

C840668 : MAJOR EDUCATIONAL MEASUREMENT AND EVALUATION

KEY WORD: DIFFERENTIAL ITEM FUNCTIONING / THE MANTEL-HAENSZEL / SIBTEST /

TEST LENGTH / SAMPLE SIZE / RATIO

JITIMA WANNASRI : A COMPARISON OF THE EFFICIENCY BETWEEN THE MANTEL-

HAENSZEL AND SIBTEST PROCEDURES IN DETECTING DIFFERENTIAL ITEM

FUNCTIONING WITH DIFFERENT TEST LENGTHS, SAMPLE SIZES AND RATIOS OF

REFERENCE AND FOCAL GROUPS. THESIS ADVISOR : ASSO. PROF. SIRICHAJ

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The purpose of this research was to compare the efficiency between the Mantel-Haenszel and SIBTEST procedures in detecting differential item functioning. Data were simulated from IRTDATA program. Factors of this study were (1) 3 sizes of test lengths; 30, 60 and 90 items (2) 3 sample sizes of examinees; 200, 600 and 1,000, each sample size had 4 ratios of reference to focal group; 1:1, 1:0.9, 1:0.75 and 1:0.5. Thirty - six conditions were investigated in this study.

Results of this research were as follows :

1. The Mantel-Haenszel and SIBTEST procedures were equally efficient in detecting DIF for all sample sizes and ratios under the same test length. Fifty percents of DIF items correctly identified with 200 and 600 of sample sizes. Hundred percents of DIF items correctly identified with 1,000 of sample size. SIBTEST procedure yielded slightly higher Type I error rates than the Mantel-Haenszel procedure.
2. The Mantel-Haenszel and SIBTEST procedures were equally efficient in detecting DIF at all sizes of test lengths, with best results at 60 items length.

ภาควิชา วิชาการศึกษา.....

สาขาวิชา การวัดและประเมินผลการศึกษา.....

ปีการศึกษา 2539.....

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