CHAPTER 5

CONCLUSIONS AND DISCUSSION

In this chapter, the conclusions are presented and discussed. The following section describes the results, for each of the objectives of the study.

1. Conclusions

What are the factors associated with student achievement?

From the univariate data analysis in Table 10, we found that gender, age, province of residence, family status, method of entrance, university entrance examination score, school grade point average, and faculty of study are all related to achievement. School grade point average, method of entrance, and university entrance examination score are the most important determinants.

Table 10: Univariate analysis of determinants for achievement

Determinants	Statistic	p-value
Gender	t-statistic : 4.021	0.00006
Religion	t-statistic : 0.3313	0.74060
Father's education	t-statistic : 0.7044	0.48140
Mother's education	t-statistic : 1.121	0.26270
Method of entrance	t-statistic : 7.196	0
Type of school	t-statistic : 1.627	0.10420
Province of residence	F-statistic : 5.43	0.00459
Family status	F-statistic : 4.871	0.00796
Family's income	F-statistic : 1.56	0.21100
School GPA	F-statistic : 39.95	0
Faculty of study	F-statistic : 5.591	0.00087
Age group	F-statistic : 2.635	0.04897
Father's occupation	F-statistic : 1.183	0.31530
Mother's occupation	F-statistic : 0.991	0.39650
University entrance examination score	F-statistic : 11.41	0.00001
Type of basic education	F-statistic : 1.47	0.22160

The other determinant of interest is type of school, but it is not statistically significant. It may be because this is insufficient data for nonformal students (the proportion of formal: nonformal is 579:48).

Can a predictive model for student achievement be developed?

Multiple regression analysis yielded family status, method of entrance, school grade point average, faculty of study and the interaction between gender and age as important predictors of university achievement. The model provided a reasonable fit with an r-squared of 22.7% and a standard deviation of 0.388. Province of residence and university entrance examination score are not related to university achievement. They are excluded from the model, because these two variables have high correlations with other predictor variables. The model is as follows:

Achievement $2.651 - 0.2308$ m16-$17 + 0.0420$ m$18 - 0.1164$ m$19 - 0.3459$ m20'

$+ 0.1078$ $g16$-$17 + 0.02$ $g19 + 0.0238$ $g20$' $- 0.1312$ *single parent*

$+ 0.1533$ *direct entrance* $+ 0.1049$ *school GPA 2-3*

$+ 0.468$ *school GPA >3* $- 0.1378$ *humanities*

$- 0.1569$ *science&technology* $- 0.0496$ *islamic*

2. Discussion

School grade point average, entrance examination score, method of entrance, age, and gender, family status, faculty of enrollment, and province of residence are statistically significant. The effects of age group and gender are not simply additive. The results can be summarised as follows.

(a) School grade point average is the strongest predictor of university achievement. The achievement of the students tends to increase with school grade point average and entrance examination score.

(b) The students with direct entrance gain higher achievement than those with pooled entrance.

(c) Females achieved higher university achievement than males. More precisely, male students entering university at age 16-17 and age 20 or more do worse

and female students entering university at age 16-17 do better. These results may be due to the fact that there are twice as many females as males at Pattani Campus of Prince of Songkla University and other environmental factors (such as activities, responsibility and social relationship).
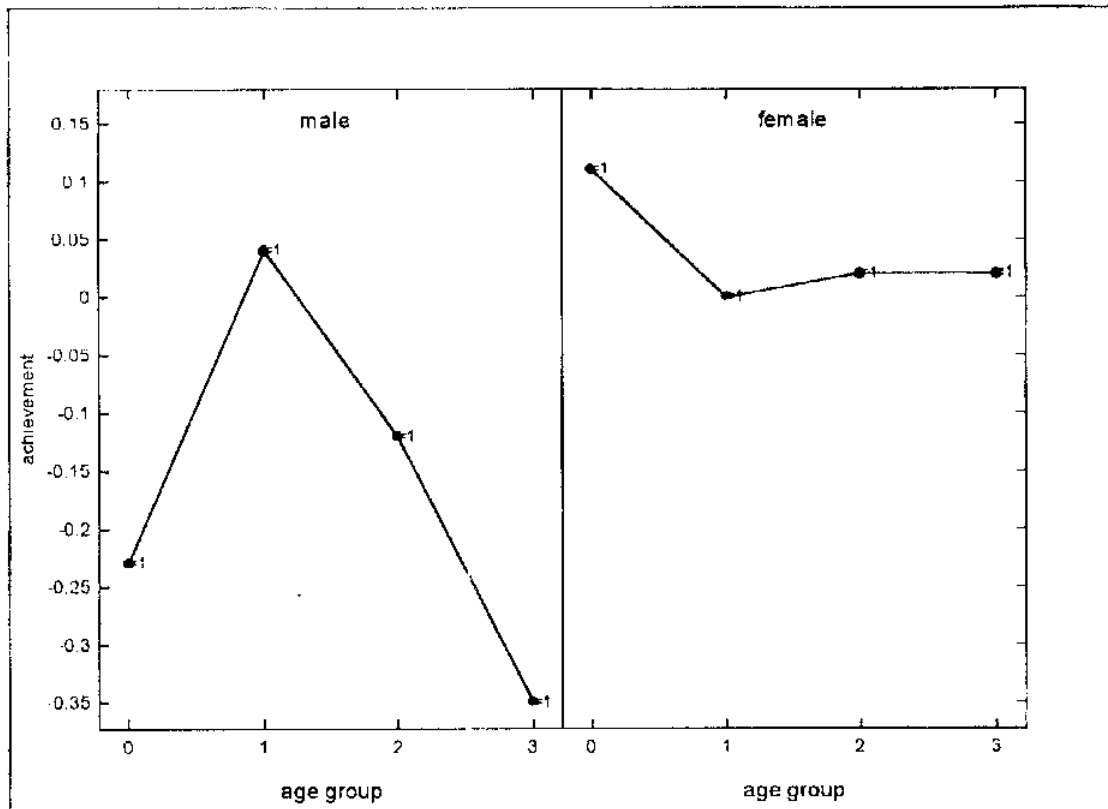

Figure 19: Means of achievement by age group and gender

(d) Students whose parents are single or separated achieve similar scores. Students from nuclear families parents achieve the best.

(e) Students in the Faculty of Science and Technology and Humanities and Social Science achieve scores lower than those students enrolled in the Faculty of Education. However, there is no substantial difference between the scores of students enrolled in the College of Islamic Studies and those in the Faculty of Education. However differences in subjects and evaluation by each lecturer in different faculties could contribute to this finding.

(f) The students in Southern Thailand gain a higher achievement than others. However, there is no substantial difference between the local and near local students.

3. Limitations

The limitations of this study must be reported. The secondary data are used and only one measure of achievement, namely grade point average in the student's final year. Basically, achievement is a function of many factors such as learning behavior and motivation. In this study secondary data could be sufficient, as data collected from the Education Services Division and Planning Division, Prince of Songkla University are completed and more accurate than those collected by primary data (questionnaire). In questionnaire, students may answer incomplete and not intentionally complete all answers which could lead to bias data.

Further research should focus on achievement measured by other measures than simply grade point average, and determinants of interest should include the background of the students, their learning behaviour, and motivation. In addition, the sample should be selected from several academic years and different universities. A stratified cohort study would be most appropriate for further research.

4. Application

The findings from this investigation could be applied in quality control of students for Intuited Study in universities.

In addition, their results could be used as a guideline for academic and administration staff in universities having similar faculty organization.