

## CHAPTER IV

## ANALYSIS AND INTERPRETATION OF DATA

4.1. Introduction

In order to achieve the two main objectives (Caption 1.10) of the present study, the analysis and interpretation of data have been carried out in the present chapter. This has been attempted separately in respect of each of the objectives. The methodology adopted for the same has already been explained in the preceding chapter (Caption III). Accordingly the present chapter has been divided into two sections:

Section-i : presents the analysis and interpretation of data pertaining to objective-1 whereas

Section-ii: presents the analysis and interpretation of data for achieving the objective-2 of this study.

Caption 4.2 and 4.3 give classificatory identifications for Section-i and Section-ii respectively.

4.2. SECTION-I

The present section deals with the analysis and interpretation of data to study the relationship between scores obtained in the entrance test and the scores obtained

at the Dip. in Education in order to predict the scores at the Dip. in Education from the scores of entrance test. The scores of entrance test which have been taken into consideration for this purpose are the scores of the following tests,

- i. Total of General Ability Tests;
- ii. Major Subject Test;
- iii. Teachers' Personality Test;
- iv. Occupational Interests Test and
- v. Grand Total of Entrance Tests.

The scores for Dip. in Education are composed of 13 sets of scores, viz.,

- i. Total of Foundation Courses,
- ii. Ed.111 : Foundation of Education,
- iii. Ed.121 : Psychology of Development,
- iv. Ed.122 : Psychology of Education,
- v. Ed.131 : Principles of Teaching and Preparing  
Field Experience,
- vi. Ed.181 : Hygiene Plan in School,
- viii. Ed.231 : Methods of Teaching Skill
- viii. Ed.232 : Methods of Teaching Life Experience,
- ix. Ed.251 : Measurement and Evaluation in Education,
- x. Total of Education Courses,
- xi. Grade Point Average of Major Subject,
- xii. Teaching Practice and
- xiii. Total Grade Point Average : GPA.

After obtaining the data related to the above mentioned variables, the prediction analysis was carried out by considering the scores in the entrance test as predictor variables and scores from Dip. in Education as criterion variables.

For convenience in analysis and interpretation of data, of this section, codes are assigned as follows:

- |                |  |
|----------------|--|
| P <sub>1</sub> | Stands for Total of General Ability Tests                                    |
| P <sub>2</sub> | Stands for Major Subject Test  |
| P <sub>3</sub> | Stands for Teachers' Personality Test  |
| P <sub>4</sub> | Stands for Occupational Interests Test                                       |
| P <sub>5</sub> | Stands for Grand Total of Entrance Tests                                     |
| C <sub>1</sub> | Stands for Total of Foundation Courses                                       |
| C <sub>2</sub> | Stands for Ed.111 : Foundation of Education                                  |
| C <sub>3</sub> | Stands for Ed.121 : Psychology of Development                                |
| C <sub>4</sub> | Stands for Ed.122 : Psychology of Education                                  |
| C <sub>5</sub> | Stands for Ed.131 : Principles of Teaching and<br>Preparing Field Experience |
| C <sub>6</sub> | Stands for Ed.181 : Hygiene Plan in School                                   |
| C <sub>7</sub> | Stands for Ed.231 : Methods of Teaching Skill                                |
| C <sub>8</sub> | Stands for Ed.232 : Methods of Teaching Life<br>Experience                   |

- $C_9$  Stands for Ed.251 : Measurement and Evaluation in  
Education
- $C_{10}$  Stands for Total of Education Courses
- $C_{11}$  Stands for Grade Point Average of Major Subject
- $C_{12}$  Stands for Teaching Practice
- $C_{13}$  Stands for Total Grade Point Average : GPA
- $r$  Stands for Correlation Between the Two Variables
- $R$  Stands for Multiple Correlation
- $b$  Stands for Coefficient in Form of Raw Score
- $C$  Stands for Constant

4.2.1. Prediction of Dip. in Education Marks  
from Entrance Test Marks:

Dip. in Education examinations were conducted at the first and second semester of the academic year 1980 and 1981 whereas entrance test was conducted for screening the students to study at Dip. in Education course for the year 1980. As stated earlier, the predictor variables, i.e. entrance test marks and criterion variables, i.e. Dip. in Education marks are listed below:

Table 4.2.1 : Showing Entrance Test as Predictor Variables  
and Dip. in Education as Criterion Variables

No.	Predictor Variables (Entrance Test)	No.	Criterion Variables (Dip. in Education)
1	P <sub>1</sub>	1	C <sub>1</sub>
2	P <sub>2</sub>	2	C <sub>2</sub>
3	P <sub>3</sub>	3	C <sub>3</sub>
4	P <sub>4</sub>	4	C <sub>4</sub>
5	P <sub>5</sub>	5	C <sub>5</sub>
		6	C <sub>6</sub>
		7	C <sub>7</sub>
		8	C <sub>8</sub>
		9	C <sub>9</sub>
		10	C <sub>10</sub>
		11	C <sub>11</sub>
		12	C <sub>12</sub>
		13	C <sub>13</sub>
<b>TOTAL:</b>	<u>5</u>	<b>TOTAL:</b>	<u>13</u>

Both the procedures of assessment, entrance test as a whole and Dip. in Education course, have their independent significance. Entrance test covers the contents of High School level (grade 11 and 12) in General Ability Test and Major Subject Test while the others are Teachers' Personality and Occupational Interests Test. The Dip. in Education examination is more comprehensive in nature having the complete coverage of the content and the syllabus of the whole course.

Firstly, an attempt was made to study intercorrelation of variables as a whole, and secondly, the relationships between each of the predictor variables and each of the criterion variables was studied. The Product-moment correlation coefficients were calculated between the two sets of variables, which are summarised in Table 4.2.2, correlations between predictor variables, criterion variables are discussed in the following pages.



From Table 4.2.2 the correlation matrix of the prediction variables, it may be observed that the correlation coefficients between  $P_5$  and  $P_1$ ,  $P_2$ ,  $P_3$ , and  $P_4$  and between  $P_1$  and  $P_3$ , and  $P_2$  and  $P_4$  are significant at 0.01 level. The value between  $P_2$  and  $P_3$  is significant at 0.05 level, while the values of  $P_1$  and  $P_2$ ,  $P_1$  and  $P_4$ , and  $P_3$  and  $P_4$  are insignificant.

