Chapter 4

Data Analysis, Interpretation and Discussion

Data Analysis, Interpretation and Discussion

4.0 Introduction

Data collected from different institutions were analyzed using regression analysis technique, to achieve the objective two. A step wise regression analysis was carried out using independent variables, namely, Research Aptitude, Techno-Pedagogic Competencies, Educational Management Aptitude, Living Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile with the dependent variable, Teacher Education Proficiency i.e. M.Ed. at end scores of the students. The results were presented region-wise- Southern Region, Northern Region, Western Region and Eastern Region and step-wise regression analysis results were presented for the data including all regions of India under the name India. In representing regression equation, the following codes were used for different factors used in the study as – Research Aptitude (RA), Techno-Pedagogic Competencies (TPC), Educational Management Aptitude (EMA), Living Competencies (LC), Adjustment Capacity (AC) and Teacher Education Disciplinary Profile (EP).

4.1 Data Analysis

4.1.1 Regression Equation for Southern Region

Y = RA*(0.2) + TPC*(0.2) + EMA*(-0.21) + LC*(0.007) + AC*(-0.12) + EP*(-0.02) + 69

5.3% of the variance was due to the contribution of variables. No variable was found to be significant at 0.01 and 0.05 levels

4.1.2 Regression Equation for Northern Region

Y= RA*(-0.45) +TPC*(0.26) +EMA*(0.06) +LC*(0.25) +AC*(-0.14) +EP*(0.11) +64.5

11.2% of the variation was due to the contribution of variables. No variable was found to be significant at 0.01 and 0.05 levels.

4.1.3 Regression Equation for Eastern Region

Y = RA*(-0.23) +TPC*(-0.05) +EMA*(-0.01) +LC*(0.48) +AC*(-0.3) +EP*(0.04) +68

14.7% of variance can be explained to the contribution of different variables involved in the study. No variable was found to be significant at 0.01 and 0.05 levels

4.1.4 Regression Equation for Western Region

Y = RA*(0.86) +TPC*(0.07) +EMA*(-1.2) +LC*(-0.1) +AC*(0.78) +EP*(0.5) +31

44% of variance can be attributed to the contribution of the variables involved in the study. Research Aptitude (0.05 level of significance), Educational Management Aptitude (0.01 level of significance), Adjustment Capacity (0.05 level of significance) and Teacher Education Disciplinary Profile (0.01 level of significance) were found to be significant.

4.1.5 Regression Equation for India

Y = RA*(0.02) +TPC*(0.16) +EMA*(-0.38) +LC*(0.09) +AC*(0.11) +EP*(0.14) +60

11% of the variation can be attributed to contribution of the variables involved in the study. Educational Management Aptitude and Teacher Education Disciplinary Profile were found to be significant at 0.01 level.

4.1.5.1 One-variable Regression

Y = RA*(0.32) + 65

2% of variance can be attributed due to contribution of the variable Research Aptitude involved in the study. The variable was found to be significant 0.01 level.

Y = TPC*(0.37) +64

5.3% of the variance can be attributed to the contribution of the variable, Techno-Pedagogic Competencies. The variable was found to be significant at the level of 0.01.

Y = EMA*(0.20) +68

0.6% of variance was due to the contribution of the variable, Educational Management Aptitude. The variable was found to be non-significant at 0.01 and 0.05 levels.

Y = LC*(0.31) +65

4% of the variance can be contributed to the effect of variable, Living Competencies. The variable showed significant value at level of 0.01.

Y = AC*(0.39) + 65

3.5% of the variance can be contributed to the effect of lone variable Adjustment Capacity. The variable showed significant value at 0.01.

Y = EP*(0.16) +60

8.2% of variance can be attributed to the Teacher Education Disciplinary Profile variable. The variable was found to be significant at the level of 0.01.

4.1.5.2 Two-variable Regression

Y = RA*(0.09) +TPC*(0.34) +63

5.4% of variance can be attributed to the combination of variables Research Aptitude and Techno-Pedagogic Competencies. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = RA*(0.3) +EMA*(0.08) +64

2% of variance was due to the contribution of Research Aptitude and Educational Management Aptitude in combination. Research Aptitude was found was found to be significant at 0.05 level.

Y = RA*(0.16) +LC*(0.27) +63

4.4% of variance can be attributed to the pair of variables, namely, Research Aptitude and Living Competencies. Living Competencies found to be significant at the level of 0.01.

Y=RA*(0.2) +AC*(0.33) +63

4% of variance can be attributed to the pair of variables, namely, Research Aptitude and Adjustment Capacity. Adjustment Capacity was found to be significant at the level of 0.01.

Y = RA*(0.05) +EP*(0.16) +59

8.3% of variance can be contributed by the pair of variables, Research Aptitude and Teacher Education Disciplinary Profile. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = TPC*(0.40) + EMA*(-0.08) +65

5.4% of variance can be attributed to the contribution Techno-Pedagogic Competencies and Educational Management Aptitude. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = TPC*(0.28) + LC*(0.15) +63

6% of variance can be attributed to the pair of variables, namely, Techno-Pedagogic Competencies and Living Competencies. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = TPC*(0.29) + AC*(0.20) +63

6% of variance was contributed by combination of variables, namely, Techno-Pedagogic Competencies and Adjustment Capacity. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = TPC*(0.17) + EP*(0.13) + 59

9% of variance can be attributed to the variables Techno-Pedagogic Competencies and Teacher Education Disciplinary Profile variable. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = EMA*(-0.09) +LC*(0.34) +65

4.1% of variance can be attributed to variables Educational Management Aptitude and Living Competencies. Living Competencies was found to be significant at the level of 0.01.

