Construction Of An Evaluation Instrument For A Web-Based Learning Environment (WBLE) And Validation Of Its Causal Structure

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Acknowledgment

I dedicate this work in memory of my parents Hamdan and Hasna.

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Synopsis

This research is aimed at constructing an evaluation instrument for a Web based learning environment and furthermore to validate its causal structure. The evaluation instrument assumes that there are five principal factors in evaluating a WBLE: the Usability, Pedagogy, Accessibility, Information quality, and Added value. A questionnaire with five point Likert-scale has been developed for such a purpose. A priori model was developed to depict the possible causal effect of Usability, Pedagogy, Accessibility and Information quality on Added value. The quantitative research method was used to collect data from 650 students at the Syrian virtual University (SVU).

The process of data collection was conducted through two stages. The first data set (300) was subjected to an exploratory factor analysis (EFA), and the second data set (350) was subjected to a confirmatory factor analysis (CFA). Data were analyzed using descriptive statistics, factor analysis, and correlative analyses between factor score estimates. The descriptive statistics estimated the item means and deviations. The EFA was conducted to determine the items for each specific factor as well as factorial structure of the instrument. Factors were then assessed for their levels of internal reliability. Conducting EFA on the first data set resulted in seven factors for Usability; thirteen factors for Pedagogy; four factors for Accessibility; four factors for Information quality; and four factors for Added value.

Confirmatory factor analysis using a structural equation modeling approach and the AMOS software was employed to measure the goodness-of-fit indices and to construct reliability of the instrument. The priori model was confirmed. The findings indicated that the priori model fits with data. Furthermore, the findings indicated that the constructs Usability, Pedagogy, Accessibility, and Information quality affect the Added value. Finally, correlations among factor scores were measured and reported.
Pembinaan Instrumen Penilaian Untuk Web-based Learning Environment (WBLE) dan Pengesahan Struktur Kausalnya

Sinopsis

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