The correlation coefficients range from 0.07 (between  $P_1$  and  $P_2$  and between  $P_3$  and  $P_4$ ) to 0.67 (between  $P_2$  and  $P_5$ ) and thus, explain 0.49 % to 44.89 % of variability.

It may also be observed that the intercorrelations of the criterion variables, most of the correlation coefficients are significant at 0.01 level except one value between  $C_6$  and  $C_7$  which is significant at 0.05 level and the other two values between  $C_1$  and  $C_6$  and  $C_4$  and  $C_6$  are not significant at any of these two levels.

The correlation coefficients range from 0.06 (between  $C_1$  and  $C_6$ ) to 0.77 (between  $C_9$  and  $C_{10}$ ) and therefore, explain 0.36 % to 59.29 % of variability.

#### 4.2.2. Relationship Between the Predictor Variables and the Criterion Variables:

It was attempted to study the relationship

between each of the predictor variables ( $P_1, P_2, P_3, P_4$  and  $P_5$ ) and each of the criterion variables ( $C_1, C_2, C_3, C_4, C_5, C_6, C_7, C_8, C_9, C_{10}, C_{11}, C_{12}$  and  $C_{13}$ ). By applying the Product-moment correlation technique, the degree of resemblance or correspondence between the two sets of marks is obtained. This helps in estimating the position of student on one variable in case his position on the other variable is known. It indicates whether the marks on two variables are independent of each other or there is some overlapping between the two. In general, it can be interpreted in terms of common variance or extent of homogeneity into sets of marks.

Although Table 4.2.2 gives all the intercorrelation, for convenience the correlation coefficients between predictor variables and criterion variables are presented in Table 4.2.3 below:

Table 4.2.3. : Correlation Between the Predictor and Criterion Variab

Variables	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>8</sub>	C <sub>10</sub>	C <sub>11</sub>	C <sub>12</sub>	C <sub>13</sub>
P <sub>1</sub>	.36**	.35**	.32**	.35**	.30**	.15**	.22**	.17**	.41**	.13**	.23**	.38**
P <sub>2</sub>	.07	.08	.10*	.14**	.05	.20**	.09*	.24**	.12**	.26**	.17**	.31**
P <sub>3</sub>	.01	.09	.17**	.12**	.11*	.05	.0*	.03	.15**	.16*	.03	.19**
P <sub>4</sub>	.09*	.01	-.03	.13**	-.04	.20*	.05	.02	.03	.22**	.06	.16**
P <sub>5</sub>	.25**	.23**	.25**	.29**	.18**	.21**	.19**	.23**	.30**	.29**	.23**	.44**

\*\* Significant at .01 level

\* Significant at .05 level

From Table 4.2.3, it may be observed that the correlation coefficients of  $P_1$  with all of the criterion variables are significant at 0.01 level. The correlation coefficients range from 0.13 (between  $P_1$  and  $C_{11}$ ) to 0.51 (between  $P_1$  and  $C_9$ ) and thus, explain 1.69 % to 26.01 % of variability.

For the second predictor variable ( $P_2$ ), the correlation coefficients between  $P_2$  and  $C_4$ ,  $C_6$ ,  $C_8$ ,  $C_{10}$ ,  $C_{11}$ ,  $C_{12}$  and  $C_{13}$  are significant at 0.01 level, while the correlation coefficients between  $P_2$  and  $C_3$  and  $C_7$  are significant at 0.05 level. The correlation coefficients between  $P_2$  and  $C_1$ ,  $C_2$ ,  $C_5$  and  $C_9$  are not significant. The correlation coefficients range from 0.00 (between  $P_2$  and  $C_9$ ) to 0.31 (between  $P_2$  and  $C_{13}$ ) and therefore, explain 0.00 % to 9.61 % of variability.

The third predictor variable ( $P_3$ ) the correlation coefficients between  $P_3$  and  $C_3$ ,  $C_4$ ,  $C_9$ ,  $C_{10}$ ,  $C_{11}$  and  $C_{13}$  are significant at 0.01 level, while the values between  $P_3$  and  $C_2$ ,  $C_5$  and  $C_7$  are significant at 0.05 level, the other values are insignificant are  $P_3$  and  $C_1$ ,  $C_6$ ,  $C_8$  and  $C_{10}$ . The coefficient of correlations range from 0.01 (between  $P_3$  and  $C_1$ ) to 0.18 (between  $P_3$  and  $C_9$  and  $C_{13}$ ) and thus, explain 0.01 % to 3.24 % of variability.



For the fourth predictor variable ( $P_4$ ), it may be observed that there are negative correlation coefficients between  $P_4$  and  $C_3$ ,  $C_5$ ,  $C_7$  and  $C_9$  and are not significant.

The positive values between  $P_4$  and  $C_4$ ,  $C_{11}$  and  $C_{13}$  are significant at 0.01 level, while the values between  $P_4$  and  $C_1$ , and  $C_6$  are significant at 0.05 level, the other values between  $P_4$  and  $C_2$ ,  $C_8$ ,  $C_{10}$ , and  $C_{12}$  are insignificant.

It is observed that for the positive values, the correlation coefficients range from 0.01 (between  $P_4$  and  $C_2$ ) to 0.22 (between  $P_4$  and  $C_{11}$ ) and therefore, explain 0.01% to 4.84% of positive variability.

The last predictor variable ( $P_5$ ) the correlation coefficients between  $P_5$  and all of the criterion variables are significant at 0.01 level and range from 0.18 (between  $P_5$  and  $C_5$ ) to 0.44 (between  $P_5$  and  $C_{13}$ ) and so, explain 3.24 % to 19.36 % of variability.