Y = EMA*(-0.03) +AC*(0.40) +65

3.5% of variance can be attributed to Educational Management Aptitude and Adjustment Capacity. Adjustment Capacity was found to be significant at the level of 0.01.

Y = EMA*(-0.23) +EP*(0.19) + 61

9% of variance was due to the pair of variables, Educational Management Aptitude and Teacher Education Disciplinary Profile in pair. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = LC*(0.21) +AC*(0.22) +64

4.7% of variance can be attributed to the variables Living Competencies and Adjustment Capacity. Living Competencies was found to be significant at the level of 0.05.

Y = LC*(0.11) +EP*(0.14) + 59

8.6% of variance can be attributed to the variables, Living Competencies and Teacher Education Disciplinary Profile variable. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = AC*(0.14) + EP*(0.14) + 59

8.6% of variance can be attributed to the variables, Adjustment Capacity and Teacher Education Disciplinary Profile variable. Teacher Education Disciplinary Profile variable was found to be significant at the level of 0.01.

4.1.5.3 Three-variable Regression

Y = RA*(0.12) +TPC*(0.37) +EMA*(-0.11) + 64

5.6% of variance can be attributed to the variables, Research Aptitude, Techno-Pedagogic Competencies and Educational Management Aptitude. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = RA*(0.06) +TPC*(0.26) +LC*(0.14) + 63

6% of variance can be attributed to variables, namely, Research Aptitude, Techno-Pedagogic Competencies and Living Competencies. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = RA*(0.06) +TPC*(0.28) +AC*(0.19) +63

6% of variance can be attributed to the variables, namely, Research Aptitude, Techno-Pedagogic Competencies and Adjustment Capacity. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = RA*(-0.009) +TPC*(0.17) +EP*(0.13) +59

9% of variance can be attributed to variables, namely, Research Aptitude, Techno-Pedagogic Competencies and Teacher Education Disciplinary Profile. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = RA*(0.19) +EMA*(-0.14) +LC*(0.31) +64

5% of variance can be attributed to variables, namely, Research Aptitude, Educational Management Aptitude and Living Competencies. Living Competencies was found to be significant at the level of 0.01.

Y = RA*(0.21) +EMA*(-0.08) +AC*(0.36) +63

4.1% of variance was due to the contribution of Research Aptitude, Educational Management Aptitude and Adjustment Capacity. Adjustment Capacity was found to be significant at 0.01.

Y = RA*(0.11) +EMA*(-0.25) +EP*(0.18) +60

9% of variance can be attributed to the Research Aptitude, Educational Management Aptitude and Teacher Education Disciplinary Profile variable. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = RA*(0.13) +LC*(0.19) +AC*(0.20) +62

5% of variance can be attributed to Research Aptitude, Living Competencies and Adjustment Capacity. No variable was found to be significant.

Y = RA*(0.02) +LC*(0.10) +EP*(0.14) +59

9% of variance can be attributed to variables, Research Aptitude, Living Competencies and Teacher Education Disciplinary Profile. Teacher Education Disciplinary Profile variable was found to be significant at the level of 0.01.

Y = RA*(0.03) +AC*(0.13) +EP*(0.14) + 59

9% of variance can be attributed to pair of variables, namely, Research Aptitude, Adjustment Capacity and Teacher Education Disciplinary Profile variable. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = TPC*(0.30) +EMA*(-0.19) +LC*(0.20) + 64

6.3% of variance was due to the contribution of group of variables, Techno-Pedagogic Competencies, Educational Management Aptitude and Living Competencies. Techno-Pedagogic Competencies and Living Competencies were found to be significant at the level of 0.05.

Y = TPC*(0.33) +EMA*(-0.17) +AC*(0.25) +64

6.3% of variance can be attributed to Techno-Pedagogic Competencies, Educational Management Aptitude and Adjustment Capacity. Techno-Pedagogic Competencies was found to be significant at 0.01 level and Adjustment Capacity was found to be significant at the level of 0.05.

Y =TPC*(0.22) +EMA*(-0.31) +EP*(0.15) + 61

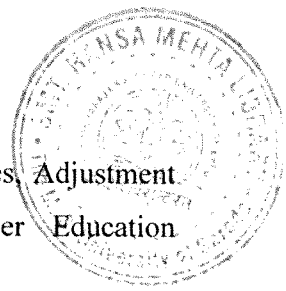
10.1% of variance can be attributed to the Techno-Pedagogic Competencies, Educational Management Aptitude and Teacher Education Disciplinary Profile variables. Techno-Pedagogic Competencies and Educational Management Aptitude were found to be significant at the level of 0.05 and Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = TPC*(0.25) +LC*(0.10) +AC*(0.14) +63

6.2% of variance was due to the contribution of Techno-Pedagogic Competencies, Living Competencies and Adjustment Capacity. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = TPC*(0.14) +LC*(0.04) +EP*(0.12) +59

9.1% of variance can be attributed to Techno-Pedagogic Competencies, Living Competencies and Teacher Education Disciplinary Profile. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.



Y = TPC*(0.15) +AC*(0.08) +EP*(0.12) +59

9.1% of variance can be attributed to Techno-Pedagogic Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = EMA*(-0.16) +LC*(0.25) +AC*(0.25) + 65

4.9% of variance can be attributed to Educational Management aptitude, Living Competencies and Adjustment Capacity. Living Competencies was found to be significant at level of 0.05.

