UNIVERSITI TEKNOLOGI MARA

ANALYSIS, DESIGN AND DEVELOPMENT OF AN ONLINE VOCABULARY GAME FOR ARABIC ELEMENTARY LEARNERS

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Candidate's Declaration

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ABSTRACT

This study was aimed at the design and development of an online Arabic vocabulary learning games prototype for pre-university Arabic elementary level learners at the Centre for Foundation Studies (CFS), International Islamic University Malaysia (IIUM), Petaling Jaya, Selangor. The design and development of this prototype started with an analysis of three theories relating to the Vocabulary Learning Theory by Nation (2001), Theory of Multimedia Learning by Mayer (2001) and Theory of Digital Game-Based Learning by Prensky (2001). The above mentioned theories have been further complemented with the Front-End Analysis (Richey et al. 2004) to study the problem in learning the Arabic language among students and lecturers, their early perception, learning needs, prior suggestions and comments towards the design and development process of the games prototype.

The modified ADDIE model has been chosen as the instructional design (ID) generic model research framework in this study by using research methods and procedures of design and development research (DDR) as suggested by Richey and Klein (2007) in five different phases of analysis, design, development, implementation and evaluation. The participants who were purposively sampled comprised 215 learners, 16 lecturers, 14 experts in instructional design (ID), Arabic subject matter expert (SME) and game-based learning (GBL), 2 technical staff from information technology (IT) unit and 2 programmers. The mixed-method approach employed techniques such as descriptive quantitative survey, open-ended questionnaires, interviews, think aloud method, content analysis, field notes, class observation and testimonial.

The evaluation of the usability, practicality and effectiveness of the games prototype was conducted based on Tessmer's (1993) adapted evaluation framework. It was divided into three main phases of pre-formative evaluation, formative evaluation 1 and formative evaluation 2. This study contributed theoretically in the form of 'design principles' and practically in the design and development of an online Arabic vocabulary learning games prototype. Findings from the evaluation process showed that the Arabic online game scored highly in terms of the learners' perception, concentration and knowledge improvement. The game scored moderately on the aspect of immersion. Analysis of from the qualitative data also indicated participants' agreement on the of usability, practicality and effectiveness of this games prototype. Suggestions and comments from the different participants were synthesized and incorporated with the findings to guide further improvement of the game prototype and to inform future research.

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