✓ From overall consideration of correlation coefficients, it may be concluded that  $P_1$  and  $P_5$  having predictive efficiency for predicting marks in all the courses in the Dip. in Education examination. Whereas other three predictor variables, viz.,  $P_2$ ,  $P_3$  and  $P_4$  could not predict the students

performance on all the criterion variables. The predictor variables  $P_2$  and  $P_3$  have the ability to predict 9 criterion variables each. And, the predictive ability of  $P_4$  is very poor on the contrary it is found to have negative correlation coefficients with  $C_3$ ,  $C_5$ ,  $C_7$  and  $C_9$ .

#### 4.2.3. Meaningful Predictors and Regression

##### Equations:

The relationship between entrance test and Dip. in Education course has been studied by obtaining the Pearson's Product-moment correlation coefficients. This has shown the predictive validity of each of the entrance tests. It has also been observed that relationships exist between different tests taken for the entrance purpose. The correlation coefficients between entrance test (predictors) and criterion, i.e. Dip. in Education marks in the respective courses indicated predictive values of entrance test marks. To get a better estimate of criterion variable, validity of the single predictor variable and correlation between two or more predictor variables, were considered to find out the meaningful predictor variables. For this, a Stepwise Multiple regression analysis method was applied. The special advantage of this method is that it fits the regression equation step by step. In the first step the predictor variable with the

highest correlation coefficient with the criterion variables is considered. The Multiple correlation coefficient obtained, is tested for significance by analysis of variance technique. In case, Multiple correlation coefficient is found significant, the next predictor variable with the second highest correlation coefficient with the criterion is included along with the first variable. With the addition of this second predictor variable, whether the increment in the square of Multiple correlation is significant is again tested by analysis of variance method. This process is continued till the increment in the square of Multiple correlation coefficient becomes insignificant. Although the addition of each variable raises the Multiple correlation, some do so very little; and in ordering the variables in accordance with the magnitude of the criterion correlation makes it probable that the least important variables will be later ones. At every stage one can pause and see whether the variable just added makes a significant addition to the Multiple correlation.

The Multiple correlation coefficients for each of the criterion variables (Dip. in Education course) with the combinations of predictor variables (entrance test) and the value of F obtained are presented in each of the Tables.

To fit the regression equation with best predictors,

the value of constants and regression weights are presented in separate Tables.

But, from the results of the computer calculations, the researcher could get only prediction equations in term of raw score forms of each of the criterion variables thus, these were converted into standard score forms in order to compare the Beta weights to see the rank order of each of the predictors. Again, Stepwise Multiple correlation had been calculated according to the rank order predictor variables by the investigator until the increment in square of Multiple R was insignificant.

The formula used to test the significance of a difference between Multiple R's was the formula of Guildford<sup>1</sup> (1973). It is presented below:

$$F = \frac{(R_1^2 - R_2^2)(N - m_1 - 1)}{(1 - R_1^2)(m_1 - m_2)}$$

Where  $R_1$  = Multiple R with large number of independent variables

$R_2$  = Multiple R with one or more variables omitted

$N$  = Number of the case in the sample

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1. J.P. Guilford (1973):  
Fundamental Statistics in Psychology and Education,  
 5th Ed. McGraw-Hill, Inc:368.

$m_1$  = larger number of independent variables

$m_2$  = smaller number of independent variables

In the use of F tables, the  $df_1$  degrees of freedom are given by  $(m_1 - m_2)$  and the  $df_2$  degrees of freedom by  $(N - m_1 - 1)$ .

Table 4.2.4 : Stepwise Multiple Correlation Coefficients (R) for Total of Foundation Courses ( $C_1$ ) as the Criterion Variable

Criterion Variable	Step. No	Predictor Variables	"r"	"R"	Increase-ment in $R^2$	F	d.f.
$C_1$	1	$P_1$	0.36	0.358	-	71.88 <sup>**</sup>	1,489
	2	$P_5$	0.25	0.370	.0087	4.93*	1,488
	3	$P_3$	0.01	0.385	.0113	6.47*	1,487
	4	$P_4$	0.09	0.385	.0000	0.00NS	1,486
	5	$P_2$	0.07	0.385	.0000	0.00NS	1,485

\*\* Significant at .01 level

\* Significant at .05 level

NS Not significant

Table 4.2.5 : Regression Equation for Meaningful Predictors for Total of  $\bigcirc$  Foundation Courses ( $C_1$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_1$	$P_1$	1.9928	346.3496
	$P_1 P_5$	1.7565, .2110	323.4705
	$P_1 P_5 P_3$	1.7568, .3865, -1.1554	351.6184

Regression equation with best predictors in score form:

$$C_1 = 1.7568 P_1 + .3865 P_5 - 1.1554 P_3 + 351.6184$$

From Table 4.2.4, it may be observed that Total of General Ability Tests ( $P_1$ ) could predict the Total of Foundation Courses ( $C_1$ ) at 0.01 level of significance.

Since Grand Total of Entrance Tests ( $P_5$ ) was added the increment in the square of Multiple R was significant at 0.05 level.

With the addition of Teachers' Personality Test ( $P_3$ ) the increment in the square of Multiple R was significant at 0.05 level.

When the fourth predictor variable and so on were added steps by step the increment in the square of Multiple R came to be insignificant. Therefore,  $P_1P_5P_3$  have come out to be the meaningful predictors respectively, according to the rank of prediction.

From Table 4.2.5 when  $P_3$  was added, the coefficient changed to a negative value and thus,  $P_3$  was the suppressant predictor. The prediction equation in score form was

$$C_1 = 1.7568P_1 + .3865P_5 - 1.1554P_3 + 351.6184$$

Table 4.2.6 : Stepwise Multiple Correlation Coefficients (R) for Ed.111 : Foundation of Education ( $C_2$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_2$	1	$P_1$	0.35	0.345	-	66.06**	1,489
	2	$P_5$	0.24	0.352	.0048	2.75NS	1,488
	3	$P_3$	0.09	0.353	.0007	0.38NS	1,487
	4	$P_2$	0.08	0.353	.0000	0.00NS	1,486
	5	$P_4$	0.01	0.353	.0000	0.00NS	1,485

\*\* Significant at .01 level

NS Not Significant

Table 4.2.7 : Regression Equation for Meaningful Predictor for Ed.111: Foundation of Education ( $C_2$ )

