

## C840684 : MAJOR EDUCATIONAL MEASUREMENT AND EVALUATION

KEY WORD: PERSON-FIT INDEX / ITEM RESPONSE PATTERN / ITEM RESPONSE THEORY

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DETECTION BETWEEN  $L_z$  AND  $W_1$  INDICES BASED ON ITEM RESPONSE THEORY.

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The purpose of this study was to compare the results of person-fit detection between two different statistical estimated methods, the likelihood-based approach :  $L_z$  index, and the score residual approach :  $W_1$  index under different examinee's ability levels and test lengths. The data were simulated by the computer packages IRTDATA. The unidimensionality indicators of test in all conditions were analyzed by the computer packages SPSSX and SPSSPC<sup>+</sup>. The results of person-fit detection were compared in terms of the quality of tests after detected person-fit : test information function, reliability, and construct validity.

The findings were as follow :

1. The results in terms of test information function :  $L_z$  index provided higher information than  $W_1$  index in all examinee's ability levels and test lengths.
2. The results in terms of reliability and construct validity :  $L_z$  index and  $W_1$  index were not significantly different in all examinee's ability levels and test lengths.

ภาควิชา วิทยาการศึกษา.....

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