ABSTRACT

Thesis Title : A Study of the Predictive Equations of Prathom
Suksa - Six Students' Achievement on Science

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The purposes of the study were to investigate the type of relationship between students' background variables and their academic achievement on science and to select the best equation for predicting academic achievement from 31 background variables. The samples were 381 students of Prathom Suksa Six students from schools in Klong-one school group Pathumthani Elementary Office, years of 1995.

The instruments were an achievement test on science, an efficiency test on 5 aspects and the test also covered the attitude of the students towards their teachers and the science language subject as well as the questionnaires of responsibility and their home-environments using SPSS/PC.[+] To analyzed data, the correlation coefficient, the simple regression analysis and the stepwise multiple regression analysis were used too.

The results of study were:

1. The relationship between the students' background variables and their academic achievement on science showed significance at .05 level. The background variables were classified into 2 groups. The first were 9 predictives with positive relationship; aptitude on language skills, numeration,

The background variables were classified into 2 groups. The first were 9 predictives with positive relationship; aptitude on language skills, numeration, reasoning dimensional relation and observation; students' responsibity, attitude on science, classroom atmosphere, and teachers' behaviour. The secon was 1 predictive with negative relationship was teachers' experience.

2. The best equation used for predicting academic achievement was a stepwise multiple regression equation with predictive variables i.c. aptitude on numeration (x_2), language skills (x_1), reasoning (x_3), observation (x_5), teaching experience (x_{29}), classroom atmosphere (x_{30}), the passing away of parents (x_{26}) the passing away of father (x_{24}) in following raw score and standard score;

$$Y'_i = 10.606 + .242X_2 + .218X_1 - .638X_{29} + .123X_3$$
$$+ .075 X_{30} + 8.422 X_{26} + 2.070X_{24} + .084X_5$$

$$Z'_i = .229Z_2 + .157Z_1 - .258Z_{29} + .161Z_3 + .122Z_{30}$$
$$+ .127 Z_{26} + .105Z_{24} + 122Z_5$$