Criterion Variable	Predictor Variables	Regression Coefficient	Constant
$C_2$	$P_1$	.1360	41.3533

Regression equation with best predictor in score form:

$$C_2 = .1360P_1 + 41.3533$$

From Table 4.2.6 and Table 4.2.7, it may be observed that Total of General Ability Tests ( $P_1$ ) could predict Ed.111: Foundation of Education at 0.01 level of significance, while the second predictor and so on were added step by step the increment in the square of Multiple R was insignificant and therefore, only  $P_1$  has come out to be the meaningful predictor. The prediction equation in score form was

$$C_2 = .1360P_1 + 41.3533$$

Table 4.2.8 : Stepwise Multiple Correlation Coefficients  
(R) for Ed.121: Psychology of Development  
(C<sub>3</sub>) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in R <sup>2</sup>	F	d.f.
C <sub>3</sub>	1	P <sub>1</sub>	0.32	0.316	-	55.24**	1,489
	2	P <sub>5</sub>	0.25	0.332	.0103	5.68*	1,488
	3	P <sub>4</sub>	-0.03	0.354	.0150	8.42**	1,487
	4	P <sub>3</sub>	0.17	0.355	.0007	0.34NS	1,486
	5	P <sub>2</sub>	0.10	0.355	.0000	0.00NS	1,485

\*\* Significant at .01 level

\* Significant at .05 level

NS Not significant

Table 4.2.9 : Regression Equation for Meaningful Predictors  
for Ed.121 : Psychology of Development ( $C_3$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_3$	$P_1$	.1236	51.8167
	$P_1P_5$	.0987, .0227	49.3056
	$P_1P_5P_4$	.0865, .0375, -.1447	49.6438

Regression equation with best predictors in score form:

$$C_3 = .0865P_1 + .0375P_5 - .1447P_4 + 49.6438$$

From Table 4.2.8, it may be observed that Total of General Ability Tests ( $P_1$ ) could predict the Ed.121: Psychology of Development ( $C_3$ ) at 0.01 level of significance.

When Grand Total of Entrance Tests ( $P_5$ ) was added the increment in the square of Multiple R was significant at 0.05 level.

With the addition of Occupational Interests Test ( $P_4$ ) the increment in the square of Multiple R was significant at 0.01 level.

When the fourth and fifth predictor variables

were added steps by step the increment in the square of Multiple R came to be insignificant. Therefore,  $P_1P_5P_4$  have come out to be the meaningful predictors respectively, according to the rank prediction.

From Table 4.2.9, it may be observed that when  $P_4$  was added the coefficient of correlation of  $P_4$  changed to a negative value and thus,  $P_4$  was the suppressant predictor. The prediction equation in score form was

$$C_3 = .0865P_1 + .0375P_5 - .1447P_4 + 49.6383$$

Table: 4.2.10 : Stepwise Multiple Correlation Coefficients (R) for Ed.122: Psychology of Education ( $C_4$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_4$	1	$P_1$	0.35	0.350	-	68.26**	1,489
	2	$P_5$	0.29	0.371	.0151	8.56**	1,488
	3	$P_2$	0.14	0.372	.0007	0.41NS	1,487
	4	$P_3$	0.12	0.372	.0000	0.00NS	1,486
	5	$P_4$	0.12	0.372	.0000	0.00NS	1,485

\*\* Significant at .01 level

NS Not significant

Table 4.2.11 : Regression Equation for Meaningful Predictors  
for Ed.122: Psychology of Education ( $C_4$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_4$	$P_1$	.1431	43.12
	$P_1P_5$	.1120, .0279	38.5270

Regression equation with best predictors in score form:

$$C_4 = .1120P_1 + .0279P_5 + 38.5270$$

From Table 4.2.10 and Table 4.2.11, it may be observed that Total of General Ability Tests ( $P_1$ ) could predict Ed.122: Psychology of Education ( $C_4$ ) at 0.01 level of significance.

When Grand Total of Entrance Tests ( $P_5$ ) was added the increment in the square of Multiple R was significant at 0.01 level.

When third and subsequent predictor variables were added step by step the increment in the square of Multiple R came to be insignificant and therefore,  $P_1P_5$  have come out to be the meaningful predictors respectively according to the rank of prediction and the prediction equation in

score form was

$$C_4 = .1120P_1 + .0279P_5 + 38.5270$$

Table 4.2.12: Stepwise Multiple Correlation Coefficients (R) for Ed.131: Principles of Teaching and Preparing Field Experience ( $C_5$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_5$	1	$P_1$	0.30	0.295	-	46.11**	1,489
	2	$P_5$	0.18	0.296	.0005	0.31NS	1,488
	3	$P_3$	0.11	0.296	.0000	0.00NS	1,487
	4	$P_2$	0.05	0.296	.0000	0.00NS	1,486
	5	$P_4$	0.04	0.296	.0000	0.00 NS	1,485

\*\* Significant at .01 level

NS Not significant

Table 4.2.13: Regression Equation for Meaningful Predictor:  
for Ed.131: Principles of Teaching and  
Preparing Field Experience ( $C_5$ )

Criterion Variable	Predictor Variable	Regression Coefficient	Constant
$C_5$	$P_1$	.0938	59.2390

Regression equation with best predictor in score form:

$$C_5 = .0938P_1 + 59.2390$$

From Table 4.2.12 and Table 4.2.13, it may be observed that only Total of General Ability Tests ( $P_1$ ) was the meaningful predictor to predict the criterion of Ed.131: Principles of Teaching and Preparing Field Experience ( $C_5$ ) which was significant at 0.01 level.

