

Universiti Teknologi MARA

**An Interactive Platform For Online
Learning Using RoR**

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ABSTRACT

This project is about an interactive online platform for online tutoring using gamification features. Gamification is use in the online learning to attract the users and increase the user's motivation and performance. Using gamification, we will create a clear learning pathway so that the users know what level they need to complete to move on to the level. Apart from that, the implement of badges will keep the learners returning to avoid breaking their achievement. Moreover, matchmaking system connects multiple users to participate in online learning. Using this method, users can interact with each other such as sharing the knowledge and notes from all over the world or even communicate with other users in the same system. This project use Ruby on Rails framework as Ruby on Rails is a well known framework use in developing web application. This framework also is very easy to use because it is very flexible language. The methodology used to develop the system is Web Development Life Cycle (WDLC) because the methodology is suitable to develop web-based system quickly in a structured manner. At the end of this project, users can use the system to choose the subject they want to learn and teach and they can use the gamification system to complete an assessment given.

Keyword: Interactive, Online Learning, Web Development Life Cycle (WDLC), Ruby on Rails.

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CHAPTER 1

INTRODUCTION

This chapter will provide an overview about the proposed project and discuss the project background, the current problem statement, the aim of the project, the project objective, the project scope, and the project significance.

1.1. Project Background

Online learning, also known as e-Learning is the means of teaching people within a virtual environment online that separate the student and the teacher. These kinds of approaches are done using many different methodologies, ways, and means and allow the tutor to teach the subject without any face-to-face interaction. According to Context (2016), nearly 6 million students around the world choose online learning as it much more convenient and flexible to those who have other obligation. According to Tania (2017), by studying online, you choose your own learning environment that works best for your need.

These days, technologies are developing rapidly that using the Internet, instructors can be found from all over the world resulting in a broader learning experience. Students also appear to be more active and interactive with the instruction because of lack of restriction around office hours or feeling intimidated. According to Stephanie (2016), most online learning is self-paced learning. Self-paced learning means that the students can start completing the targets at any time, and they can arrange a learning schedule that meets the individual's needs.

Furthermore, online learning is more preferred by people around the world not only it can be flexible with their busy schedule, but there is also some gamification feature that is used to attract the student in learning. The implement of a game element like badges in a non-game environment has become increasingly popular over the last few years (Butler, 2014). According to Tsay, Kofinas, and Luo