NUTTAPORN LAWTHONG : A COMPARISON OF GOODNESS OF FIT OF SCIENCE PROCESS SKILLS MEASUREMENT MODEL BETWEEN MULTIPLE CHOICE TEST AND PERCEIVED SCALES.   THESIS ADVISOR : PROF. SOMWUNG PITIYANUWAT, Ph.D. 99 pp.   ISBN 974-636-227-5

The purpose of this research was to compare the goodness of fit of science process skills measurement model between multiple choice test and perceived scales. Measurement model consisted of one latent variable (science process skill) and five observed variables (identifying and controlling variables, formulating hypotheses, operationally defining, experimenting and interpreting data and conclusion). Responses scores from multiple choice test and perceived scale of 764 mathayomsuksa 1-3 students in Bangkok Metropolis were analysed by confirmatory factor analysis through LISREL.

The results indicated that the measurement model by multiple choice test was consistent with empirical data more than measurement model by perceieved scale. Measurement model by multiple choice test provided the chi-square goodness-of-fit test of 2.02; p = 0.57, df = 3, GFI = 1.00, AGFI = 0.99. Measurement model by perceieved scale provided the chi-square goodness-of-fit test of 6.74; p = 0.08, df = 3, GFI = 1.00, AGFI = 0.98. Measurement model by perceieved scale accounted for 81.1 percent of variance more than measurement model by multiple choice test accounted for 37.4 percent of variance.

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