UNIVERSITI TEKNOLOGI MARA

EDUCATIONAL GAME FOR INTRODUCING PROGRAMMING TO CHILDREN

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Educational Game for Introducing Programming to Children

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SUPERVISOR APPROVAL

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This report was prepared under supervision of the project supervisor, Siti Aisyah binti Abdul Kadir. 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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JULY 30, 2015

STUDENT'S 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

The accentuated of reasoning skills in the new Malaysian's curriculum showed the importance of reasoning skills among children. *Kurikulum Standard Sekolah Rendah* (KSSR) had newly added reasoning skills as one of their focus besides literacy, numeration and arithmetic. Learning programming was beneficial for children because it promotes the development in reasoning skills. It was quite challenging for children to learn and understand programming thus computer games was believed to lighten the burden of learning programming. This project aimed in creating excitement of learning reasoning skill through programming. Rapid Application Development (RAD) model was chosen as a suitable method. A simple 3D game consist of three different levels was developed. Each of the levels covered the fundamental of computer programming topics such as Variables, Sequence, Selection and Repetition. This game was played by 20 students from first grade class at the age of 10. Pre-test and post-test was conducted to evaluate their performance before and after playing the game. Majority of the students was able to get the correct answer during pre-test. An improvement was discovered in comparison of pre-test and post-test. The result showed that children at the age of 10 have the potential to learn programming through game. For future works, this project evaluation can be more diverse by testing the students from various grade levels so that the result is unbiased.

Keywords - Reasoning Skills; KSSR; Children Learning Programming; Computer Games; RAD