The prediction equation in score form was

$$C_5 = .0938P_1 + 59.2390$$

Table 4.2.14 : Stepwise Multiple Correlation Coefficients  
(R) for Ed.181: Hygiene Plan in School ( $C_6$ )  
as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_6$	1	$P_2$	0.20	0.203	-	21.01**	1,489
	2	$P_1$	0.15	0.246	.0193	10.02**	1,488
	3	$P_5$	0.21	0.246	.0000	0.00NS	1,487
	4	$P_4$	0.10	0.246	.0000	0.00NS	1,486
	5	$P_3$	0.05	0.246	.0000	0.00NS	1,485

\*\* Significant at .01 level

NS Not significant

Table: 4.2.15 : Regression Equation for Meaningful Predictors  
for Ed.181: Hygiene Plan in School ( $C_6$ )

Criterion Variable	Predictor Variables	Regression Coefficient	Constant
$C_6$	$P_2$	.0580	62.9076
	$P_2P_1$	.0555, .0480	57.7145

Regression equation with best predictors in score form:

$$C_6 = .0555P_2 + .0480P_1 + 57.7145$$

From Table 4.2.14 and Table 4.2.15, it may be observed that Major Subject Test ( $P_2$ ) could predict Ed.181: Hygiene Plan in School at 0.01 level of significance.

With the addition of second predictor variable (Total of General Ability Tests:  $P_1$ ) the increment in the square of Multiple R was significant at 0.01 level.

With the third and so on predictor variables were added step by step the increment in the square of Multiple R was not significant and thus,  $P_2P_1$  have come out to be the meaningful predictors respectively, according to the rank prediction. The prediction equation in score form was

$$C_6 = .0555P_2 + .0480P_1 + 57.7145$$

Table 4.2.16 : Stepwise Multiple Correlation Coefficients  
 (R) for Ed. 231 : Methods of Teaching Skill  
 (C<sub>7</sub>) as the Criterion Variable

Criterion Variable	Step No.	Predictor variables	"r"	"R"	Increment in R <sup>2</sup>	F	d.f.
C <sub>7</sub>	1	P <sub>5</sub>	0.19	0.188	-	17.91**	1,489
	2	P <sub>4</sub>	-0.5	0.245	.0246	12.44**	1,488
	3	P <sub>1</sub>	0.22	0.269	.0123	6.24*	1,487
	4	P <sub>3</sub>	0.10	0.269	.0000	0.00NS	1,486
	5	P <sub>2</sub>	0.09	0.269	.0000	0.00NS	1,485

\*\* Significant at .01 level

NS Not significant

Table 4.2.17: Regression Equation for Meaningful Predictors  
for Ed.231: Methods of Teaching Skill ( $C_7$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_7$	$P_5$	.0396	58.9811
	$P_5P_4$	.0504, -.2059	62.8827
	$P_5P_4P_1$	.0399, -.1767, .0589	55.6472

Regression equation with best predictors in score form:

$$C_7 = .0399P_5 - .1767P_4 + .0589P_1 + 55.6472$$

From Table 4.2.16, it may be observed that Grand Total of Entrance Tests ( $P_5$ ) could predict Ed.231: Methods of Teaching Skill ( $C_7$ ) at 0.01 level of significance.

Since occupational Interests Test ( $P_4$ ) was added the increment in the square of Multiple R was still significant at 0.01 level.

With the addition of third predictor (Total of General Ability Test :  $P_1$ ), the increment in the square of Multiple R was significant at 0.05 level.

When the fourth and fifth predictor variables were added step by step the increment in the square of Multiple R came to be insignificant and thus,  $P_5 P_4 P_1$  have come out to be the meaningful predictors respectively, according to the rank prediction.

From Table 4.2.17, it may be observed that when  $P_4$  was added, the coefficient of  $P_4$  changed to a negative value and thus,  $P_4$  was the suppressant predictor and the prediction equation in score form was

$$C_7 = .0399P_5 - .1767P_4 + .0589P_1 + 55.6472.$$

Table 4.2.18 : Stepwise Multiple Correlation Coefficients (R) for Ed.232: Methods of Teaching Life Experience ( $C_8$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_8$	1	$P_2$	0.24	0.238	-	29.36**	1,489
	2	$P_1$	0.17	0.280	.0217	11.52**	1,488
	3	$P_4$	0.03	0.290	.0080	4.28*	1,487
	4	$P_5$	0.23	0.290	.0000	0.00NS	1,486
	5	$P_3$	0.03	0.290	.0000	0.00NS	1,485

\*\* Significant at .01 level

\* Significant at .05 level

NS Not significant

Table 4.2.19 : Regression Equation for Meaningful Predictors  
for Ed.232: Methods of Teaching Life Experience  
( $C_8$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_8$	$P_2$	.0718	66.6686
	$P_2P_1$	.0688, .0560	55.6210
	$P_2P_1P_4$	.0787, .0580, -.0797	57.2131

Regression equation with best predictors in score form:

$$C_8 = .0787P_2 + .0580P_1 - .0797P_4 + 57.2131$$

From Table 4.2.18, it may be observed that Major Subject Test ( $P_2$ ) could predict Ed.232: Methodol of Teaching Life Experience ( $C_8$ ) at 0.01 level of significance.

Since Total of General Ability Tests ( $P_1$ ) was added the increment in square of Multiple R was significant at 0.01 level.

With the addition of the third predictor variable (Occupational Interests Test :  $P_4$ ) the increment in square of Multiple R was significant at 0.05 level.

When the fourth and fifth predictor variables were added step by step the increment in the square of Multiple R was insignificant and therefore,  $P_2$   $P_1$   $P_4$  have come out to be the meaningful predictors respectively, according to the rank prediction.

From Table 4.2.19, it may be observed that when  $P_4$  was added, the coefficient of  $P_4$  changed to a negative value and thus,  $P_4$  was the suppressant predictor and the prediction equation in score form was

$$C_8 = .0787P_2 + .0580P_1 - .0797P_4 + 57.2131.$$

Table 4.2.20 : Stepwise Multiple Correlation Coefficients (R) for Ed.251: Measurement and Evaluation in Education ( $C_9$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_9$	1	$P_1$	0.51	0.509	-	170.99**	1,489
	2	$P_4$	-0.03	0.533	.0250	17.04**	1,488
	3	$P_3$	0.18	0.539	.0064	4.41*	1,487
	4	$P_5$	0.28	0.539	.0000	0.00NS	1,486
	5	$P_2$	0.00	0.539	.0000	0.00NS	1,485

\*\* Significant at .01 level

\* Significant at .05 level

NS Not Significant

Table 4.2.21 : Regression Equation for Meaningful Predictors  
for Ed.251: Measurement and Evaluation in  
Education ( $C_9$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_9$	$P_1$	.4902	33.4815
	$P_1P_4$	.5226, -.1795	35.5029
	$P_1P_4P_3$	.4893, -.1929, .0958	32.0898

Regression equation with best predictors in score form:

$$C_9 = .4893P_1 - .1929P_4 + .0958P_3 + 32.0898$$

From Table 4.2.20, it may be observed that Total of General Ability Tests ( $P_1$ ) could predict Ed.251: Measurement and Evaluation in Education ( $C_9$ ) at 0.01 level of significance.

