UNIVERSITI TEKNOLOGI MARA

DEVELOPMENT OF 3D VIRTUAL LEARNING ENVIRONMENT USING ADDIE METHODOLOGY

NOR AZILAH OTHMAN

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ABSTRACT

Learning is seen as the internal changes that occur to someone to form a new relationship, or as potentially willing to produce a new response. They are various teaching and learning approaches such as face-to-face learning, e-learning, and also virtual learning environment. Face-to-face teaching and learning approach can be considered as a traditional learning method. Virtual Learning Environment (VLE) is a learning through electronic media where teachers and student are not in the same place, but the gap is bridged by the use of technologies. Currently, learning and teaching interaction among students and lecturers are using face-to-face and blended learning method and students still need to go to physical class for teaching and learning process thus this research offers a new method of interaction among students and lecturers which is using 3D virtual learning environment (3D VLE) by adapting ADDIE methodology as the research method. There are three objectives need to be achieved which are to gather the requirement of 3D VLE, to design the 3D VLE, and to develop the 3D VLE. At the end of this research, a prototype is developed using Open Simulator, SLOODLE and Moodle. This prototype then be evaluated using WebCHECK Professional on their motivational dimension. Based on the evaluation, this research has a high expectation of success on the value dimension of stimulating, meaningful of the system and it is easy to used. In future, there is still enhancement can be done for 3D VLE such as using gesture recognition to control the avatar movement and also the 3D VLE can be located at the hosting server so it can reduce the cost of server maintenance and software licenses. This research hopefully can give a new method for lecturer and student to have a better interaction and better communication.

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