

CHAPTER VI

SUMMARY AND CONCLUSIONS

6.1. Introduction

"Education is an instrument of developing the country", this has been emphasised by all policy makers and has been expressed in all Five-Year National, Economic and Social Development Plans in Thailand. In this planned effort, the Five-Year Educational Development Plans and National Scheme of Education aim at improving the quality of the citizens. The quality of citizens can be improved only by imparting better education. Therefore, one has to think of improving the educational system, to be specific, planning the curriculum, teaching and evaluation are the three aspects which have to be taken into consideration.

The improvement in educational system can be brought only when the people engaged in the profession are efficient. The efficiency depends mainly on the abilities which they possess and the training which they get for the profession. The training can only foster the ability. Therefore, the selection procedures of professional courses should be made systematic to select the able people to be trained as stated in the National Scheme of Education 1977.

6.2. The Significance of the Problem

The National Scheme of Education 1977 stated that "Special Selection measures and procedures shall be employed to ensure that, suitable persons with intelligence and appropriate character will be drawn into the teaching profession". This idea was further supported and given due importance in the Fourth Five-Year National Plan (1977-1981) which states that, "those who are responsible for producing teachers have to select the suitable persons with intelligence, capacities, attitudes, interest and appropriate character to be trained into the teaching profession".

In Thailand, the individual schools and colleges conduct their own examinations and the ministry of education provides certificates. This restricts the possibility of comparing the performance of students from different institutions. Hence, it naturally would not be scientific to admit these students to higher courses on the basis of their performance in these examinations. This necessitates the conduct of entrance test on the basis of which admission may be given. Thus, entrance tests in Thailand have greater significance.

The Department of Teacher Training which is responsible for producing teachers supported and emphasised the policy framed in the Fourth National Plan. In order to achieve

this aim, it was decided that suitable tests would be developed. These tests may be divided into two parts. Out of these two parts, one part would emphasise the teaching aptitude and another part would emphasise certain other characteristics like teachers' personality and occupational interest. It has been kept in view because these abilities and characteristics are essential for carrying out the activities effectively in the teaching profession.

So, from the year 1977, the selection of candidates for studying in teachers college has been given due importance. The tests for selecting the candidates have been developed. At present selection tests include the following:

- i. General Ability Test.
- ii. Major Subject Test.
- iii. Teachers' Personality Test.
- iv. Occupational Interests Test.
- v. Interview.

These selection tests are being used in all the teachers colleges all over Thailand. The students for teacher training courses are admitted to the teacher training courses on the basis of their performance on these tests. But the question arises:

Do these tests have the capacity to select the

candidates having teaching aptitude and other characteristics needed for carrying out the activities effectively in the teaching profession?

Do these tests predict the performance of selected students in the teacher training courses ? What are the basic-abilities being measured by these tests ? The answers to these questions can be provided only when researchers in the field of education, plan and conduct systematic and well planned studies in the testing procedures being adopted in the teachers colleges. The present study which is entitled, "An Evaluative Study of the Entrance Test to Diploma in Education Course at Surin Teachers College, Thailand", is an attempt to provide answers to the above raised questions.

6.3. Objectives of the Study

I. To study the effectiveness of entrance test consisting of the following tests, viz.,

- i. General Ability Test composed of five subtests, namely;

- a) Thai;
- b) English;
- c) Mathematics;
- d) Science; and
- e) Social Studies,

- ii. Major Subject Test,
- iii. Teachers' Personality Test and
- iv. Occupational Interests Test to predict the performance of the teacher trainees in the Dip. in Education.

II. To study the factors underlying the entrance test.

6.4. Methodology

6.4.1. The Sample:

A. The Sample for Objective I :

Those students who had been selected and admitted for the Dip. in Education Course of various major subjects at Surin Teachers College in the year 1980 formed the sample for this objective. The total number of 491 students selected purely on the basis of merit of the entrance test and remained present in all the examinations conducted during the course formed the sample for this objective.

B The Sample for Objective II :

The sample of 3,000⁽ⁿ⁾ students was drawn to study the factors underlying the entrance test. Out of these 3,000 students 1,000 students were selected for each year viz., 1980, 1981 and 1982 in order to study the factors for each year separately. The sample was selected by employing stratified random sampling technique.

