

# **Detecting DIF in polytomous items across multiple populations: issues and techniques**

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**Keywords:** differential item functioning, DIF, measurement invariance, item bias, multiple groups, item response theory, structural equation modelling

## **Abstract**

Techniques for the detection of Differential Item Functioning (DIF) in dichotomous as well as polytomous items have focused mainly on situations involving only two populations. However, with the advent of large cross-cultural or international survey research projects in psychology, sociology and market(ing) research (e.g. the world values studies (WVS), the International Social Survey Program (ISSP), etc.), settings have arisen that require the detection of DIF across multiple (more than 2) populations. The application of DIF detection techniques in the above described setting raises several issues. The purpose of this paper is to investigate one of these issues, namely to what extent can DIF detection techniques be used and/or extended for the detection of DIF across multiple populations and how well do they perform in this respect. The paper will discuss the usage/extension of several techniques for polytomous items (IRT techniques, SEM techniques as well as observed score techniques) and will evaluate their performance via simulation study.