CHAPTER VII

INTERPRETATION OF DATA AND DISCUSSION

7.1 INTRODUCTION

As already mentioned, the present research study was designed to find out the differences brought out by the variables such as Area (urban/rural), Sex (male/female), Teacher classroom performance, Student Achievement level in four subjects (Science, Maths, Social Science, Language) and Length of experience on the self concept of secondary school teachers studying in Mysore District of Karnataka state.

The strategy adopted in this investigation is a factorial design. The data obtained have been treated for the purpose of analysis as having obtained from a $2^5$ factorial experiment with underlying design being a completely randomised design. In Chapter VI the analysis of data and its results are presented.

In this Chapter the obtained results are interpreted and discussed with reference to each of the hypotheses as formulated in Chapter I. In order to find out the significant differences if any, in the various categories of the five independent variables in relation to self-concept the data has been analysed with the help of the Analysis of Variance (ANOVA) technique. The thirty-one hypotheses which were evolved to study the five main effects, ten two-way interaction effects, ten three-way interaction effects, five four-way interaction effects, and one five-way interaction effect were tested on the basis of the ‘F’ values obtained in Table 21 in Chapter VI.
7.2 SELF CONCEPT AND AREA (URBAN/RURAL)

Self concept is a developmental characteristic and it plays a vital role in decision making in real life. Research evidence shows that self concept is related to the behaviour of an individual. There grows a self concept within each individual. This self concept influences the behaviour of adolescents. It may either put the young person in a series of problems or help him sail through smoothly.

An individual’s self concept depends not merely on one factor alone rather many factors such as his area, sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages), length of experience probably play a major role in the development of self concept.

In India there is a belief that urban students are always better in their judgement and self concept than their counterparts in rural areas. The area i.e., urban or rural to which students belong may play a prominent role in determining their self concept. A child having positive self concept can plan for his future properly as a result of which he develops positive interest in study outside and inside the classroom. However this largely depends upon the school climate in which the children are made to grow.

Therefore a hypothesis was formulated in this study to ascertain whether there is any difference between urban and rural teachers in their mean self concept scores.
Hypothesis 1

The teachers from urban and rural areas will not vary significantly in relation to their Self-Concept in secondary schools of Mysore District

In order to verify the above stated hypothesis, Analysis of Variance (ANOVA) technique was used.

The result of the statistical analysis is presented in Table 22.

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>1</td>
<td>765.11</td>
<td>765.11</td>
<td>1.18</td>
<td>NS</td>
</tr>
</tbody>
</table>

An examination of the Table 22 reveals that the calculated value of F in relation to Area is smaller (F < 1.60) than the tabulated value. The null hypothesis cannot be rejected at 0.05 level of significance. Therefore the previously formulated hypothesis has been accepted.

The result may be interpreted as that in this study Area (urban/Rural) as a single main variable does not show any significant difference on the self concept of teachers.

7.2.1 Discussion

The obtained result may be regarded as an indicative of that the urban and rural teachers in this study do have similarity of self concept and that area (urban/rural) is not a factor which affects their self concept. The present investigation has shown that the belief that the urban teachers are always better in their self concept than their counterparts in rural areas has no basis as far as this study is concerned.
7.2.2 Conclusion

With the present data available on the mean self-concept scores of urban and rural teachers of secondary schools of Mysore district, we can safely conclude that area (urban/rural) is not a potent force in the development of self concept of teachers of Mysore district and therefore the previously formulated hypothesis has been accepted.

7.3 SELF CONCEPT AND SEX

It has already been experimentally established that Sex of an individual has a significant part to play in the development of his/her self concept. Naturally, therefore, the study believed that the level of self concept would also be appreciably influenced by the Sex of an individual. Accordingly, a hypothesis was formulated to know whether male and female differ in their mean self concept scores of secondary schools teachers of Mysore district.

Hypothesis 2

The male teachers will not vary significantly from the female teachers in relation to their self concept in secondary schools of Mysore District

In order to verify the aforesaid hypothesis, Analysis of Variance technique was used and the result is presented in Table 23.

Table 23: The male teachers and female teachers in relation to their self concept in secondary schools of Mysore District

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>1</td>
<td>83.10</td>
<td>83.10</td>
<td>0.128</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level
A perusal of the Table 23 indicates that the calculated value of ‘F’ in relation to Sex is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value, the null hypothesis cannot be rejected at 0.05 level of significance. It means that Sex as a single main variance does not show any significant difference on self concept. It may be interpreted that as far as this study is concerned both male and female teachers do manifest similarity in their self concept. This is due to the fact that female teachers in the contemporary context are no more lagging behind the male teachers as they have taken up dual function of making teaching profession and managing the household.

