Competency assessment of clothing fashion design : rasch measurement model for construct validity and reliability

ABSTRACT

The Clothing Fashion Design (CFaD) assessment instrument was used to measure the level of competence among instructors in Skills Training Institute (STI). This study was conducted to select items that are valid, fair, and of quality. The CFaD instrument consists of 97 Likert scale items with six constructs of designing, pattern drafting, computer, sewing, creative, and trade/entrepreneurship. The instrument was administered for the first stage of testing to 95 instructors in STI who teach in the field of fashion and clothing. The Rasch measurement model was used to obtain the reliability, validity, relevance of person items and unidimensionality of items. Therefore, Winsteps software version 3.72.3 was used to analyze the data. The findings showed that the items in the six constructs of skill competency have high reliability, from 0.63 to 0.96 for the Likert scale items. Meanwhile, the reliability of the respondents was estimated between 0.93-0.98. The analysis also indicate that 11 out of the 97 items were misfit while 32 items need to be repaired prior to the decision of dropping some of them due to lack of unidimensionality and differing levels of difficulty. Decisions to remove or repair were made so that the instrument is more fair and equitable to all respondents, and reliable.