Overview:
This workshop aims to introduce participants to measurement theory and the Rasch Model (RM) for construction, validation and calibration of measures. The interactive session will include a mixture of theory and hands-on activities.

The RM is the parsimonious item response theory (IRT) model having one parameter for the person (ability), and only one parameter corresponding to each category of an item (threshold). It is the only IRT model in which the total score across items characterizes a person completely. Thus, the RM provides a proper method for nonlinear transformation of ordinal raw scores to linear measures, is an efficient tool for post-hoc analysis of an instrument and for development of new instruments.

A defining feature of the Rasch-model is that it is derived from theory which means that it is constructed a priori to the data. In Rasch analysis the data are compared with the model which is considered fixed representing required properties of the data. Instead of finding a model that best describes the data, the purpose of Rasch analysis is to identify the ‘anomalies’ in the data and thus the functioning of an item/test/questionnaire.

Various models of the Rasch family (Dichotomous, Ordered Response Categories: Rating Scale and Partial Credit) are introduced and analysed through ACER’s CONQUEST4.5 software. Model fit including differential item functioning is presented.

This workshop will be of interest to practitioners and researchers engaged with measurement, questionnaire/test designs, and in making objective and meaningful inferences from the scale or construct used. Hands on activities include computing item statistics and ability estimates, plotting item characteristic curves, and generating plausible values to estimate population characteristics.

Requirements:
Participant should have some basic knowledge and appreciation of statistics, and have access to a laptop for use during the workshop.

Workshop Facilitator:
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