Thus male and female teachers in this study do not differ significantly in their self concept.

7.3.1 Discussion

The results of the present study are in agreement with the findings of (1) Aggarwal and Brijbhusan (1967) that there is no difference in the self concept of arts group boys and girls; (2) Pandit (1969) reports that there is no significant difference in the self concept of boys and girls; (3) Way (1981) reports that there is no significant difference for the effect of sex for the total self concept or for any of the self concept scores; (4) Sundaram C (1981) reports that no significant difference was found between boys and girls in their self concept.

However the results of the present study do not support or in agreement with the findings of (1) Figur (1952) and Lincoln (1966) have reported in their studies that sex is also a contributory factor in differentiating high and low achievers on the self concept scores; (2) Kakkar (1967) reports that male students appeared to be less self
accepting than females; (3) Sharma (1969) reports that girls as a whole have, significant higher self concept than boys; (4) Vasantha (1970) found that boys have significant higher score in self concept than girls; (5) Desai (1979) reports that sex is related to self concept-as female students possess higher perception than the male students; (6) Sharma S (1981) reports that boys and girls differ significantly in their self concept; (7) Saraswat (1982) reports a significant difference in the self concept of boys and girls in Delhi area.

Fein, O’Neill, Frank and Mcollvelit (1975) report that sex differences in self concept reached significance only in the sixth grade.

### 7.3.2 Conclusion

The findings of the present study indicates that the male and female teachers have similar self concept and it may be concluded that in this study there is no influence of sex on self concept of secondary school teachers of Mysore district and therefore the initially formulated hypothesis is accepted.

### 7.4 SELF CONCEPT AND TEACHERS CLASSROOM PERFORMANCE

It has already been experimentally established that the Teachers classroom performance has a significant part to play with their self concept.

The investigator therefore believed that the self concept would be appreciably influenced by the Teachers classroom performance. Therefore a hypothesis was formulated in this behalf and a suitable standardised Teachers classroom performance scale was administered to the sample in the study.
Hypothesis 3

Teachers with high teachers classroom performance will not vary significantly from the teachers with low teachers classroom performance in relation to their self-concept in secondary schools of Mysore district.

In order to verify the above stated hypothesis Analysis of Variance (ANOVA) technique was used and the result of the analysis is presented in Table 24.

Table 24: Teachers with high teachers classroom performance and the teachers with low teachers classroom performance in relation to their self-concept in secondary schools of Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers classroom performance</td>
<td>1</td>
<td>5610.11</td>
<td>5610.11</td>
<td>8.73</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level

Graph 6: Teachers with high teachers classroom performance and the teachers with low teachers classroom performance in relation to their self-concept in secondary schools of Mysore district
An examination of the Table 24 indicates that the calculated value of F in relation to Teachers classroom performance is high (F > 1.60). Since the calculated value is higher than the tabulated value, the null hypothesis can be rejected at 0.05 level of significance. It means that Teachers classroom performance as a single main variable does show significant difference on the Self concept.

7.4.1 Discussion

It may be interpreted that as far as this study is concerned teachers belong to High and Low Teachers classroom performance groups do not possess similarity in the Self concept scores.

This is due to the fact that teachers coming from different homes will have different home background and therefore in the present study teachers do differ in their self concept which is quite natural

7.4.2 Conclusion

Teachers classroom performance as a variable, according to the present study is a vital factor in determining self concept. The findings of this study indicate that there is an influence of Teachers classroom performance levels on self concept of Secondary school teachers of Mysore district. Therefore rejection of the hypothesis which was initially framed is justifiable.
7.5 SELF-CONCEPT AND STUDENTS ACHIEVEMENT LEVEL

Self concept is a dominant element in an individual’s personality pattern. It is the positive self concept of teachers which facilitates their students educational and vocational planning. Students achievement level in four subjects (Science, Maths, Social Science and Languages) is influenced by the teachers.

This is precisely the reason why a hypothesis has been formulated to know whether there is any relationship between students achievement level in four subjects (Science, Maths, Social Science and Languages) and self-concept of teachers.

**Hypothesis 4**

Students with high students achievement level in four subjects (Science, Maths, Social Science and Languages) will not vary significantly from the students with low students achievement level in four subjects (Science, Maths, Social Science and Languages) in relation to their teachers self-concept in secondary schools of Mysore district.