Since the second predictor variable (Occupational Interests Test :  $P_4$ ) was added the increment in the square of Multiple R was still significant at 0.01 level.

With the addition of Teachers' Personality Test ( $P_3$ ) the increment in the square of Multiple R was significant at 0.05 level.

When the fourth and fifth predictor variables were added step by step the increment in the square of Multiple R was not significant and therefore,  $P_1$ ,  $P_4$ ,  $P_3$  have come out to be the meaningful predictors respectively, according to the rank prediction.

From Table 4.2.21, it may be observed that when  $P_4$  was added, the coefficient of  $P_4$  changed to a negative value and therefore,  $P_4$  was the suppressant predictor and the prediction equation in score form was

$$C_9 = .4893P_1 - .1929P_4 + .0958P_3 + 32.0800.$$

Table 4.2.22: Stepwise Multiple Correlation Coefficients (R) for Total of Education Courses ( $C_{10}$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_{10}$	1	$P_1$	0.41	0.409	•	98.23 <sup>**</sup>	1,489
	2	$P_5$	0.30	0.419	.0082	4.90 <sup>*</sup>	1,488
	3	$P_4$	0.03	0.428	.0076	4.54 <sup>*</sup>	1,487
	4	$P_3$	0.15	0.428	.0000	0.00NS	1,486
	5	$P_2$	0.12	0.428	.0000	0.00NS	1,485

\*\* Significant at .01 level

\* Significant at .05 level

NS Not significant

Table 4.2.23 : Regression Equation for Meaningful Predictors  
for Total of Education Courses ( $C_{10}$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_{10}$	$P_1$	1.0965	422.6898
	$P_1P_5$	.9237, .1543	405.9428
	$P_1P_5P_4$	.8786, .2119, -.5526	413.8351

Regression equation with best predictors in score form:

$$C_{10} = .8786P_1 + .2119P_5 - .5526P_4 + 413.8751$$

From Table 4.2.22, it may be observed that Total of General Ability Tests ( $P_1$ ) could predict the Total of Education Courses ( $C_{10}$ ) at 0.01 level of significance.

Since Grand Total of Entrance Tests ( $P_5$ ) was added the increment in the square of Multiple R was significant at 0.05 level.

With the addition of Occupational Interests Test ( $P_4$ ) the increment in the square of Multiple R was significant at 0.05 level.

When the fourth and fifth predictor variables were

added step by step the increment in the square of Multiple R was insignificant and so,  $P_1P_5P_4$  have come out to be the meaningful predictors respectively, according to the rank prediction.

From Table 4.2.23, it may be observed that when  $P_4$  was added, the coefficient of  $P_4$  changed to a negative value and thus,  $P_4$  was the suppressant predictor and the prediction equation in score form was

$$C_{10} = .8786P_1 + .2119P_5 - .5526P_4 + 413.8751.$$

Table 4.2.24 : Stepwise Multiple Correlation Coefficients (R) for Grade Point Average of Major Subject ( $C_{11}$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_{11}$	1	$P_2$	0.26	0.257	-	34.58**	1,489
	2	$P_4$	0.22	0.290	.0180	9.61**	1,488
	3	$P_3$	0.16	0.317	.0163	8.87*	1,487
	4	$P_1$	0.13	0.329	.0077	4.18*	1,486
	5	$P_5$	0.29	0.330	.0006	0.19NS	1,485

\*\* Significant at .01 level

\* Significant at .05 level

NS Not significant

Table 4.20.25 : Regression Equation for Meaningful Predictors  
for Grade Point Average of Major Subject ( $C_{11}$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_{11}$	$P_2$	.0070	2.0589
	$P_2 P_4$	.0055, .0127	1.7673
	$P_2 P_4 P_3$	.0052, .0122, .0064	1.2963
	$P_2 P_4 P_3 P_1$	.0051, .0119, .0055, .0027	1.0761

Regression equation with best predictors in score form:

$$C_{11} = .0051P_2 + .0119P_4 + .0055P_3 + .0027P_1 + 1.0761$$

From Table 4.2.24 and Table 4.2.25, it may be observed that Major Subject Test ( $P_2$ ) could predict Grade Point Average of Major Subject ( $C_{11}$ ) at 0.01 level of significance.

When Occupational Interests Test ( $P_4$ ) was added the increment in the square of Multiple R was still significant at 0.01 level.

Since Teachers' Personality Test ( $P_3$ ) was added the increment in square of Multiple R was still significant 0.01 level.

With the addition of Total of General Ability Tests ( $P_1$ ) the increment in the square of Multiple R was significant at 0.05 level.

When the fifth predictor variable was added the increment in the square came to be insignificant thus,  $P_2$   $P_4$   $P_3$   $P_1$  have come out to be the meaningful predictors respectively, according to the rank prediction, and the prediction equation in score form was

$$C_{11} = .0051P_2 + .0119P_4 + .0055P_3 + .0027P_1 + 1.0761.$$

Table 4.2.26: Stepwise Multiple Correlation Coefficients (R) for Teaching Practice ( $C_{12}$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_{12}$	1	$P_1$	0.25	0.249	-	32.32**	1,489
	2	$P_2$	0.07	0.290	.0220	11.77**	1,488
	3	$P_5$	0.23	0.290	.0000	0.00NS	1,487
	4	$P_4$	0.06	0.290	.0000	0.00NS	1,486
	5	$P_3$	0.03	0.290	.0000	0.00NS	1,485

\*\* Significant at .01 level

NS Not significant

Table 4.2.27 : Regression Equation for Meaningful Predictors  
for Teaching Practice ( $C_{12}$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_{12}$	$P_1$	.0357	49.3565
	$P_1P_2$	.0346, .0178	46.3102

Regression equation with best predictor in score form:

$$C_{12} = .0346P_1 + .0178P_2 + 46.3102$$

From Table 4.2.26 and Table 4.2.27, it may be observed that Total of General Ability Tests ( $P_1$ ) could predict Teaching Practice ( $C_{12}$ ) at 0.01 level of significance.