Y = EMA*(-0.34) +LC*(0.19) +EP*(0.16) +60

10% of variance can be attributed to the variables, Educational Management Aptitude, Living Competencies and Teacher Education Disciplinary Profile variable. Educational Management Aptitude (0.05), Living Competencies (0.05) and Teacher Education Disciplinary Profile (0.01) variable were found to be significant.

Y = EMA*(-0.30) +AC*(0.21) +EP*(0.17) +60

10% of variance can be attributed to Educational Management Aptitude and Adjustment Capacity and Teacher Education Disciplinary Profile. Educational Management Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = LC*(0.07) +AC*(0.09) +EP*(0.14) +59

9% of variance can be attributed to the variables, Living Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile Variable. Teacher Education Disciplinary Profile (0.01) was found to be significant.

4.1.5.4 Four-variable Regression

Y = RA*(0.09) +TPC*(0.29) +EMA*(-0.21) +LC*(0.19) +63

6.4% of variance can be attributed to the variables, namely, Research Aptitude, Techno-Pedagogic Competencies, Educational Management Aptitude and Living Competencies. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = RA*(0.09) +TPC*(0.31) +EMA*(-0.19) +AC*(0.24) +63

6.4% of variance can be contributed to the groups of variables involved in the regression, namely, Research Aptitude, Techno-Pedagogic Competencies, Educational Management Aptitude and Adjustment Capacity. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = RA*(0.03) +TPC*(0.21) +EMA*(-0.32) +EP*(0.15) +60

10.1% of variance was due to the contribution of variable, namely, Research Aptitude, Techno-Pedagogic Competencies, Educational Management Aptitude, and Teacher Education Disciplinary Profile. Educational Management Aptitude (0.05), Techno-Pedagogic Competencies (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = RA*(0.05) +TPC*(0.24) +LC*(0.09) +AC*(0.14) +62

6.2% of variance can be attributed to the combination of variables involved in regression, namely, Research Aptitude, Techno-Pedagogic Competencies, Living Competency, and Adjustment Capacity. Techno-Pedagogic Competencies was found to be significant at the level of 0.05.

Y = RA*(-0.02) +TPC*(0.15) +LC*(0.05) +EP*(0.12) +59

9.1% of variance can be contributed to the group of variables involved in regression, namely, Research aptitude, Techno-Pedagogic Competencies, Living Competencies and Teacher Education Disciplinary Profile. The variable Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = RA*(-0.02) +TPC*(0.15) +AC*(0.08) +EP*(0.12) +59

9.1% of variance can be attributed to the variables involved, Research Aptitude, Techno-Pedagogic Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = RA*(0.16) +EMA*(-0.20) +LC*(0.23) +AC*(0.23) +63

5.3% of variance was due to the effect of Research Aptitude, Educational Management Aptitude, Living Competencies and Adjustment Capacity. Living Competencies was found to be significant at level of 0.05.

Y = RA*(0.07) +EMA*(-0.35) +LC*(0.18) +EP*(0.16) +59

10% of variance can be explained to the effect of Research Aptitude, Educational Management Aptitude, Living Competencies and Teacher Education Disciplinary Profile. Educational Management Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = RA*(0.08) +EMA*(-0.32) +AC*(0.20) +EP*(0.16) +59

10% of variance can be attributed to the effect of Research Aptitude, Educational Management Aptitude, Adjustment Capacity and Teacher Education Disciplinary Profile variable. Educational Management Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = RA*(0.02) +LC*(0.07) +AC*(0.09) +EP*(0.13) +59

9% of variance can be attributed to the groups of variables involved in regression, namely, Research Aptitude, Living Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = TPC*(0.28) +EMA*(-0.23) +LC*(0.15) +AC*(0.18) + 63

7% of variance can be attributed to variables, Techno-Pedagogic Competencies, Educational Management Aptitude, Living Competencies and Adjustment Capacity. Techno-Pedagogic Competencies was found to be significant at the level of 0.05.

Y = TPC*(0.17) +EMA*(-0.36) +LC*(0.12) +EP*(0.15) +60

10.4% of variance was due to variable involved in the regression, namely, Techno-Pedagogic Competencies, Educational Management Aptitude, Living Competencies and Teacher Education Disciplinary Profile. The variables Educational Management Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = TPC*(0.19) +EMA*(-0.35) +AC*(0.15) +EP*(0.15) +60

10.4% of variance was due to variable involved in the regression, namely, Techno-Pedagogic Competencies, Educational Management Aptitude, Adjustment Capacity and Teacher Education Disciplinary Profile. The variables Educational Management

Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = EMA*(-0.36) + LC*(0.14) +AC*(0.14) +EP*(0.16) +60

10% of variance was due to contribution of group of variables, namely, Educational Management Aptitude, Living Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile variable. Educational Management Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

4.1.5.5 Five-variable Regression

Y = RA*(0.08) +TPC*(0.26) +EMA*(-0.24) +LC*(0.14) +AC*(0.17) + 63

7% of variance can be attributed to the combined effect of variables, namely, Research Aptitude, Techno-Pedagogic Competencies, Educational Management Aptitude, Living Competencies and Adjustment Capacity. Techno-Pedagogic Competencies was found to be significant at the level of 0.01.

Y = RA*(-0.02) +TPC*(0.14) +LC*(0.03) +AC*(0.07) +EP*(0.12) +59

9.1% of variance can be attributed to the group of variable, Research Aptitude, Techno-Pedagogic Competencies, Living Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile. Teacher Education Disciplinary Profile was found to be significant at the level of 0.01.

