

Title : A STUDY OF ITEM PARAMETERS AND TEST INFORMATION  
FUNCTION OF MULTIPLE CHOICE TEST AND CLOZE TEST IN  
MATHEMATICS CONCEPT OF PRATHOM SUKSA SIX STUDENTS :  
APPLICATION OF ITEM RESPONSE THEORY

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Degree : M.Ed. (Educational Measurement), 1998.

The purposes of this research were to study item parameters and test information function of multiple-choice test and cloze test.

The sample of 1,092 students of Prathom Suksa six was selected by three large schools in Kampaeng - Phet province and two large schools in Sukhothai province in academic year 1996.

The research instruments used for data collection was the multiple choice test of 17 items and the cloze test of 14 items in mathematics concept of Prathom Suksa six students.

The data was analysed through Bayesian Estimation to estimate item parameters using three-parameter Logistic Model in Item Response Theory.

The results of the study were as follows :

(1) Item difficulty parameters were ranged from -2.997 to +1.061 and the average was -0.193, item discrimination parameters were ranged from 0.562 to 2.452 and the average was 1.108 and item guessing parameters were ranged from 0.107 to 0.457 and the average was 0.230 for multiple choice test.

(2) Item difficulty parameters were ranged from -1.175 to +1.919 and the average was -0.355, item discrimination parameters were ranged from 0.338 to 1.490 and the average was 0.944 and item guessing parameters were ranged from 0.000 to 0.004 and the average was 0.002 for cloze test.

(3) The test information function of multiple choice test was 9.341 at 0.800 ability level whilst the cloze test was 7.573 at -0.600 ability level. The test information function

of multiple choice test was lower than cloze test at the ability level of  $-4.000$  to  $+0.300$  but higher than the cloze test at the ability level of  $+0.310$  to  $+4.000$ .