Analysis of web content quality factors for massive open online course using the Rasch model

ABSTRACT

The lack of understanding among content providers towards the quality of MOOC motivates the development of several MOOC quality models. However, none was focused on the web content from the perspective of content providers or experts despite the facts that their views are important particularly in the development phase. MOOCs learners and instructors definitely understand the functional external quality, but content providers have better understanding to the internal qualities, which is required during the development phase. The initial quality model for MOOC web content based on 7C's of Learning Design and PDCA model for continuity have been proposed, consisted of nine categories and 54 factors. This research focuses on the validation towards the proposed model by content providers and experts to provide systematic evidence of construct validity. This involved two main processes; content validity test and survey on acceptability. The content validity test was conducted to confirm the agreeability of proposed categories and factors among respondents. The Dichotomous Rasch model was utilized to explain the conditional probability of a binary outcome, given the person's agreeability level and the item's endorsability level. Subsequently, the survey on acceptability was conducted to obtain confirmation and verification from the experts group pertaining on MOOC web content quality factors. Rasch Rating Scale model was used since it specifies the set of items, which share the same rating scale structure. The usage of the Rasch Model in instrument development generally ease variable measurement by converting the nonlinear raw data to linear scale, while assists researchers in tackling fitness validation and other instrumentation issues like person reliability and unidimensionality. This paper demonstrates the strengths of applying Rasch Model in construct validation and instrument building, which provides a strong foundation for the model adaptation as a methodological tool.

Keyword: Web content; Quality model; Hierarchical model; Rasch Model; Rating scale; Survey reliability