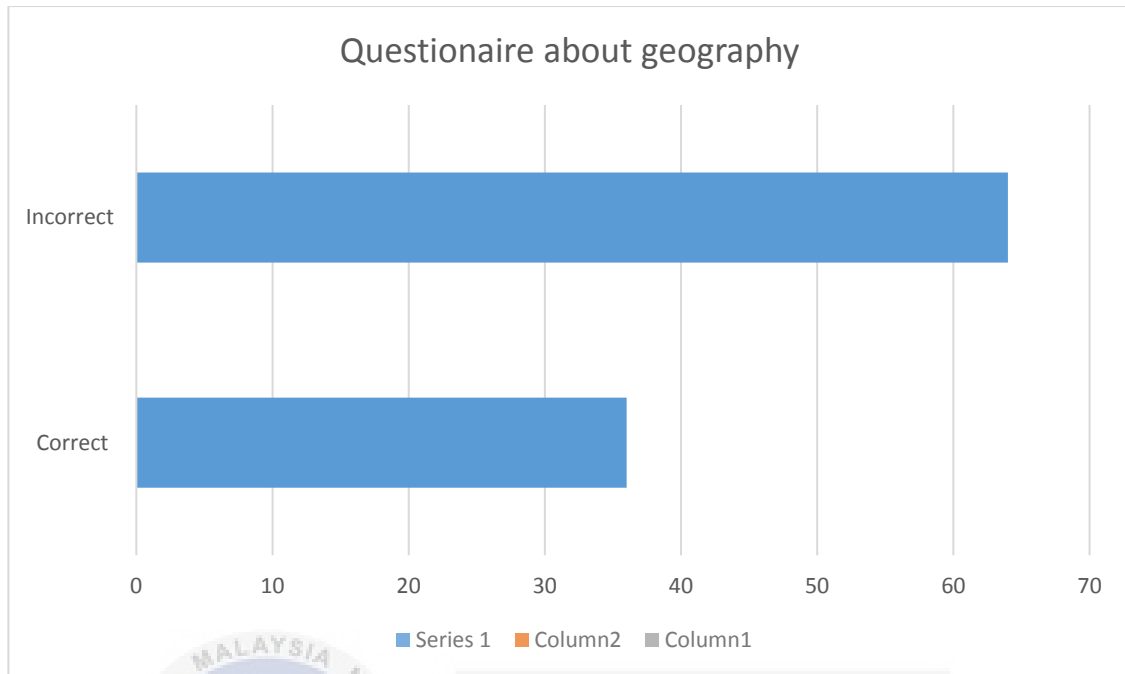


Figure 2.2: Questionnaire about geography

As a conclusion, school need to prepare children for the “real world” that develop fundamental geographic understanding about the world. They should know starting from the continents and countries of the world to the global events.

## 2.4 Existing System

### a. World Geography Games



Figure 2.3 : World Geography Game (Adaptation from google)

World Geography Games bring many entertaining and simulating map games to improve your geographical knowledge. The quizzes asking about countries, flags, regions, mountain, deserts, and other topics. This game let everyone explore and learn about the world.

b. Learning Game for Kids - Geography games





Figure 2.4: Learning Game for kids (Adaptation from google)

Geography games want to let people understand the challenge of global warning, start with understanding the basics of our world of geography. These games help people to form the basis understanding of our country, states and world. There are many mini games in this website such as jigsaw puzzle, word search, letter fall, speedy speller, hang mouse and extra.

## 2.4.1 Comparison of existing system

Table 2.1: Comparison of existing system

	World Geography Games	Learning Game for Kids - Geography games
Picture		
Genre	Quizzes	Action puzzle
Target audience	Everyone	Kids
Game Mechanics	Quizzes: drag and drop, click at the answer	Games: drag and drop , Move keyboard,
Platform	Website.	Website
Features	Player have to choose at the correct answer.	Player have to answer the question given by find words and arranging photo of map.

## 2.5 Project Methodology

This project use Game Development Life Cycle (GDLC) method as a guideline in game development. The project planning and milestone are also planned and discussed.

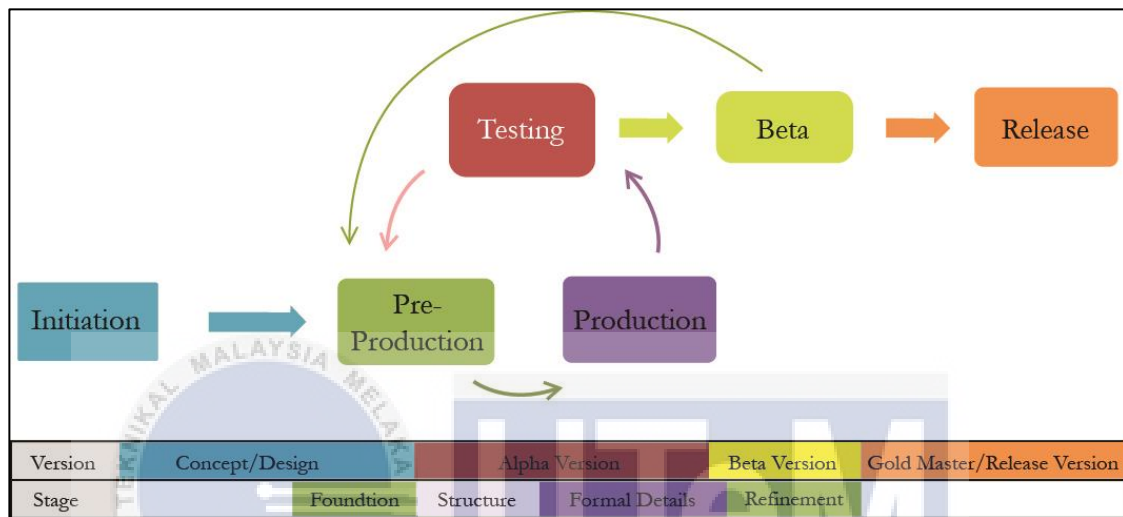


Figure 2.5: Game Development Life Cycle (GDLC). Adaptations from Google

### Phase One: Initiation

In this phase, it is brainstorming session with supervisor. Student should have their own idea whether to do game development or research. Then student can bring that idea to supervisor to get it clear.

### Phase Two: Pre – Production

In this phase, student should gather information, identify problem statement, objective of the project and etc. Do the analysis and list the flow of the game or research that will be carried out. After supervisor approved it, it is time to design the system architecture based on flow of the game.