In order to verify the above hypothesis, Analysis of Variance’ (ANOVA) technique was used and the result of the analysis is presented in Table 25.
Table 25: Students with high students achievement level in four subjects (Science, Maths, Social Science and Languages) and the students with low students achievement level in four subjects (Science, Maths, Social Science and Languages) in relation to their teachers self-concept in secondary schools of Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students achievement level</td>
<td>1</td>
<td>4960.51</td>
<td>4960.51</td>
<td>7.68</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level

Graph 7: Students with high students achievement level in four subjects (Science, Maths, Social Science and Languages) and the students with low students achievement level in four subjects (Science, Maths, Social Science and Languages) in relation to their teachers self-concept in secondary schools of Mysore district

The Table 25 indicates that the calculated value of F in relation to students achievement level in four subjects (Science, Maths, Social Science and Languages) is
high \((F > 1.60)\). Since the calculated value is higher than the tabulated value, the null hypothesis can be rejected at 0.05 level of significance. It means that teachers self concept as a single main variable does show significant difference on their students achievement level. It may be interpreted that as far as this study is concerned students belonging to High and Low students achievement level in four subjects (Science, Maths, Social Science and Languages) groups do not manifest similarity in their teachers self concept scores.

7.5.1 Discussion

Many researchers have found a positive’ correlation between students achievement level in four subjects (Science, Maths, Social Science and Languages) and their teachers self concept. Most educators and researchers concede that the relationship between the self concept of teachers and their students achievement level in four subjects (Science, Maths, Social Science and Languages) is partially reciprocal.

7.5.2 Conclusion

Students achievement level in four subjects (Science, Maths, Social Science and Languages) as a variable, according to this study is a potent factor in determining the self concept of secondary school teachers.

Hence the previously formulated hypothesis has been rejected.
7.6 SELF CONCEPT AND LENGTH OF EXPERIENCE

The other variable that the investigator hypothesised as an important factor in determining one’s self concept and length of experience of a teacher.

**Hypothesis 5**

*Teachers with high length of experience will not vary significantly from the teachers with low length of experience in relation to their self concept in secondary schools of Mysore district*

To verify the above hypothesis, Analysis of Variance (ANOVA) was used.

The result of the statistical analysis is presented in Table 26.

**Table 26: Teachers with high length of experience and the teachers with low length of experience in relation to their self concept in secondary schools of Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of experience</td>
<td>1</td>
<td>69.10</td>
<td>69.10</td>
<td>0.107</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

An examination of the Table 26 indicates that the calculated value of F in relation to Length of experience is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.107), the null hypothesis cannot be rejected at 0.05 level of significance. It means that Length of experience as a single main variable does not show any significant difference on the self concept. It may be interpreted that as far as this study is concerned teachers belonging to High and Low length of experience groups do manifest similarity in their self concept scores.
7.7 TWO-WAY INTERACTION EFFECTS

To study the two-way interaction effects of the five independent variables (viz. Area (urban/rural), Sex (male/female), Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and Length of experience on self concept of secondary school teachers of Mysore district, Ten hypotheses were framed and each one of them is presented one by one and tested for its significance.

7.7.1 Interaction between Area and Sex

In order to find out the interaction between Area and sex on self concept the following hypothesis was framed.

Hypothesis 6

There will be no significant two-way interaction between area and sex on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the above hypothesis. The result of the analysis is presented in Table 27.

Table 27: Two-way Interaction between Area and sex on self concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area and Sex</td>
<td>1</td>
<td>410.37</td>
<td>410.37</td>
<td>0.636</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 27 reveals that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value, the null hypothesis cannot be rejected at 0.05 level of significance. It
may be interpreted that Area and Sex together do not seem to show any significant interaction on the self concept. Therefore initially framed hypothesis has been accepted.

7.7.2 Interaction between Area and Teachers classroom performance

In order to find out the interaction between Area and Teachers classroom performance on self concept, the following hypothesis was formulated.

Hypothesis 7

There will be no significant two-way interaction between Area and Teachers classroom performance on Self-concept of secondary school teachers in Mysore district

In order to test the above hypothesis, Analysis of Variance (ANOVA) technique was used and the result is presented in Table 28.

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area and Teachers classroom performance</td>
<td>1</td>
<td>36.79</td>
<td>36.79</td>
<td>0.057</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 28 indicates that the calculated value of F in relation to this-interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.057), the null hypothesis cannot be rejected at 0.05 level of significance. It means that Area and Teachers classroom performance together do not
seem to show any significant interaction on the self concept. Therefore the previously formulated hypothesis has been accepted.

7.7.3 Interaction between Area and students achievement level in four subjects (Science, Maths, Social Science and Languages)

To find out the interaction between Area and students achievement level in four subjects (Science, Maths, Social Science and Languages) on self concept, the following hypothesis was framed.