6.4.2. The Collection of Data:

In order to achieve objective I the marks obtained by the students in various tests of entrance test and Dip. in Education were considered as variables. These variables are mentioned below:

The Entrance Test Marks:

- i. Total of General Ability Tests (P_1)
- ii. Major Subject Test (P_2)
- iii. Teachers' Personality Test (P_3)
- iv. Occupational Interests Test (P_4)
- v. Grand Total of Entrance Tests (P_5)

The Dip. in Education Marks:

- i. Total of Foundation Courses (C_1)
- ii. Ed.111 : Foundation of Education (C_2)
- iii. Ed.121 : Psychology of Development (C_3)
- iv. Ed.122 : Psychology of Education (C_4)

- v. Ed.131 : Principles of Teaching and Preparing
Field Experience (C₅)
- vi. Ed.181 : Hygiene Plan in School (C₆)
- vii. Ed.231 : Methods of Teaching Skill (C₇)
- viii. Ed.232 : Methods of Teaching Life Experience (C₈)
- ix. Ed.251 : Measurement and Evaluation in
Education (C₉)
- x. Total of Education Courses (C₁₀)
- xi. Grade Point Average of Major Subject (C₁₁)
- xii. Teaching Practice (C₁₂)
- xiii. Total Grade Point Average: GPA (C₁₃)

For entrance test marks in the year 1980 were collected from registrar's office. Only T scores were available for different tests. Therefore, T scores were collected in different major subjects selected by the students separately. T scores in different General Ability subtests, Teachers' Personality Test and Occupational Interests Test were also collected. These T score were converted into raw scores. The total of various major subjects offered by the candidates was different, therefore, these raw scores were converted into percentages to bring them on a common scale.

The Total of General Ability Tests was arrived at, by summing up the raw scores on its different subtests and the Grand Total of Entrance Tests was obtained by summing up the scores of all the tests included in the entrance test.

The Dip. in Education Marks: the marks could be collectēd directly from the registrar's office except Grade Point Average of each Major subject and Total Grade Point Average: GPA. These were calculated according to each Major subject and the courses to be selected in the present study.

For achieving the second objective, the scores of the candidates in different entrance tests were obtained. In the year 1980 T scores were converted into raw scores as indicated earlier, and the marks composed of different tests, viz.,

- i. Thai,
- ii. English,
- iii. Mathematics,
- iv. Science,
- v. Social Studies,
- vi. Teachers' Personality Test and
- vii. Occupational Interests Test.

But for the year 1981 and 1982 raw scores were available for

different subjects, namely;

- i. Thai;
- ii. English;
- iii. Mathematics;
- iv. Science and
- v. Social Studies

directly from the registrar's office and therefore were collected as such. The data thus collected were then transferred on I B M cards and further processed on a computer.

6.5. Data Analysis

The procedure employed for carrying out the statistical analysis of the data was as follows:

- i. To achieve the first objective of the study the correlational and prediction analyses techniques were applied. To study the relationship between entrance test and Dip. in Education course, the Product-moment correlational technique was applied. Further, to study the aspect of prediction, considering Dip. in Education course as dependent variables and entrance test as independent variables, the Stepwise multivariate regression analysis technique was applied. The increment in the correlation

coefficient with the addition of new variable was tested by the analysis of variance technique to identify the meaningful predictors. Finally the regression equations with the meaningful predictors were fitted by obtaining the corresponding regression coefficients and the constant values.

ii. The abilities or common factors underlying the entrance test in the year 1980, 1981 and 1982 were studied separately. The Principal Component method of factor analysis was applied to identify these factors. The extracted factor matrices were also subjected to rotation of axes by Varimax method.

6.6. Major Findings

6.6.1. Relationship Between Entrance Test and Dip. in Education Course:

- a) The correlation coefficients between Total of General Tests (P_1) and all of the 13 criterion variables were significant at 0.01 level. The values ranged from 0.13 to 0.51 and explained 1.69 % to 26.01 % of variability. The correlation coefficient between Total of General Ability Tests (P_1) and Ed.251 : Measurement and Evaluation in Education (C_9) was found to be the highest (0.51).

b) The correlation coefficients between Major Subject Test (P_2) and Total of Education Courses (C_{10}), Ed. 122 : Psychology of Education (C_4), Teaching Practice (C_{12}) Ed.181 : Hygiene Plan in School (C_6), Ed.232 : Methods of Teaching Life Experience (C_8), Grade Point Average of Major Subject (C_{11}) and Total Grade Point Average : GPA (C_{13}) were significant at 0.01 level.

