Universiti Teknologi MARA

Integrating Gamification in Haze Awareness Web Application

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STUDENT DECLARATION

I certify that this thesis and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

The project aims to develop a haze awareness web application that integrate with gamification. There are only few existing portals that deliver haze information such as Air Pollutant Index of Malaysia (APIMS), *Portal Rasmi Jabatan Alam Sekitar* and *Info Sihat* website. However, not many people know about those portals, however. Consequently, public knowledge of haze is lacking. They do not know what to do when faced with haze situation such as what to wear to cover themselves from haze situation. Moreover, the public doesn't know what are the causes and consequences of this air pollution. Therefore, this project will focus on developing a web application with gamification elements to help spread the knowledge and safety tips or steps needed when faced with a hazy environment.

Integrating Gamification in Haze Awareness Web Application was developed to educate the public about the haze knowledge. The game elements that integrate in the web application is to attract the people from all ages to use the system. The methodology selected for this project is to use the ADDIE model, which consists of these phases; analysis, design, development, implementation, and evaluation. It is achieved mainly on an iterative basis, with a re-analysis evaluation and further changes to the method of design and development. Using gamification in haze awareness web application lets the developer participate in the development process with the target users using the ADDIE model, which can be used to analyze, evaluate, interpret and learn about the system before implementing the final system effectively.

This project is also evaluated by testing the system function through a Functionality Test before being evaluated by the actual user during the User Acceptance Test (UAT). For both measures, about 30 respondents were selected to use this program. The finding of this test has acknowledged that use of the system is great. Any suggestions for the future will also be addressed at the conclusion of the project, based on the weakness found in the project to provide potential for further development.

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