**Hypothesis 8**

There will be no significant two-way interaction between area and student achievement level in four subjects (Science, Maths, Social Science, Language) on self-concept of secondary school teachers in Mysore district.

The above hypothesis was tested for its significance using Analysis of Variance (ANOVA) technique. The result of the ANOVA is presented in Table 29.

**Table 29: Two-way interaction between Area and student achievement level in four subjects (Science, Maths, Social Science, Language) on self-concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area and Students achievement level</td>
<td>1</td>
<td>1180.29</td>
<td>1180.29</td>
<td>1.829</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level
Table 29 reveals that the calculated value of F in relation to this interaction effect is high (F > 1.60). Since the calculated value is high than the tabulated value (1.829), the null hypothesis can be rejected at 0.05 level of significance. This may be interpreted that Area and students achievement level in four subjects (Science, Maths, Social Science and Languages). Together does show significant interaction on the self concept. Therefore the previously formulated hypothesis has been rejected.

7.7.4 Interaction between Area and length of experience

To find out the interaction between Area and length of experience on self concept, the following hypothesis was framed.
Hypothesis 9

There will be no significant two-way interaction between Area and length of experience on self concept of Secondary School Teachers in Mysore district

The above hypothesis was tested for its significance using Analysis of Variance technique (ANOVA) and the result is presented in Table 30.

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area and Length of experience</td>
<td>1</td>
<td>51.85</td>
<td>51.85</td>
<td>0.080</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 30 reveals that the calculated value of F in relation to length of experience is less than the tabulated value. Since the calculated value is less than the tabulated value the null hypothesis is accepted at 0.05 level of significance. It means that Area and length of experience seem to show no significant interaction on the self concept.

7.7.4.1 Discussion

The results of the present study are not significant and it means that the teachers ‘Area’ (urban or rural) and length of experience together do not influence their self concept.

7.7.4.2 Conclusion

It may be concluded that in this study teachers Area (urban or rural) and length of experience are not the vital factors in determining their self concept.

Therefore the previously formulated hypothesis has been accepted.
7.7.5 Interaction between Sex and Teachers classroom performance

In order to find out the interaction between Sex and Teachers classroom performance on self concept, the following hypothesis was framed.

Hypothesis 10

There will be no significant two-way interaction between Sex and Teachers classroom performance on self-concept of secondary school teachers in Mysore district

The above hypothesis was tested for its significance using Analysis of Variance technique (ANOVA) and the result is presented in Table 31.

Table 31: Two-way interaction between Sex and Teachers classroom performance on self-concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex and Teachers classroom performance</td>
<td>1</td>
<td>1.98</td>
<td>1.98</td>
<td>0.003</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 31 reveals that the calculated value of F in relation to this interaction effect is less. Since the calculated value is smaller than the tabulated value, the null hypothesis cannot be rejected at 0.05 level of significance. It means that Sex and Teachers classroom performance together do not seem to show any significant interaction on the self concept. Therefore the previously formulated hypothesis has been accepted.
7.7.6 Interaction between Sex and Students achievement level in four subjects

(Science, Maths, Social Science, Language)

To find out the interaction between sex and Students achievement level in four subjects (Science, Maths, Social Science, Language) on Self Concept of secondary school teachers of the following hypothesis has been framed.

**Hypothesis 11**

There will be no significant two-way interaction between Sex and Student achievement level in four subjects (Science, Maths, Social Science, Language) on self-concept of secondary school teachers in Mysore district.

The aforesaid hypothesis was tested for its significance using Analysis of Variance (ANOVA) technique. The result of ANOVA is presented in Table 32.

**Table 32: Two-way interaction between Sex and Student achievement level in four subjects (Science, Maths, Social Science, Language) on self-concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex and Students achievement level</td>
<td>1</td>
<td>81.14</td>
<td>81.14</td>
<td>0.125</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 32 reveals that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.125), the null hypothesis cannot be rejected at 0.05 level of significance.

It may be interpreted that Sex and Students achievement level in four subjects (Science, Maths, Social Science, Language) together do not seem to show any
significant interaction on the self concept. Therefore the previously formulated-hypothesis has been accepted.

7.7.7 Interaction between Sex and length of experience

In order to find out the interaction between Sex and Length of experience on self concept of secondary school teachers the following hypothesis has been framed.

Hypothesis 12

There will be no significant two-way interaction between Sex and Length of experience on self concept of secondary school teachers in Mysore district

The above hypothesis was tested for its significance using Analysis of Variance (ANOVA) technique. The ANOVA result is presented in Table 33.