Y = RA*(0.02) +TPC*(0.18) + EMA*(-0.35) +AC*(0.15) +EP*(0.15) +60

10.5% of variance was due to the combined effect of Research Aptitude, Techno-Pedagogic Competencies, Educational Management Aptitude, Adjustment Capacity and Teacher Education Disciplinary Profile. The variables Educational Management Aptitude (0.05), and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = RA*(0.02) +TPC*(0.17) +EMA*(-0.37) +LC*(0.12) +EP*(0.15) +60

10.4% of variance can be attributed to the combination of Research aptitude, Techno-Pedagogic Competencies, Educational Management Aptitude, Living Competencies, and Teacher Education Disciplinary Profile. The variables Educational Management

Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = RA*(0.05) +EMA*(-0.37) +LC*(0.13) +AC*(0.13) +EP*(0.16) +60
10.1% of variance can be contributed to the effect of Research Aptitude, Educational Management Aptitude, Living Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile. Educational Management Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

Y = TPC*(0.16) + EMA*(-0.38) +LC*(0.09) +AC*(0.11) +EP*(0.14) + 60
11% of variance can be attributed to the combination of variables, Techno-Pedagogic Competencies, Educational Management Aptitude, Living Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile. The variables Educational Management Aptitude (0.05) and Teacher Education Disciplinary Profile (0.01) were found to be significant.

4. 2 Data Interpretation

Regression equations for different regions of India have shown different values. No variable was found to be significant for Northern, Eastern and Southern regions. The significant variables for Western region were Research Aptitude, Educational Management Aptitude, Adjustment Capacity and Teacher Education Disciplinary Profile. In all regions interception variables were found to be significant.

At all India level, regression equations involving one variable revealed that as an independent variable Educational Management Aptitude was found to be non-significant. Other five variables, namely, Research Aptitude, Techno-Pedagogic Competencies, Living Competencies, Adjustment Capacity and Teacher Education Disciplinary Profile were found to be significant at 0.01 level. Interception variable was found to be significant in all six equations.

Regression equations involving two variables had shown different results as follows. Of all the combinations involving two variables, Educational Management Aptitude was found to be non-significant in all combinations. Research Aptitude was found to be significant in equation, Y = RA*(0.3) +EMA*(0.08) +64. Techno-Pedagogic

Competencies was found to be significant in all combinations except in combination with Teacher Education Disciplinary Profile (Y = TPC*(0.17) + EP*(0.13) + 59). Teacher Education Disciplinary Profile was found to be significant in all the combinations. Living Competencies was found to be non-significant in all combinations except in combinations Y = RA*(16.2) +LC*(0.27) +63 and Y = EMA*(-0.09) +LC*(0.34) +65 and Y = LC*(0.21) +AC*(0.22) +64. Adjustment Capacity was found to be non-significant in all combinations, except in combinations, Y=RA*(0.2) +AC*(0.33) +63 and Y = EMA*(-0.03) +AC*(0.40) +65. All the equations involving two variables showed at least one variable significant and nowhere equations with both the variables showing significant values were found. All the equations showed significant interception variable.

Regression equations involving three variable combinations have shown the following results. In the entire combinations interception variable was found to be significant. Research Aptitude was found to be non-significant in all combinations. Techno-Pedagogic Competencies was found to be significant in all the combinations except, in combinations - Y = RA*(-0.009) +TPC*(0.17) +EP*(0.13) +59; Y = TPC*(0.14) +LC*(0.04) +EP*(0.12) +59 and Y = TPC*(0.15) +AC*(0.08) +EP*(0.12) +59. Teacher Education Disciplinary Profile was found to be significant in all combinations where it was involved. Adjustment Capacity was found to be non-significant in all, except in combinations, Y = RA*(0.21) +EMA*(-0.08) +AC*(0.36) +63. Living Competencies was found to be non-significant in all except in Y = RA*(0.19) +EMA*(-0.14) +LC*(0.31) +64 and Y=EMA*(-0.16) +LC*(0.25) +AC*(0.24) + 65. Educational Management Aptitude was significant in equations, Y = EMA*(-0.31) +LC*(0.16) +EP*(0.17) +60 and Y = EMA*(-0.30) +AC*(0.19) +EP*(0.18) +60, in all other combinations it was found to be non-significant. No variable was found to be significant in equation, Y = RA*(0.13) +LC*(0.18) +AC*(0.20) +62 and all variables were found to be significant in the equation, Y = EMA*(-0.34) +LC*(0.19) +EP*(0.16) +60 and Y =TPC*(0.22) +EMA*(-0.31) +EP*(0.15) + 61. Equations, Y = TPC*(0.30) +EMA*(-0.19) +LC*(0.20) + 64, Y = TPC*(0.33) +EMA*(-0.17) +AC*(0.25) +64 showed two significant variables, namely, Techno-Pedagogic Competencies, Living Competencies and Techno-Pedagogic Competencies and Adjustment Capacity.

