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EDUCATIONAL RESEARCH

KEY WORD: INTERACTION EFFECTS / MODERATOR VARIABLE / MULTIGROUP STRATEGY IN LISREL

WARUNEE LAPANACHOKDEE : AN ANALYSIS OF INTERACTION EFFECTS WITH ONE MODERATOR VARIABLE USING THE MULTIGROUP STRATEGY IN LISREL. THESIS ADVISOR : ASST. PROF. NONGLAK WIRATCHAI, Ph.D. 185 pp. ISBN 974-637-279-3

This correlational research was a secondary analysis to study the interaction effects between a categorical moderator variable and an independent variable on a dependent variable, using multigroup strategy in LISREL; and to compare the obtained results with those obtaining by means of two-way ANOVA. Four conceptual LISREL models were developed representing an independent and a dependent variables, each of which was measured as an observed variable and a latent variable. Two databases were used : the first one from the research project entitled "The Efficiency of Teacher Utilization : a Macro-level Quantitative Analysis" by The National Educational Commission Office and the second one from the dissertation entitled "Effectiveness of Instructional Media : a Meta-analysis" by Siriyupa Poonswan. The first database consisted of 1,286 schools with 42 observed variables and 2 latent variables. The second database consisted of 559 effect sizes with 4 observed variables.

The research results showed that the multigroup strategy in LISREL yielded clearly the interaction effects results in all four models. Comparing the results obtaining from the multigroup strategy in LISREL with those from two-way ANOVA, it was found that the former gave more cases of statistically significant interaction effects with lower significant level than the latter.

The interaction effect analysis results of the first database showed that the interaction effects between observed variables : schools' attachment and size on the efficiency of teacher utilization in the observed and latent dependent variable models were significant. The effect sizes of the former model were between -0.016 to -0.296 and those of the latter were between -0.095 to 0.018. The interaction effects between observed variable : schools' attachment and latent independent variable : staffs' background on the efficiency of teacher utilization in the model with latent dependent variable also yielded significant interaction effects. The effect sizes were between -1.332 to 0.103. But in the model with observed dependent variable, the interaction effects were not significant.

The interaction effect analysis results of the second database showed that the interaction effects between observed variables : media type and students' educational level in the first model, and the experimental group sample size in the second model on effect size were significant. The effect sizes of the former model were between -0.083 to -0.383 and those of the latter were between 0.008 to 0.043.

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