UNIVERSITI TEKNOLOGI MARA

Game-Based Learning for Road Safety for Children

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BACHELOR OF COMPUTER SCIENCE (Hons.)

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Game-Based Learning for Road Safety for Children

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SUPERVISOR'S APPROVAL

GAME-BASED LEARNING FOR ROAD SAFETY FOR CHILDREN

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This report was prepared under the supervision of the project supervisor, Cik Aimi Liyana Binti Amir. It was submitted to the Faculty of Computer and Mathematical Science and was accepted in partial fulfillment of the requirements for the degree of Bachelor of Computer Science (Hons).

Approved by

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Cik Aimi Liyana Binti Amir
Project Supervisor

JULY 29, 2015

STUDENTS DECLARATION

I certify that this report 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

Traffic accidents rank fifth among the leading cause of deaths in Malaysia (Nurulhuda .J et al., nd). It is one of the most common causes of injury and death. The country is burdened with more than ten billion ringgit of losses due to traffic accidents every year. Over 1.17 million deaths occur each year worldwide due to road accidents 70 % of which occur in developing countries 65% of deaths involve pedestrians, 35 % which are experienced by children (Kareem.A, 2002). The aim of this project is to develop and test effectiveness of the game-based learning for children about road safety. Development methods that had been used in this project is the agile development methodology. This game will combine with situated learning technic, means that the children pedestrian are challenged to use critical thinking, problem solving and kinaesthetic abilities based on the situation in the road environment. By presenting the road safety game, understanding among children age 10 years old awareness increases. The result will provide a new means for road safety education of children in Malaysia. From the result, it shown that percentage of users' knowledge increases after playing the game based on the pre-test and post-test. Thus this game is effective to improve students' knowledge about road safety. In the future, this game will be available in iOS and android. Children can gain knowledge about road safety and risk awareness of the road and also children can learn the road safety knowledge by interactive method without risking their life.

Keyword: *Game-based learning, Road Safety, Situated Learning, Pedestrian, Awareness*