Regression equations involving four variables revealed the following scenario. In the entire combinations Research Aptitude and Adjustment Capacity were found to be non-significant in all combinations. Techno-Pedagogic Competencies was found to be significant in all except in Y = RA*(-0.02) +TPC*(0.15) +LC*(0.05) +EP*(0.12) +59 and Y = RA*(-0.02) +TPC*(0.15) +AC*(0.08) +EP*(0.12) +59. Teacher Education Disciplinary Profile was found to be significant in all the combinations wherever it was involved. Educational Management Aptitude was found to be significant along with Teacher Education Disciplinary Profile, in equations, Y = RA*(0.03) +TPC*(0.21) +EMA*(-0.32) +EP*(0.15) +60; Y = RA*(0.06) +EMA*(-0.35) +LC*(0.18) +EP*(0.16) +59; Y = RA*(0.08) +EMA*(-0.32) +AC*(0.20) +EP*(0.16) +59; Y = TPC*(0.17) +EMA*(-0.36) +LC*(0.12) +EP*(0.15) +60; Y = TPC*(0.19) +EMA*(-0.35) +AC*(0.15) +EP*(0.15) +60 and Y = EMA*(-0.36) + LC*(0.14) +AC*(0.14) +EP*(0.16) +60. Living Competencies was found to be significant in the equation, Y = RA*(0.16) +EMA*(-0.19) +LC*(0.23) +AC*(0.23) +63. The equation Y = RA*(0.03) +TPC*(0.21) +EMA*(-0.32) +EP*(0.15) +60 had shown most number of variables (three) to be significant. Interception variable was found to be significant in the entire combinations.

Regression equations involving five variables combinations have shown the following results. Techno-Pedagogic Competencies was found to be significant in the equation, Y = RA*(0.08) +TPC*(0.26) +EMA*(-0.24) +LC*(0.14) +AC*(0.17) + 63. Teacher Educational Disciplinary Profile was found to be significant in all the equations it is involved. Educational Management Aptitude was found to be significant along with Teacher Education Disciplinary Profile in four equations, Y = RA*(0.02) +TPC*(0.18) + EMA*(-0.35) +AC*(0.15) +EP*(0.15) +60; Y = RA*(0.02) +TPC*(0.17) +EMA*(-0.37) +LC*(0.12) +EP*(0.14) +60; Y = RA*(0.05) +EMA*(-0.37) +LC*(0.13) +AC*(0.13) +EP*(0.16) +60 and Y = TPC*(0.16) + EMA*(-0.38) +LC*(0.09) +AC*(0.11) +EP*(0.14) + 60. Research Aptitude was found to be non-significant along with Adjustment Capacity and Living Competencies in all equations. Interception variable was found to be significant in all the combinations.

All India level regression equation had shown significant values for Educational Management Aptitude (0.05) and Teacher education disciplinary profile (0.01) along

with interception variable. Research Aptitude, Techno-Pedagogic Competencies, Adjustment Capacity and Living Competencies were found to be insignificant.

The regional variation in teacher education programmes might have affected the overall regression equation and also in step-wise regression equations. This regional variation could be attributed to the contextual specificity of the teacher education process of the respective regions. This view was further strengthened by the significant values shown by interception variable at all regions. Irregularity in the significance values of the variables in different combinations was also further strengthening this view. Contextual specificity related to content areas, management aspects and teaching process in different regions of the country might have resulted in different significant relations among different variables involved in the study. However further considerations are needed to strengthen this view.

On the whole the continuous significance values for Teacher Education Disciplinary Profile are indicating dominance of content teaching in teacher education institutions. Most number of significant values for Techno-Pedagogic Competencies in step-wise regression is indicating the enhanced technological use of learners in various contexts for their day to day lives, but awareness of integration of technology in educational contexts is still to be verified. Less number of significant values for Research Aptitude is providing support to the fact that research is given lesser importance in the process and is more of an academic exercise than practical value oriented. Most number of insignificant values for Adjustment Capacity and Living competencies is showing the little exposure of students to these aspects in their educational field in general. Aspects of life skills education, value education, mental health and hygiene are still budding areas in the education scenario. On the whole the values showed on step-wise regression equations have indicated the need to strengthen the teacher education programmes taking into consideration the emerging needs and challenges of the present context.

4.3 Discussion

Predictive validity studies helped to prove validity of different tests, in assessing the validity of different variables used to test quality of candidates for admission into different professional courses. However, the test results indicated different outcomes

in different combinations and are proved successful in specific combination of variables under specific conditions. A detailed discussion on various predictive validity studies reviewed for this research are given here, in order to comprehend the nature of results obtained for this study. The predictive validity tests proved successful in proving MCAT newer version as superior to that of its predecessor (Essex et. al., 1980); while finding the relationship among different tests on predicting academic performance, results indicated that the DPST had a limited predictive relationship with the HERS and that the CTBS had only a minimal predictive relationship with the HERS. Results suggest that the use of the DPST as a predictor of later school success is questionable (Mann et al., 1984); Results of predictive validity studies demonstrated strong predictive validity for CBM Oral Reading Fluency measures relative to student performance on state and local standardized achievement tests. Analysis of the linkage between established oral reading fluency benchmarks and state and local assessment in Illinois demonstrated high utility for oral reading fluency benchmarks established in other states (Sibley et al., 2001); here the studies are considering the effect of standardized tests in prediction of different aspects. However, results cannot focus on a specific point of significance to overall context. The present study on M.Ed. programme is also revealing the same situation. All variables could not reveal significant relationships among themselves in order to decide the quality of candidate. Out of six selected variables, Educational Management Aptitude and Teacher Education Disciplinary Profile were proved to be significant. More over the tests were self-made on purposively selected variables.