With the addition of Major Subject Test ( $P_2$ ) the increment in square of Multiple R was still significant at 0.01 level.

When the third and so on predictor variables were added step by step the increment in square of Multiple R came to be insignificant and therefore,  $P_1P_2$  have come out to be the meaningful predictors respectively, according to the rank prediction and the prediction equation in score form was

$$C_{12} = .0346P_1 + .0178P_2 + 46.3102.$$

Table 4.2.28 : Stepwise Multiple Correlation Coefficients  
 (R) for Total Grade Point Average : GPA  
 ( $C_{13}$ ) as the Criterion Variable

Criterion Variable	Step No.	Predictor Variables	"r"	"R"	Increment in $R^2$	F	d.f.
$C_{13}$	1	$P_1$	0.38	0.382	-	83.54**	1,489
	2	$P_5$	0.44	0.475	.0797	50.22**	1,488
	3	$P_2$	0.31	0.486	.0105	6.74**	1,487
	4	$P_3$	0.18	0.488	.0019	1.24NS	1,486
	5	$P_4$	0.16	0.488	.0000	0.00NS	1,485

\*\* Significant at .01 level

NS Not Significant

Table 4.2.29 : Regression Equation for Meaningful Predictors  
for Total Grade Point Average: GPA ( $C_{13}$ )

Criterion Variable	Predictor Variables	Regression Coefficients	Constant
$C_{13}$	$P_1$	.0086	1.6051
	$P_1P_5$	.0046, .0035	1.2209
	$P_1P_5P_2$	.0060, .0029, .0020	1.0976

Regression equation with best predictors in score form:

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

From Table 4.2.28 and Table 4.2.29, it may be observed that Total of General Ability Tests ( $P_1$ ) could predict Total Grade Point Average: GPA ( $C_{13}$ ) at 0.01 level of significance.

When Grand Total of Entrance Tests ( $P_5$ ) was added the increment in the square of Multiple R was still significant at .01 level.

With the addition of Major Subject Test ( $P_2$ ) the increment in the square of Multiple R was significant at 0.05 level.

Since the fourth and fifth predictor variables were added step by step the increment in the square was insignificant and therefore,  $P_1 P_5 P_2$  have come out to be the meaningful predictors respectively, according to the rank prediction and the prediction equation in score form was

$$C_{13} = .0061P_1 + .0020P_5 + .0020P_2 + 1.0976.$$

#### 4.3. SECTION-II

In order to identify the abilities or common factors being measured by the entrance examination, the Principal Component factor analytical technique was applied (Caption 3.5). The obtained factor matrices were further subjected to rotation of axes by the Varimax Rotation method. The analysis of data has been carried out with respect to each of the three entrance tests, viz., in the year 1980, 1981 and 1982 separately. The analysis and interpretation of data for the examinations referred above, are presented in the following:

##### 4.3.1. Abilities Underlying Entrance Test in the Year 1980:

In the present study, to find out the abilities underlying the entrance test conducted in the year 1980 only those subtests were selected which were taken by all the candidates. The tests which were selected for this purpose

were seven, viz.,

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

The matrix of intercorrelations obtained through the factor analysis is presented in the following Table

Table 4.3.1 : Matrix of Intercorrelations for Entrance Test in 1980

Tests	Th.	Eng.	Math.	Sc.	So.	TPT	OIT
Th.	1.00	0.22	0.16	0.23	0.41	0.27	0.05
Eng.		1.00	0.13	0.18	0.15	0.09	-0.01
Math.			1.00	0.22	0.12	0.14	-0.01
Sc.				1.00	0.36	0.25	0.10
So.					1.00	0.36	0.09
TPT						1.00	0.10
OIT							1.00

Note : Th. Stands for Thai

Eng. Stands for English  
 Math. Stands for Mathematics  
 Sc. Stands for Science  
 So. Stands for Social Studies  
 TPT Stands for Teachers' Personality Test  
 OIT Stands for Occupational Interests Test

The matrix of intercorrelations was subjected to the Principal - factor analysis techniques. The factor matrix, thus, obtained is presented in the Table 4.3.2.

Table 4.3.2 : Factor Matrix of Entrance Test in 1980

Tests	Factors		
	I	II	III
Thai	.67	-.07	-.31
English	.42	-.47	-.03
Mathematics	.41	-.42	-.67
Science	.65	.01	.26
Social Studies	.74	.15	-.28
Teachers' Personality Test	.62	.25	-.16
Occupational Interests Test	.19	.76	.43
Eigen Values	2.18	1.06	.90
% Variance	52.61	25.65	21.74

The results obtained in Table 4.3.2 indicate that the first factor is having high loading in four variables viz., Thai, Science, Social Studies and Teachers' Personality Test. Looking at the nature of the content of these subjects, it can be said that Thai involves mainly the verbal ability. Science demands the general ability to understand and solve the scientific problems. It may be noted, that, in order to solve the scientific problems the understanding of scientific principles is necessary. This understanding to a very great extent depends on the verbal ability of the student in addition to the general ability. Social Studies would require the general ability to understand and solve the social problems. This also will be influenced by the verbal ability. So far as the Teachers' Personality Test is concerned, this also deals with the ability of the teachers to act effectively into different social problematic situations. Therefore, this factor may be named as, "Verbal General Ability to solve the Scientific and social problems". This factor contributes 52.61 percent to the total variance.