The correlation coefficients between Major Subject Test (P_2) and Ed.231 : Methods of Teaching Skill (C_7) and Ed.121 : Psychology of Development (C_3) were significant at 0.05 level.

The correlation coefficients between Major Subject Test (P_2) and Ed.251 : Measurement and Evaluation in Education (C_9), Ed.131 : Principles of Teaching and Preparing Field Experience (C_5), Total of Foundation Courses (C_1) and Ed.111 : Foundation of Education (C_2) were not significant.

The high correlation coefficient (0.31) was the value between Major Subject Test (P_2) and Total Grade Point Average : GPA (C_{13}) and the low value (0.00) was the value between Major Subject Test (P_2) and Ed.251: Measurement and Evaluation in Education (C_9).

c) The correlation coefficients between Teachers' Personality Test (P_3) and Ed.122: Psychology of Education (C_4), Total of Education Courses (C_{10}), Grade Point Average of Major Subject (C_{11}), Ed.121: Psychology of Development (C_3), Ed.251: Measurement and Evaluation in Education (C_9) and Total Grade Point Average : GPA (C_{13}) were significant at 0.01 level.

The values of correlation coefficients between Teachers' Personality Test (P_3) and Ed.111: Foundation of Education (C_2), Ed.231: Methods of Teaching Skill (C_7) and Ed.131: Principles of Teaching and Preparing Field Experience (C_5) were significant at 0.05 level.

The correlation coefficients of Teachers' Personality Test (P_3) and Total of Foundation Courses (C_1), Teaching Practice (C_{12}), Ed.232: Methods of Teaching Life Experience (C_8) and Ed.181: Hygiene Plan in School (C_6) were not significant.

The correlation coefficients between Teachers' Personality Test (P_3) and Ed.251: Measurement and Evaluation in Education (C_9), and Total Grade Point Average : GPA (C_{13}) were to be the highest (0.18).

- d) The correlation coefficients between Occupational Interests Test (P_4) and Ed.122: Psychology of Education (C_4), Total Grade Point Average:GPA (C_{13}) and Grade Point Average of Major Subject (C_{11}) were significant at 0.01 level.

The correlation coefficients between Occupational Interests Test (P_4) and Total of Foundation Courses (C_1) and Ed.181: Hygiene Plan in School (C_6) were significant at 0.05 level.

The correlation coefficients between Occupational Interests Test (P_4) and Ed.111: Foundation of Education (C_2), Ed.232: Methods of Teaching Life Experience (C_8), Total of Education Courses (C_{10}) and Teaching Practice (C_{12}) were not significant.

The negative correlation coefficients between Occupational Interests Test (P_4) and Ed.121: Psychology of Development (C_3), Ed.251: Measurement and Evaluation in Education (C_9), Ed.131: Principles of Teaching and Preparing Field Experience (C_5) and Ed.231: Methods of Teaching Skill (C_7) were not significant.

- e) The correlation coefficients between Grand Total of Entrance Tests (P_5) and all of the

13 criterion variables were significant at 0.01 level. The value between Grand Total of Entrance Tests (P_5) and Total Grade Point Average:GPA (C_{13}) was found out to be the highest (0.44).

6.6.2 : Meaningful Predictors and Regression

Education:

Considering the performance in entrance test in the year 1980 as the predictor variables and Dip. in Education Course as criterion variables the meaningful predictors and regression equation were studied.

- f) The Table 6.6.1. shows meaningful predictors in respect of each criterion variable. The placement of the predictor variables are in their rank order of prediction and regression equation with best predictors in score form.

Table 6.6.1: Criterion Variables, Multiple Correlation Coefficients (R), Meaningful Predictors in the Rank Order of Their Prediction and Regression Equations

Criterion Variable (Dip.in Education)	Multiple Correlati- on (R)	Meaningful Predictors in Rank Order(Entrance Test)
Total of Foundation Courses: C_1	0.385	i. Total of General Ability Tests: P_1

Table 6.6.1. contd....