Studies on searching for application of specific aptitudes to the prediction of job performance revealed that studies require either very large sample size studies (N=1,000) for particular jobs or the identification of special job families (Hunter, 1983); in comprehending the racism impacts on scores of pre-pharmacy GPA and PCA total score one of the non-cognitive variables--understanding and dealing with racism--significantly increased the overall R squared value, and this study also focused on the sample size as quite small, limiting both the validity and generalizability of the findings. The small sample size also undermined the attempt to distinguish results across racial groups for the non-cognitive variables. (Bandalos et. al, 1988); Predictive validity of the Risk and Promise Profile [copyright] identified personal and social influences on academic persistence, with diverse sample of older

college students. Hierarchical multiple regression and ANOVA indicated that the profile explains significant portions of the variance associated with academic success, and that race per se should not be used to identify at-risk students (Cubeta et al., 2001); Effect of social context was revealed to be contributing to the variance, which might also be a factor for present study variance also.

In predicting the validity of specific variables, the data for 167 graduate psychology students suggested that the GRE is predictive for first-year grades but not other kinds of performance, with the exception that male performance on the GRE Analytical test was predictive (Sternberg, 1997); in case of adjusting SAT grades to improve validity, only a small proportion of admissions decisions were changed, did not increase freshman grades, but adjustment of SAT grades did change freshman class composition in some majors and limited access of women and blacks (Keller et. al., 1994); in case of adjustment scale studies the results showed that Mt scale scores were significantly associated with total number of client contacts, number of scheduled appointments, frequency of contacts, and number of cancellations and Mt scale has some predictive validity(Stewart, 1996); the study on validity of GT score found significant relationship with overall academic performance for 19 out of the 22 samples, with a median rho of 44. Results indicated that the level of relationship was not differentially affected by school-specific ethnic group composition, school expenditures or average teacher/pupil ratio. Neither the samples used nor conclusions presented in this study were said to be considered as representative of high schools throughout the country. Since socio economic levels represented in the various samples go from the highest to the lowest ranges, limited generalizations may be meaningful to other school districts with similar diverse populations (Harris et. al, 1974); Region wise difference in regression equations was giving support to the above situations, that social context variability and social interaction could have affected the results significantly.

In the teacher education area predictive validity studies revealed relationship existing among different techniques, among different variables indicating quality of programmes, relevancy of admission tests for admission and recruitment processes at different levels. A comparison of the data on validity of different activities in predicting teaching success of student teachers revealed that the 7-minute microteaching was the most consistent predictor of student teaching success. The 30-

minute session was the poorest predictor. The remaining activities proved to be irrelevant to the student teaching evaluation (Butcher et al., 1972); the sensing intuitive dimension alone was found to be a significant predictor while the judging/perceiving dimension was found to significantly increase the R-square obtained when SAT scores were used as predictors. It is concluded that the study confirms the importance of examining the interaction between the academic qualifications and the personality types of students in training as well as in selecting students. (Pratt et al., 1981); High scorers exhibited more effective teaching behaviors during practicum such as appearing confident, being imaginative, showing respect, being flexible, showing commitment to teaching, and having good communicative skills. As beginning teachers, HRI high scorers also tended to score consistently high on a systematic observation instrument. Longitudinal study significance was seriously affected by subject attrition due to government changes in educational funding which resulted in very few subjects being hired to teach (Mamchur et al., 1984); Student teachers academic achievement in relation to attitude, aptitude, participation and human values varied depending on variables of gender, socio economic status and urban rural background (Diwan, 1992); however the present study differed in measuring qualities like, Research Aptitude, Techno-Pedagogic Competencies, Adjustment Capacity, Educational Management Aptitude, Living Competencies and Teacher Education Disciplinary Profile along with content mastery through quantitative analysis i.e. using step wise regression techniques.

The predictive validity studies on entrance examinations to teacher training revealed different findings in relation to specificity of situations like - SAT verbal, SAT math, and grade point averages were found to be significant predictors of NTE Common Examination scores for the NCCU students. The SAT verbal and grade point average were significant predictors of Area Examination scores in one area, while only the SAT verbal was significant in predicting scores in a second area. The findings indicate that SAT scores may be acceptable predictors of NTE Common Examination scores(Pratt et al., 1979); A number of studies have looked at GPA and standardized test scores, specifically those core exams of the National Teachers Examination, and have concluded standardized test scores and GPA are not effective predictors for teaching success. This study on NTE Science Specialty Exams confirms these findings, in that the NTE Science Specialty Exams showed little predictive capability

of these measures of academic competence. It would seem that academic competence is just one of the important criteria in selecting teachers (Olstad, 1987); Tests were not found to be effective than the grade point averages of freshman and sophomore years in predicting academic performance. The test scores did predict student performance on the test of professional knowledge (Wakeford, 1988); Findings suggest that strong academic preparation and support are essential to the development of academic talent, and that increasing the pool of minority teachers is equivalent to increasing the quality of elementary and secondary education (Richard, 1990); The CS and GK scores were not found to be strongly enough related to performance in the teacher education programs, as measured by GPA, to merit their use as requirements for admission. The tests were useful in predicting performance on the NTE PK tests, the state certification examinations. Cross-validation of regression models from prior studies showed these relationships to be stable (Williams, 1990); in tune with above studies the present study attempted to study prediction of different purposively selected variables on selection processes. The results were showing different significant variable combinations region wise as well as country wide.

