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Title:

**Exploring student's learning ability in a statistical course via entrance-exit survey:
a Rasch measurement approach**

Abstract:

As much as we want to know the extent of students' learning through our usual methods of assessment, it is good to make a small paradigm shift to explore the learning ability of the students at the micro level. While some are accustomed to the conventional methods of assessing students' learning, an attempt was made to explore students' learning of statistics in a way that will provide me with a greater advantage to the extent of being able to diagnose the underlying factors for their learning disability through their responses. This Malaysian case study is presented based on my experience in investigating the suitability of using Rasch measurement model in exploring students' learning of statistics via the course Entrance-Exit survey. Rasch Measurement Model is used to calibrate the responses between students' perceived learning ability and the agents/items of learning within each course outcome (CO), at both entry and exit level as well as across the CO-taxonomy levels. Apart from the ability of Rasch models to assess the quality of responses using its dynamic measurement tools, it produces statistics and visual presentations that can map person ability and item difficulty on a single logit scale while demonstrating the unidimensionality, independence and monotonicity characteristics of the data. Other statistical measurements such as person and item measure order, fit statistics, item characteristics curves that are used to assess the quality and validity of the data will be shown in the presentation.