Criterion Variable (Dip.in Education)	Multiple Correlati- on (R)	Meaningful Predictors in Rank Order (Entrance Test)
		ii. Grand Total of Entrance Tests: P ₅
		iii. Teachers' Personality Test: P ₃
Regression equation with best predictors in score form:		
$C_1 = 1.7568P_1 + .3865P_5 - 1.1554P_3 + 351.6184$		
Ed.111:Foundation of Education: C ₂	0.345	Total of General Ability Tests: P ₁
Regression equation with best predictor in score form:		
$C_2 = .1360P_1 + 41.3533$		
Ed.121:Psychology of Development: C ₃	0.354	i. Total of General Ability Tests: P ₁
		ii. Grand Total of Entrance Tests: P ₅

Table 6.6.1. contd...

Criterion Variable (Dip.in Education)	Multiple Correla- tion(R)	Meaningful Predictors in Rank Order(Entrance Test)
		iii. Occupational Interests Test: P ₄
Regression equation with best predictors in score form:		
$C_3 = .0865P_1 + .0375P_5 - .1447P_4 + 49.6438$		
Ed.122: Psychology of Education: C ₃	0.371	i. Total of General Ability Tests : P ₁ ii. Grand Total of Entrance Tests:P ₅
Regression equation with best predictors in score form:		
$C_4 = .1120P_1 + .0279P_5 + 38.5270$		
Ed.131: Principles of Teaching and Preparing Field Expe- rience:C ₅	0.295	Total of General Ability Tests: P ₁
Regression equation with best predictor in score form:		
$C_5 = .0938P_1 + 59.2390$		

Table 6.6.1. contd....

Criterion Variable (Dip.in Education)	Multiple Correla- tion(R)	Meaningful Predictors in Rank Order(Entrance Test)
Ed.181: Hygiene Plan in School: C ₆	0.246	i. Major Subject Test:P ₂ ii. Total of General Ability Tests: P ₁
Regression equation with best predictors in score form: C ₆ = .0555P ₂ + .0480P ₁ + 57.7145		
Ed.231: Methods of Teaching Skill: C ₇	0.269	i. Grand Total of Entrance Tests: P ₅ ii. Occupational Interests Test:P ₄ iii. Total of General Ability Tests: P ₁
Regression equation with best predictors in score form: C ₇ = .0399P ₅ - .1767P ₄ + .0589P ₁ + 55.6472		
Ed.232: Methods of Teaching Life Experience: C ₈	0.290	i. Major Subject Test:P ₂ ii. Total of General Ability Tests:P ₁

Table 6.6.1. contd....

Criterion Variable (Dip.in Education)	Multiple Correla- tion(R)	Meaningful Predictors in Rank Order (Entrance Test)
		iii. Occupational Interests Test: P ₄
Regression equation with best predictors in score form: C ₈ = .0787P ₂ + .0580P ₁ - .0797P ₄ + 57.2131		
Ed.251: Measurement and Evaluation in Education: C ₉	0.539	i. Total of General Ability Tests: P ₁ ii. Occupational Interests Test: P ₄ iii. Teachers' Personality Test: P ₃
Regression equation with best predictors in score form: C ₉ = .4893P ₁ - .1929P ₄ + .0958P ₃ + 32.0898		
Total of Education Courses: C ₁₀	0.428	i. Total of General Ability Tests: P ₁ ii. Grand Total of Entrance Tests: P ₅ iii. Occupational Interests Test : P ₄

Table 6.6.1. contd....

Criterion Variable (Dip.in Education)	Multiple Correla- tion(R)	Meaningful Predictors in Rank Order(Entrance Test)

Regression equation with best predictors in score form:		
$C_{10} = .8786P_1 + .2119P_5 - .5526P_4 + 413.8751()$		

Grade Point Average of Major Subject: C_{11}	0.329	i. Major Subject Test: P_2 ii. Occupational Interests Test: P_4 iii. Teachers' Personality Test: P_3 iv. Total of General Ability Tests: P_1
Regression equation with best predictors in score form:		
$C_{11} = .0051P_2 + .0119P_4 + .0055P_3 + .0027P_1 + 1.0761$		

Teaching Practice: C_{12}	0.290	i. Total of General Ability Tests: P_1 ii. Major Subject Test: P_2
Regression equation with best predictors in score form:		
$C_{12} = .0346P_1 + .0178P_2 + 46.3102$		

Table 6.6.1. contd....