The second factor has very poor loadings on all the variables except the loading on Occupational Interests Test and English. The loadings on these two subjects have appeared with opposite signs, which may be a case of bi-polar factor. This factor contributes 25.62 percent of the total variance. /

The third factor has high loadings in Mathematics and Occupational Interests Test. The loadings on these two subjects have appeared with opposite signs, which may be again a case of bi-polar factor. This factor contributes 21.74 percent of total variance.

Further rotating the factor matrix by Varimax Rotation method, the new rotated factor matrix was derived. This is presented in the Table 4.3.3.

Table 4.3.3 : Rotated Factor Matrix of Entrance Test  
in 1980

Tests	Factors		
	I	II	III
Thai	.11	-.18	.11
English	.28	-.40	.40
Mathematics	-.01	-.02	.89
Science	.45	.16	.50
Social Studies	.76	.02	.07
Teachers' Personality Test	.66	.16	.06
Occupational Interests Test	.12	.88	.08
Variance	1.32	1.02	1.23

The rotated factor matrix presented in Table 4.3.3 indicates that in the first factor, high loadings appeared on Social Studies and Teachers' Personality Test. Looking at the nature of the content of these variables, it can be said that Social Studies would require the general ability to understand and solve the social problems and so far as the Teachers' Personality Test is concerned, This also deals with the ability of the teachers to act effectively into different social problematic situations. Therefore, this factor may be named as, "General Ability to solve the social problems".

The second factor has very poor loadings on all the variables except the loadings on the Occupational Interests Test and English which have got opposite signs and therefore, second factor remained the same after rotation too.

The third factor has got high loadings on English, Science and Mathematics respectively. Looking at the nature of the content of these variables, i.e., English involves mainly the verbal ability. Science demands the general ability to understand and solve the scientific problems. It may be noted, that, in order to solve the scientific problems the understanding of scientific principles is necessary. This understanding to a very great extent depends on the verbal ability of the student in addition to the general ability.

Mathematics involves mainly the calculations in order to solve the mathematical problems, so, mainly involves the numerical ability. Therefore, the factor may be named as, "Verbal General Ability to solve the scientific and numerical problems".

4.3.2. Abilities Underlying Entrance Test  
in the Year 1981:

In the present study, to find out the abilities underlying the entrance test conducted in the year 1981 only those subtests were selected which were taken by all the candidates. These tests which were selected for this purpose composed of five tests, namely;

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

The matrix of intercorrelations for these variables is presented in the Table 4.3.4.

Table 4.3.4 : Matrix of Intercorrelations for Entrance  
Test in 1981

Tests					
	Thai	English	Mathematics	Science	Social Studies
Thai	1.00	.37	.28	.35	.39
English		1.00	.32	.36	.35
Mathematics			1.00	.37	.28
Science				1.00	.44
Social Studies					1.00

The matrix of intercorrelations was subjected to the Principal - factor analysis techniques. The factor matrix, thus, obtained is presented in the Table 4.3.5.

Table 4.3.5 : Factor Matrix of Entrance Test in 1981

Tests	Factors	
	I	II
Thai	.69	-.42
English	.70	-.02
Mathematics	.63	.70
Science	.74	.10
Social Studies	.72	.29
Eigen Value	2.43	.76
% Variance	76.19	23.81

From the results obtained in Table 4.3.5 it can be observed that the first factor, which is having high loadings in all the five variables, appears to be a factor of "General Ability". This factor alone contributes 76.19 percent to the total variance.

The second factor has a very high loading on Mathematics. Looking into the nature of the content of this variable, one would find that it involves mainly the calculations in order to solve the mathematical problems. Therefore, this factor may be named as, "Numerical Ability".

In order to arrive at more stable factors the factor matrix was rotated by applying the Varimax Rotation method. The rotation matrix is presented in Table 4.3.6.

Table 4.3.6 : Rotated Factor Matrix of Entrance Test in 1981

Tests	Factors	
	I	II
Thai	.80	.06
English	.58	.38
Mathematics	.11	.93
Science	.55	.51
Social Studies	.76	.17
Variance	1.67	1.27

The rotated factor matrix indicates that in the first factor, high loadings are appearing on Thai, English, Science and Social Studies. Looking at the nature of the content of these subjects, it can be said that Thai and English, these two subjects involve mainly the verbal ability. Science demands the general ability to understand and solve the scientific problems. It may be noted that, in order to solve the scientific problems the understanding of scientific principles is necessary. This understanding to a very great extent depends on the verbal ability of the students in addition to the general ability. Social Studies would require the general ability to understand and solve the social problems. This also will be influenced by the verbal ability. Therefore, this factor may be named as, "Verbal General Ability to solve the scientific and social problems".

The second factor has very high loading on Mathematics. Looking into the nature of the content of this variable, one would find that it involves mainly the calculations in order to solve the mathematical problems. Therefore, this factor may <sup>be</sup> named as, "Numerical Ability". The second factor remained the same as the original factor.

#### 4.3.3. Abilities Underlying Entrance Test in

1982:

In the present study, to find out the abilities

underlying the entrance test conducted in the year 1982 only those tests were selected which were taken by all the candidates. The five tests which were selected for this purpose are as follows:

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

Thus there are five variables for obtaining the intercorrelation matrixes. The matrix of intercorrelations for these variables is presented in Table 4.3.7.

Table 4.3.7 : Matrix of Intercorrelations for Entrance Test in 1982

Tests	Thai	English	Mathematics	Science	Social Studies
Thai	1.00	.31	.32	-.32	.40
English		1.00	.39	.28	.27
Mathematics			1.00	.40	.28
Science				1.00	.31
Social Studies					1.00

After applying the Principal Component factor analysis technique, the factor matrix obtained is presented in Table 4.3.8.

Table 4.3.8 : Factor Matrix of Entrance Test in 1982

Tests	<u>Factor</u> I
Thai	.69
English	.65
Mathematics	.71
Science	.69
Social Studies	.64
Eigen Value	2.29
% Variance	100.00

The factor loadings in the Table 4.3.8 are all high and appearing on a single factor. This factor involves Thai, English, Mathematics, Science and Social Studies. It may be named as the factor of "General Ability".

The results presented in this Chapter are discussed in details in the succeeding chapter.