Studies were also conducted to find the effectiveness of different curricular courses on achievement and quality of candidates. The findings of a study on developing on-line entrance test for B. Ed. candidates revealed, out of the four independent variables, Language Ability, Teaching Aptitude, General mental Ability and Social Sensitivity-teaching aptitude and language ability have been found to be contributing most to Educational Competency. The highest contribution is that of teaching Aptitude, whereas, Language ability was next in contribution. Social sensitivity and general mental ability have been found to be very poor predictors (Mishra, 1993); findings on a study on educability of M.Ed. students revealed significant correlations between internal and external scores of the courses, Philosophical Foundations of Education, Sociological Foundations of Education and Psychological Foundations of Education. No significant correlation was found between internal and external scores of the course Research Methodology in Education. No significant correlation was found between the scores of special area opted for internal examination and special areas opted for external examination. Between scores of the same special area there is significant correlation. Overall academic achievement of students in internal and external are significantly related (Goel et. al., 2001); the present study has focused on

initial level entry processes in teacher education basing on self-made tests, where Educational Management Aptitude and Teacher Education Disciplinary Profile were found to be significant.

The findings showed that it is difficult to bring out a uniform model to represent overall context of education. The results revealed different possibilities of expressions within the similar context basing on conditions of study chosen. Sometimes the relationship shown among different variables is not affected by social contexts also. Influences of social and personal characters of individuals on performance cannot be ruled out completely. The generalization of the results to a large geographical area was questioned mostly in studies conducted on assessing future academic performance basing on present admission performance and scores of qualifying exams. Similar to these generalizations on relative predictive studies the present study also could not reveal a common pattern of influence of variables selected, at regional level as well as at countrywide equations.

Research aptitude which must form an important characteristic of teacher educator failed to be significant in most of the step wise regression combinations, except in regression equation of Western region and regression equation involving Research Aptitude as a single variable. The emphasis given for research aspect generally varies in different parts of the country. The result is in congruence with the trend analyses and reports given out for teacher education. (Zeichner et. al., 2008) Unless proper care is taken to strengthen this aspect in educational process of all general streams as well as in teacher education, the quality of candidates to conduct research is in questionable state. Research in teacher education area has been criticized for lacking vigour in providing strong solutions to educational problems. Lack of consideration of results by policy makers and pure academic nature of conducting research only for conferring degrees was criticized much. A study by Barbara, 2002 revealed most of the quantitative research results are given value in policy making than qualitative. The process of conducting research was seen as a mechanical routine without its own evolved methodologies suitable to local contextual requirements. On the other hand reviews on research have indicated the usefulness of exposure to research in professional enhancement for pre-service and in-service teachers. . (Tanner, 2009) The results from the present study are also in tune with these opinions. Significant

values of research aptitude were found only in western part of India and in overall stepwise regression equations the value is non-significant in most of the equations. This indicates the need to evolve a suitable indigenous methodology of research in teacher education area to improve upon the situation. Education process has to provide much time and space for both teacher and student to concentrate on research than completing it as a routine process.

Techno-Pedagogic Competencies showed its dominance by standing significant as a single variable and in most combinations of step-wise regression equations. This shows the extent of development of inner attitude of people towards technology in general, but the questions about educational implications of use of and integration of technology are still to be clarified. Conscious efforts made towards this end by Indian government after enunciation of National Education Policy, 1986 could be cited as one reason for this change. Technology has come a long way to occupy an important part in the day to day activities of people. Invention of PC has led to the lessening of the distance between human being with his vast surroundings. Communication is faster and cheaper than earlier days. To address to the needs of the communication gaps existing in education scenario at various levels, technology use is a potent tool. No aspect of education area including teacher education is out of the purview of technology integration. Enhancing use of technology in the process is the focus. Opinions on role of technology for present day education are still divided. On one side researches are favoring developing awareness about and integration of technology in students, teachers and student teachers and on the other side we find people still going strong with traditional way of teaching, Views are going further to evolve theories, philosophy on integrating technology in education area. (Okan, 2007) Techno-Pedagogy as a skill is already introduced and is being fine tuned. Still integration of technology in education is a big question. There is awareness and subject knowledge in people, but proper understanding related to its integration in education is lacking. This change is reflected in the present study through dominance of techno-pedagogic competencies as a significant factor at most of the step-wise regression equations. The reason for this is awakening and adopting of technology in one way or other by student teachers for the day to day chores. There is a need to further enhance this situation in order to achieve the complete integration of technology in education for all purposes.

Educational Management Aptitude is significant in overall equation but non-significant as a single variable and also showed very less significant values in step-wise regression equations as a stand alone variable. The variable was found significant along with Teacher Education Disciplinary Profile in majority of the equations. Wherever it is found significant, the equation showed a negative value, indicating lack of aptitude in the required direction in the candidates. The management process of teacher education needs reorientation in order to develop a proper attitude and confidence in the candidates.

Educational management is a confusing term. Is teacher an academician or an administrator? If academician then who is the administrator? If administrator, what about academics? Which aspect needs management? These are the strong questions confusing a person working in the educational scenario. If we visualize the traditional way of management, teacher is the most controlled individual from employers' points of view and teacher controls the classroom in turn. New ideas of management are talking about providing freedom to teacher to perform new roles. Then management becomes an intertwining part of educational process. It cannot be visualized as a separate entity. It is visible in the actions of teachers, behaviours of students. It helps in achieving the goals as per visualization of planners. Ideas have started emerging for this. Roles and responsibilities are to be evolved for which processes are being thought of. Researches need to be conducted related to this designing of management processes. In teacher education area also new concept of management like knowledge management, human resource management, human resource index and so many other terms are introduced. But research studies in this area have focused more on teachers and teacher educator related factors. Surveys were there to analyze status of programmes. Financing and policy making areas are less explored. The results of present study on educational management aptitude revealed this confusing aspect. Even though Educational Management Aptitude was significant in overall regression equation, its non-significance as an independent variable, less significance values towards negative sign, in most of the combinations of step wise regression are indicating the variety of practices in management aspect of teacher education. This variety is not because of the decentralization of the process, but because of peculiarities arising out of different controls at local, state and central level on the

educational institution. Who is the controller of teacher education programme - NCTE? UGC? MHRD? State level or Local level Governments? Or SELF? When this question is answered, the process is properly channelized and positive attitudes are developed.

