

## **Development and validation of an instrument to measure leadership competency among secondary school students: a pilot study**

### **Abstract**

The purpose of this study is to pilot test the newly developed Malaysian Secondary School Students' Leadership Scale (M3SLS) and to determine its psychometric properties. The Rasch Rating Scale analysis was implemented and the correlation coefficient of measurement-point (PTMEA correlation) value of every item was found positive. Eight items with PTMEA correlations below .20, however, needed revision. Since secondary dimension was noticeable, the three domains therefore were analyzed separately in the next study. The item separation and item reliability were 7.49 and .98 respectively which implied that the person sample was sufficient to confirm the item difficulty hierarchy. A Person separation index value of 2.86 indicated there were three levels of respondent ability identified in this pilot study. Person separation of more than two and person reliability of .89 with a relevant person sample implied the instrument was sensitive enough to distinguish between high and low performers. Except for eight items, the infit mean square values for all items were in the range of .50 to 1.50 which was within the acceptable range. As a conclusion, there were items that needed to be revised and modified based on the analysis of item polarity, item fit, and principal component analysis of residual (PCAR). The reliability and separation indices of item and person were within the acceptable range. Based on the outcomes of the pilot test, the instrument is recommended for distribution to a larger population to ensure stability of the scale.