

Identifying Differential Item Functioning Items of the Spatial Ability Tests for Myanmar Middle School Students

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Abstract

The main purpose of this study is to analyze differential item functioning (DIF) items of spatial ability tests (S.A.T) for Myanmar middle school students. In this study, DIF items were examined in the S.A.T across gender and ethnicity by using three DIF analysis methods; Lord's Chi-square (LC) method, Logistic Regression (LR) method, and Mantel-Haenszel (MH) method. The S.A.T had two equivalent forms; form A and form B. Each consisted 40 items. When the ethnicity based DIF analysis was conducted, eight significant DIF items in S.A.T form A and seven significant DIF items in S.A.T form B were identified. Concerning gender based comparison, no significant DIF items in S.A.T form A but eight significant DIF items were identified in form B.

Keywords: differential item functioning (DIF) analysis, spatial ability, ethnicity, gender

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