Variables Living Competencies and Adjustment Capacity stood significant on individual counts and showed significant values at meager levels in step wise regression, indicating lack of knowledge in students towards this area. Have teachers ever come out to identify themselves as thorough professionals? This is the question lingering through out the discussion. The general belief is - we become what we think and feel. When teachers' identity in the society with other professionals is not at par, how can one say that teacher is confident to lead life and profession according to expectations? This low profile is because of – lack of confidence, lack of life skills, lack of orientation, lack of interest – there is no clarity. Society still believes and is looking for a role model in teacher. But teacher some where or other is giving out the negative role model, thus questions the entire beliefs of society. Teacher is low in confidence and improper in adjustment. This is what the research on Living Competencies and Adjustment Capacity indicating. Can it be attributed to policy decisions done by professional outside education arena? Or is it because teaching as a profession is the least sought after? *If there is no other way of settlement, opt to be a teacher.* Is this prevalent opinion making teacher less confident and maladjusted? Teachers as professionals are freely available, and are contributing to the significant part of economy providing a large number of working force. Still they failed to identify themselves as equivalent to other service providers from Banks, Medicine and Engineering fields. When this situation is going to improve? Who is responsible for this? Is it teacher or society? When teacher is confused in identifying himself as a professional, can we expect him to develop a wholistic child? These questions need further probe.

Dominance of Teacher Education Disciplinary Profile in all combinations of step-wise regression showed the importance people possess towards acquiring knowledge through education. The conscious efforts of Indian government after independence towards socialization and democratization of education could be one reason. But still efforts are needed to decide the extent of application of knowledge for practical life situations. Content mastery is identified as one of the essential characteristics of a

teacher. In turn it decides the teaching capacity when skills are better known. A study by Beck, 1984 revealed, teachers perceive content as of greater importance for teaching. Conceptual knowledge is essential to proceed with teaching and research. For teacher or teacher educator knowledge of basic discipline, knowledge of pedagogy, practical knowledge of teaching is essential to achieve success in profession. Almost all of entrance tests into professional courses test content at one or other stage. A continuous significant value of Teacher Education Disciplinary Profile in most of the regression equation of the present study is indicating this importance. The value student is giving to developing knowledge related to content is visible here. The reason being the value given for marks gained or percentage earned at year end exams in gaining entry into next level of education. Still the practical utility of educational knowledge in living life properly is in doubt. The admission, evaluation procedures are being questioned by the society at large. The lower level of knowledge is delivered and tested that too in traditional ways in institutions. Cognitive development is not evolutionizing into application and still higher levels of evaluation in majority of the students. Content delivery from schools to universities must focus on this evolution rather than mechanical delivery and development of concepts through tutoring.

The intention of the study was to come out with a regression equation for selection of quality candidates into teacher education process. Even though the equations failed to show common trend to evolve a common regression equation, one cannot rule out the variables as invalid. There may be many reasons for expression of non-significance related to these variables in education area that was discussed earlier in relation to each and every variable. In the view of the investigator, many more indicators of quality are coming up in the context day by day. One has to think of adopting the needed indicators into the system and eliminate those that have become obsolete. One cannot decide the value of indicator basing on its significance and insignificance in quantitative equations. The equation is the representation of the reality, that one variable is lacking, one variable is present in a direction that is undesirable and some are not at all developed. Looking into these equations one must try to improve educational situations to develop the indicators, but not to discard the indicators. It will further affect the quality.

The implications of this discussion on admission process in teacher education at different levels are indicating to streamline the process towards centralization than leaving it to be different at different regions. Country wants a teacher educator developed appropriately in all qualities required, not in a skewed direction, as visualized in the results. A centralized admission process for India can strengthen the programmes by further centralizing the teaching-learning, practicum and evaluation as programmes have to follow a specific curriculum in order to train students. This is not an impossible task, the experiences of IIT can be cited here as an example favoring this situation. A common core curriculum when implemented will streamline the system as facilities need to be provided in order to visualize teaching and evaluation. However, contextual specificities like language could pose a question on this. Moreover, in order to strengthen teacher educator level programmes, care must be taken from lower levels, from which entry is give to this level.

The preparation of teacher educator as a professional in order to train the future teacher for different levels of education is a complex process. First there is a need to define teacher educator as a professional. Then only the roles and responsibilities can be identified and teacher education programmes can visualize proper goals and objectives to design programme. The role of teacher educator is different from other counter parts in the university education system in the fact that s/he is a master in his/her basic discipline and teaching content. A teacher uses his teacher training content to practice teaching of the basic discipline. This is the intention of training a teacher. This is the role of teacher educator. Then teacher educator is the person using his teaching skills to teach content related to teaching from view point of principles, techniques, methods, approaches, media, and society. If this is the definite role of teacher educator, then one can attempt to design content, transaction, research and profession for teacher educator. The present study attempted to touch a very minute part of admission, that too in designing of admission test considering the predictive validity of some selected variables. Much larger whole is to be touched and worked out to comprehend the situation to take necessary actions to improve.