Table 33: Two-way interaction between Sex and Length of experience on self concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex and Length of experience</td>
<td>1</td>
<td>74.10</td>
<td>74.10</td>
<td>0.114</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 33 reveals that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value, the null hypothesis cannot be rejected at 0.05 level of significance.

It may be interpreted that Sex and length of experience together do not seem to show any significant interaction on the self-concept. Therefore the initially formulated hypothesis has been accepted.
7.7.8 Interaction between Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language)

To find out the interaction between Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science and Languages) on Self concept, the following hypothesis has been framed.

**Hypothesis 13**

There will be no significant two-way interaction between Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above hypothesis. The result of the ANOVA is presented in Table 34.

**Table 34: Two-way interaction between Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers classroom performance and Students achievement level</td>
<td>1</td>
<td>2196.14</td>
<td>2196.14</td>
<td>3.40</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level
Graph 9: Two-way interaction between Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district

Table 34 reveals that the calculated value of F in relation to this interaction effect is high (F > 1.60). Since the calculated value is higher than the tabulated value (3.40), the null hypothesis can be rejected at 0.05 level of significance. It signifies that Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language) together does seem to show significant interaction on the self concept. Therefore the previously formulated hypothesis has been rejected.
7.7.9 Interaction between Teachers classroom performance and length of experience

To find out the interaction between Teachers classroom performance and length of experience on self-concept, the following hypothesis was framed.

**Hypothesis 14**

*There will be no significant two-way interaction between Teachers classroom performance and length of experience on self-concept of secondary school teachers in Mysore district*

Analysis of Variance technique (ANOVA) was used to test the significance of the above stated hypothesis. The ANOVA result is presented in Table 35.

**Table 35: Two-way interaction between Teachers classroom performance and length of experience on self-concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers classroom performance and Length of experience</td>
<td>1</td>
<td>1429.19</td>
<td>1429.19</td>
<td>2.21</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level
Graph 10: Two-way interaction between Teachers classroom performance and length of experience on self-concept of secondary school teachers in Mysore district

Table 35 shows that the calculated value of $F$ in relation to this interaction effect is high ($F > 1.60$). Since the calculated value is higher than the tabulated value (2.21), the null hypothesis can be rejected at 0.05 level of significance. It indicates that Teachers classroom performance and length of experience together does seem to show significant interaction on the Self concept. Therefore the previously formulated hypothesis has been rejected.
7.7.10 Interaction between students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience

To find out the interaction between students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on Self concept, the following hypothesis has been framed.

**Hypothesis 15**

There will be no significant two-way interaction between Students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above stated hypothesis. The result of the ANOVA is presented in Table 36.

**Table 36: Two-way interaction between Students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students achievement level and Length of experience</td>
<td>1</td>
<td>3876.26</td>
<td>3876.26</td>
<td>6.00</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level
Graph 11: Two-way interaction between Students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary school teachers in Mysore district

Table 36 reveals that the calculated value of F in relation to this interaction effect is high (F > 1.60). Since the calculated value is higher than the tabulated value (6.00), the null hypothesis can be rejected at 0.05 level of significance. This may be interpreted that students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience together shows significant interaction on the self concept in secondary school teachers of Mysore district. Therefore the initially formulated hypothesis has been rejected.
7.8 THREE-WAY INTERACTION EFFECTS

To study the three-way interaction effects of the five independent variables on self concept of secondary school teachers in Mysore district, ten hypotheses were framed and each one of them is presented one by one and tested for its significance.

7.8.1 Interaction among Area, Sex and Teachers classroom performance

In order to find out interaction among Area, Sex and Teachers classroom performance on self concept, the following hypothesis was framed.

Hypothesis 16

There will be no significant three-way interaction among Area, sex and Teachers classroom performance on self concept of secondary school teachers in Mysore district

To test the significance of the aforesaid hypothesis, Analysis of Variance (ANOVA) technique was used in the study. The ANOVA result is presented in Table 37.

Table 37: Three-way interaction among Area, sex and Teachers classroom performance on self concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Sex and Teachers classroom performance</td>
<td>1</td>
<td>10.61</td>
<td>10.61</td>
<td>0.016</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 37 reveals that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value, the null hypothesis cannot be rejected at 0.05 level of significance. It
means that area, sex and Teachers classroom performance together do not seem to show any significant interaction on the self concept of secondary school teachers in Mysore district. Therefore the above stated hypothesis has been accepted.

### 7.8.2 Interaction among Area, Sex and Students achievement level

#### Hypothesis 17

There will be no significant three-way interaction among area, sex and Students achievement level in four subjects (Science, Maths, Social Science, Languages) on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above hypothesis. The ANOVA result is presented in Table 38.