Criterion Variable (Dip.in Education)	Multiple Correla- tion(R)	Meaningful Predictors in Rank Order(Entrance Test)
Total of Grade Point Average : GPA : C_{13}	0.486	i. Total of General Ability Tests: P_1 ii. Grand Total of Entrance Tests: P_5 iii. Major Subject Test: P_2

Regression equation with predictors in score form:

$$C_{13} = .0060P_1 + .0029P_5 + .0020P_2 + 1.0976$$

6.6.3. Factors Underlying the Entrance Test:

g) The abilities or common factors underlying each of the entrance test were as follows:

I) In the year 1980,

- i. Verabal General Ability to solve the scientific and social problems,
- ii. General Ability to solve the social problems, and
- iii. Verbal General Ability to solve the scientific and numerical problems.

II) In the year 1981,

- i. General Ability,
- ii. Numerical Ability and
- iii. Verbal General Ability to solve the scientific and social problems.

III) In the year 1982, only one factor of,

"General Ability" was found.

6.7.

Conclusion:

6.7.1. Relationship between Entrance Test and Dip.in Education Course:

- a) The correlation coefficients between Total of General Ability Tests (P_1) and all of the 13 criterion variables were significant at 0.01 level and ranged from 0.13 to 0.51, explained 1.69 % to 26.01 % of variability.
- b) The coefficient of correlations between Major Subject Test (P_2) and the 7 criterion variables were significant at 0.01 level and the 2 criterion variables were significant at 0.05 level, and the 4 criterion variables were not significant. The values ranged from 0.00 to 0.31 and explained 0.00 % to 9.61 % of variability.

c) The correlation coefficients between Teachers' Personality Test (P_3) and the 6 criterion variables were significant at 0.01 level, and the 3 criterion variables were significant at 0.05 level, and the 4 criterion variables were not significant. The values ranged from 0.01 to 0.18 and explained 0.01 % to 3.24 % of variability.

d) The coefficient of correlations between Occupational Interests Test (P_4) and the 3 criterion variables were significant at 0.01 level, and the 2 criterion variables were significant at 0.05 level, and the 4 criterion variables were not significant.

The negative correlation coefficients between Occupational Interests Test (P_4) and the 4 criterion variables were not significant. For the positive values the correlation coefficients ranged from 0.01 to 0.22 and the negative values ranged from -0.03 to -0.05.

e) The coefficient of correlations between Grand Total of Entrance Tests (P_5) and all of the 13 criterion variables were significant at 0.01

level. The values ranged from 0.18 to 0.44 and explained 3.24 % to 19.36 % of variability.

6.7.2. Meaningful Predictors and Regression Equation:

- f) The Total of General Ability Tests (P_1) which consisted of 5 subtests, viz., Thai, English, Mathematics, Science and Social Studies was found to be the best for predicting Dip.in Education Course. The second best predictor was found to be the Grand Total of Entrance Tests (P_5)
- g) Major Subject Test (P_2) could predict to a great extent the Grade Point Average of Major Subject (C_{11}), Ed.181 : Hygiene Plan in School (C_6) and Ed.232: Methods of Teaching Life Experience (C_8). Whereas, Teachers' Personality Test (P_3) and Occupational Interests Test (P_4) had very little predictive value and for many criterion variables they could not predict at all.

6.7.3. Factors Underlying the Entrance Test:

h) The abilities or common factors underlying each of entrance test were as follows:

- I) In the year 1980,
- i. Verbal General Ability to solve the scientific and social problems,

- ii. General Ability to solve the social problems and
- iii. Verbal General Ability to solve the scientific and numerical problems.

II. In the year 1981,

- i. General Ability,
- ii. Numerical Ability and
- iii. Verbal General Ability to solve the scientific and social problems.

III. In the year 1982, only one factor of "General Ability" was found.

6.8. Suggestions for Further Research

While carrying out this investigation, certain research issues emerged out. These researches along with some allied problems are presented here as suggestions for further research. They are as follows:

- i. The finding of the present study may be substantiated by repeating the same over a sequential period to find out the repeatability of the results.
- ii. Similar studies on entrance test may also be taken up in other colleges in order to compare and

conclude the results for utilizing it effectively for screening the applicants wanting to enter into teachers colleges.

- iii. Studies pertaining to other factors which affect the achievement of Dip.in Education students may also be taken up.
- iv. Some systematic studies on Job Analysis of Teachers should be taken up to find out the abilities needed to perform the total job.
- v. More studies should be taken up to construct the entrance test which may be more scientific and valid on various dimensions.
- vi. The factors underlying the Dip. in Education Course also should be identified through systematic studies.