

# # 49842715274 : MAJOR EDUCATIONAL RESEARCH

KEYWORDS : PRIVATE TUTORING / LOWER SECONDARY SCHOOL STUDENTS /  
MULTIPLE DISCRIMINANT / SUPPORT VECTOR MACHINE

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IN ATTENDING PRIVATE TUTORING LESSONS OF LOWER SECONDARY  
SCHOOL STUDENTS: A MULTIPLE DISCRIMINANT ANALYSIS AND SUPPORT  
VECTOR MACHINE. THESIS ADVISOR : ASSOC.PROF. SIRIDEJ SUJIVA, Ph.D.,  
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This research aimed 1) study the relationship between students' factors and decision on using private tutoring 2) study factor discriminating group of student and 3) to compare between the result of a multiple discriminant analysis and neural network analysis. The data were collected from the sample of 608 students using multi-stage sampling from the population of 285,700 students in the 2<sup>nd</sup> semester, 2009 from secondary schools in Bangkok. The researcher analyzed the data by using SPSS for descriptive statistic, multiple discriminant analysis and using MatLab for support vector machine analysis. The result showed that

1) There are 9 factors relating the attention in private tutoring lessons significant at 0.05 level, with the effects ranging from 0.16-0.69.

2) The result of multiple discriminant analysis found that there were 9 factors relating the discrimination: grade point average, period of father's education, period of mother's education, family's income, expectation in tutoring, characteristics of students, attitude toward tutoring, quality of learning management and family's support.

3) The comparison of the efficiency of the analysis revealed that support vector machine analysis was able to discriminate learning , information at 100%, the multiple discriminant analysis had efficiency at 73.42% for the prediction of support vector machine analysis had efficiency approximately at 73.24%, and multiple discriminant analysis had efficiency at 70.56%