**Table 38: Three-way interaction among area, sex and Students achievement level in four subjects (Science, Maths, Social Science, Languages) on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Sex and Students achievement level</td>
<td>1</td>
<td>39.09</td>
<td>39.09</td>
<td>0.060</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 38 shows that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value, the null hypothesis cannot be rejected at 0.05 level of significance. It signifies that area, sex and students achievement level in four subjects (Science, Maths, Social Science, Languages) together do not seem to show any significant interaction on self concept of secondary school teachers in Mysore district. Therefore the previously formulated hypothesis has been accepted.
7.8.3 Interaction among Area, Sex and Length of experience

In order to find out interaction effect among Area, sex and length of experience on self concept, the following hypothesis has been framed.

**Hypothesis 18**

*There will be no significant three-way interaction among area, sex and length of experience on self concept of secondary school teachers in Mysore district*

Analysis of Variance (ANOVA) technique was used to test the significance of the above stated hypothesis. The result of ANOVA is made available in Table 39.

**Table 39: Three-way interaction among area, sex and length of experience on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Sex and Length of experience</td>
<td>1</td>
<td>399.69</td>
<td>399.69</td>
<td>0.619</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 39 reveals that the calculated value of F in relation to this interaction effect is less (F < 1.60). Since the calculated value is smaller than the tabulated value (0.619) the null hypothesis cannot be rejected at 0.05 level of significance. This may be interpreted as that in this investigation area, sex and length of experience together do not seem to show any significant interaction on the self concept of secondary school teachers in Mysore district. Therefore the initially formulated hypothesis has been accepted.
7.8.4 Interaction among area, Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science, Language)

In order to find out the interaction among area, Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept, the following hypothesis has been framed.

Hypothesis 19

There will be no significant three-way interaction among area, Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district

The above hypothesis was tested for its significance using Analysis of Variance (ANOVA) technique. The ANOVA result is made available in Table 40.

Table 40: Three-way interaction among area, Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Teachers classroom performance and Students achievement level</td>
<td>1</td>
<td>1906.13</td>
<td>1906.13</td>
<td>2.95</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level
Table 40 reveals that the calculated value of F in relation to this interaction effect is high (F > 1.60). Since the calculated value is higher than the tabulated value (2.95), the null hypothesis can be rejected at 0.05 level of significance. It indicates that area, Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science and Languages) together do seem to show significant interaction on the self concept of secondary school teachers in Mysore district. Hence the previously formulated hypothesis has been rejected.
7.8.5 Interaction among Area, Teachers classroom performance and length of experience

To find out the interaction among area, Teachers classroom performance and length of experience on self concept the following hypothesis has been framed.

**Hypothesis 20**

*There will be no significant three-way interaction among area, Teachers classroom performance and length of experience on self concept of secondary school teachers in Mysore district*

The above hypothesis was tested for its significance using Analysis of Variance (ANOVA) technique. The ANOVA result is presented in Table 41.

**Table 41: Three-way interaction among area, Teachers classroom performance and length of experience on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Teachers classroom performance and Length of experience</td>
<td>1</td>
<td>531.11</td>
<td>531.11</td>
<td>0.823</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 41 reveals that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.823), the null hypothesis cannot be rejected at 0.05 level of significance. This may be interpreted that in this study area, Teachers classroom performance and length of experience together do not seem to show any significant interaction on the self concept of secondary school teachers in Mysore district. Therefore the initially framed hypothesis is accepted.
7.8.6 Interaction among area, Students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience

To find out the interaction among area, Students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience, the following hypothesis has been framed.

**Hypothesis 21**

There will be no significant three-way interaction among area, students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above hypothesis. The result of the ANOVA is made available in Table 42.

**Table 42: Three-way interaction among area, students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Students achievement level and Length of experience</td>
<td>1</td>
<td>450.75</td>
<td>450.75</td>
<td>0.698</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 42 indicates that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.698), the null hypothesis cannot be rejected at 0.05 level of significance. This may be interpreted that in this study area, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience together do not seem to show any significant interaction on self concept of
secondary school teachers in Mysore district, Hence the previously framed hypothesis is accepted.

7.8.7 Interaction among sex, Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept

To find out the interaction among sex, Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science and Languages) on self concept the following hypothesis has been framed.

**Hypothesis 22**

There will be no significant three-way interaction among sex, Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above hypothesis. Table 43 gives the ANOVA result.

