# ABSTRACT

Thesis Title      : A Comparative Study of the Item Analysis of a

                              Mathematics Achievement Test with the Use of Sato's

                              Caution Index and Rasch Model

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Major            : Educational Measurement and Evaluation

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The purposes of this study were to compare and test the significant differences of the results of test item analysis with the use of Sato's Caution Index and Rasch's model about the efficiency of index ; the number of students who had unusual item response patterns and the numbers of unusual items the students made. Samples were 461 Mathayomsuksa I students studying in the first semester of the 1995 academic year of Tepleela School,Bangkok Metropolis.

The results of this study were as follows:

1. The Sato's Caution Index had more efficiency for analysis

of item response patterns than Rach's Index at the statistical singnificant of .01

   2. The analysis of Sato's Caution Index classifies the number of students who had unusual item response patterns more efficiently at the statistical significant level of .01

   3. The analysis using Sato's Caution Index had higher significant quality discrimination than that of Rasch's at .01 level.