

ABSTRACT

Thesis Title : The Effects of Item Rearrangement on Sato's
Caution Index from Science Item Response
Patterns Analysis at Matthayomsuksa 2 Level
by the S - P Curve Theory.

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Advisor Committee:

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The purpose of this research was to compare the the number of the unusual students and the number of the unusual items in the item response pattern on Sato's caution index between the easy to difficult and the random arrangement tests that they were different or not. And it also compared the value of the test reliability that has been selected on Sato's caution index between the easy to difficult and the random arrangement tests that they were different or not. The sample group of this research was 1,110 matthayomsuksa 2 level students in academic year 1995 that have been selected by the two stage random sampling from General Education Department Schools in Angthong province.

The results were as follows :

1. The number of the unusual students in the item response pattern from the easy to difficult item arrangement test was different from the random arrangement test had the statistical significant difference at .05 level. The easy to difficult item arrangement test had the number of the unusual item response pattern students less than the random arrangement test.

2. The number of the unusual items in the item response pattern from the easy to difficult item arrangement test was different from the random arrangement test had the statistical significant difference at .05 level. The easy to difficult item arrangement test could be classify the unusual items in the item response pattern more than the random arrangement test.

3. The value of the test reliability that have been selected on the usual istems in the response paattern on Sato's caution index between the easy to difficult item arrangement test was different from the random arrangement test had not statistical significant difference at .05 level.

The easy to difficult and the random item arrangement had the effects on Sato's caution index. The easy to difficult item arrangement was more appropriate than the

random arrangement because the easy to difficult item arrangement had the effects with the number of the unusual students from the item response pattern less than the random item arrangement. We can classify the unusual items from the item response pattern more than the random arrangement. And the value of the test reliability that has been selected on the usual items response pattern on Sato's caution index had the different valuable not statistical significant difference.