**Table 43: Three-way interaction among sex, Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex, Teachers classroom performance and Students achievement level</td>
<td>1</td>
<td>116.40</td>
<td>116.40</td>
<td>0.180</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 43 indicates that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the
tabulated value (0.180), the null hypothesis cannot be rejected at 0.05 level of significance. It signifies that in this study sex, Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science and Languages) together do not seem to show any significant interaction on the self concept of secondary school teachers in Mysore district. Therefore the previously formulated hypothesis has been accepted.

7.8.8 Interaction among sex, Teachers classroom performance and length of experience on self concept

To find out the interaction among sex, Teachers classroom performance and length of experience on self concept the following hypothesis has been framed.

Hypothesis 23

There will be no significant three-way interaction among sex, teachers classroom performance and length of experience on self concept of secondary school teachers in Mysore district

The above hypothesis was tested for its significance using Analysis of Variance (ANOVA) technique. The result of the ANOVA is presented in Table 44.

Table 44: Three-way interaction among sex, teachers classroom performance and length of experience on self concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex, Teachers classroom performance and Length of experience</td>
<td>1</td>
<td>3411.21</td>
<td>3411.21</td>
<td>5.287</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level
Graph 13: Three-way interaction among sex, teachers classroom performance and length of experience on self concept of secondary school teachers in Mysore district

Table 44 indicates that the calculated value of F in relation to this interaction effect is high (F > 1.60). Since the calculated value is higher than the tabulated value (5.287), the null hypothesis can be rejected at 0.05 level of significance. This may be interpreted that in this study sex, Teachers classroom performance and length of experience together do seem to show significant interaction on the self concept in secondary school teachers of Mysore district, Therefore the previously framed hypothesis has been rejected.
7.8.9 Interaction among sex, students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept

To find out the interaction among sex, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self-concept, the following hypothesis was framed.

**Hypothesis 24**

There will be no significant three-way interaction among sex, Students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above hypothesis. Table 45 provides the ANOVA result.

**Table 45: Three-way interaction among sex, Students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex, Students achievement level and Length of experience</td>
<td>1</td>
<td>465.57</td>
<td>465.57</td>
<td>0.721</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 45 indicates that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since calculated value is smaller than the tabulated value (0.721), the null hypothesis cannot be rejected at 0.05 level of significance. This may be interpreted that sex, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience together do not seem
to show any significant interaction on self concept of secondary school teachers in Mysore district, Hence the initially formulated hypothesis has been accepted.

7.8.10 Interaction among Teachers classroom performance, Students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept

To find out the interaction among Teachers classroom performance, Students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self-concept, the following hypothesis was framed.

**Hypothesis 25**

There will be no significant three-way interaction among Teachers classroom performance, Students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above mentioned hypothesis. Table 46 provides the ANOVA result.

**Table 46: Three-way interaction among Teachers classroom performance, Students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers classroom performance, students achievement level and length of experience</td>
<td>1</td>
<td>437.71</td>
<td>437.71</td>
<td>0.678</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 46 indicates that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the
tabulated value (0.678), the null hypothesis cannot be rejected at 0.05 level of significance. It indicates that Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience together do not seem to show any significant interaction on the self concept of secondary school teachers in Mysore district. Therefore the previously formulated hypothesis has been accepted.

7.9 FOUR-WAY INTERACT ION EFFECTS

7.9.1 Interaction among area, sex, Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept

In order to find out the interaction among area, sex, Teachers classroom performance and students achievement level in four subjects (Science, Maths, Social Science and Languages) on self-concept, the following hypothesis was framed.

Hypothesis 26

There will be no significant four-way interaction among area, sex, Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above hypothesis, The ANOVA result is presented in Table 47.
Table 47: Four-way interaction among area, sex, Teachers classroom performance and Students achievement level in four subjects (Science, Maths, Social Science, Language) on self concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Sex, Teachers classroom performance and Students achievement level</td>
<td>1</td>
<td>41.78</td>
<td>41.78</td>
<td>0.064</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 47 indicates that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.064), the null hypothesis cannot be rejected at 0.05 level of significance. This together do not seem to show any significant interaction on the self concept of secondary school teachers in Mysore district, Therefore the initially framed hypothesis has been accepted.

7.9.2 Interaction among Area, sex, Teachers classroom performance and length of experience on self concept

In order to find out the interaction among Area, Sex, Teachers classroom performance and length of experience, the following hypothesis has been framed.

Hypothesis 27

There will be no significant four-way interaction among area, sex, Teachers classroom performance and length of experience on self concept of secondary school teachers in Mysore district

To test the significance of the above hypothesis, Analysis of Variance (ANOVA) technique was used. The ANOVA result is presented in Table 48.
Table 48: Four-way interaction among area, sex, Teachers classroom performance and length of experience on self concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Sex, Teachers classroom performance and Length of experience</td>
<td>1</td>
<td>1021.14</td>
<td>1021.14</td>
<td>1.582</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 48 reveals that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (1.582), the null hypothesis cannot be rejected at 0.05 level of significance. This may be interpreted that in this study area, sex, Teachers classroom performance and length of experience together do not seem to show any significant interaction on self-concept of secondary school teachers in Mysore district. Therefore the initially framed hypothesis has been accepted.

7.9.3 Interaction among area, sex, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept

In order to find out the interaction among Area, Sex, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept the following hypothesis has been framed.
Hypothesis 28

There will be no significant four-way interaction among area, sex, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above hypothesis. Table 49 provides the ANOVA result.

**Table 49: Four-way interaction among area, sex, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Sex, Students achievement level and Length of experience</td>
<td>1</td>
<td>157.65</td>
<td>157.65</td>
<td>0.244</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 49 indicates that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.244), the null hypothesis cannot be rejected at 0.05 level of significance. This may be interpreted that area, sex, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience in this study together do not seem to show any significant interaction on the self concept of secondary school teachers in Mysore district. Hence the previously formulated hypothesis has been accepted.
7.9.4 Interaction among area, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self-concept

In order to find out the interaction among area, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept, the following hypothesis has been framed.

**Hypothesis 29**

There will be no significant four-way interaction among area, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary school teachers in Mysore district

Analysis of Variance (ANOVA) technique was used to test the significance of the above hypothesis. Table 50 provides the ANOVA result.

**Table 50: Four-way interaction among area, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary school teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Teachers classroom performance, Students achievement level and Length of experience</td>
<td>1</td>
<td>2384.65</td>
<td>2384.65</td>
<td>3.69</td>
<td>S</td>
</tr>
</tbody>
</table>

S – Significant at 0.05 level
Graph 14: Four-way interaction among area, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary school teachers in Mysore district

![Graph showing interaction effects](image)

Table 50 indicates that the calculated value of F in relation to this interaction effect is high (F > 1.60). Since the calculated value is higher than the tabulated value (3.69), the null hypothesis can be rejected at 0.05 level of significance. It reveals that in this study area, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience together does seem to show significant interaction on self concept of secondary school teachers of Mysore district. Therefore the initially framed hypothesis is rejected.
7.9.5 **Interaction among sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept**

In order to find out the interaction among sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self-concept, the following hypothesis has been framed.

**Hypothesis 30**

There will be no significant four-way interaction among sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary teachers in Mysore district

The above hypothesis was tested for its significance using Analysis of Variance (ANOVA) technique. The ANOVA result is made available in Table 51.

**Table 51: Four-way interaction among sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept of secondary teachers in Mysore district**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex, Teachers classroom performance, Students achievement level and Length of experience</td>
<td>1</td>
<td>211.30</td>
<td>211.30</td>
<td>0.327</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 51 indicates that the calculated value of F in relation to this interaction effect is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.327), the null hypothesis cannot be rejected at 0.05 level of significance.
significance. This signifies that sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience together do not seem to show any significant interaction on the self concept of secondary school teachers in Mysore district. Therefore the initially framed hypothesis has been accepted.

7.10 FIVE-WAY INTERACTION EFFECT

To study the five-way interaction effect of the five independent variables on self concept of secondary school teachers in Mysore district, one-way hypothesis was formulated and the same is presented and tested for its significance.

7.10.1 Interaction among area, sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self-concept

In order to find out the interaction among area, sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience on self concept the following hypothesis has been framed.

Hypothesis 31

There will be no significant five-way interaction among area, sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept of secondary school teachers in Mysore district.

To test the above hypothesis for its significance, Analysis of Variance (ANOVA) technique was used. Table 52 provides the ANOVA result.
Table 52: Five-way interaction among area, sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science, Language) and length of experience on self concept of secondary school teachers in Mysore district

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean squares</th>
<th>F-ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, Sex, Teachers classroom performance, Students achievement level and Length of experience</td>
<td>1</td>
<td>173.57</td>
<td>173.57</td>
<td>0.269</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS – Not significant at 0.05 level

Table 52 reveals that the calculated value of F in relation to this interaction is less than one (F < 1.60). Since the calculated value is smaller than the tabulated value (0.269), the null hypothesis cannot be rejected at 0.05 level of significance. This may be interpreted that in this study area, sex, Teachers classroom performance, students achievement level in four subjects (Science, Maths, Social Science and Languages) and length of experience together do not seem to show any significant interaction on self concept of secondary school teachers in Mysore district. Therefore the previously formulated hypothesis has been accepted.