CHAPTER – 7

ANALYSIS OF DATA AND INTERPRETATIONS

7.1 Introduction

7.2 Research Design

7.3 Analysis of Control group and Experiment group post Test Data

7.4 Hypotheses Testing and Its Interpretation

7.5 Analysis of Students’ Feedback on Kolb’s Experiential Learning Model Programme
7.1 **Introduction:**

Investigator generally tries to reach to the findings following the steps of research work. The analysis of data is an important process that empirically supports the experiment carried out by the researcher. Data collection processes are predetermined and functions parallel to the research objectives. Data analysis and interpretation covers only the required and relevant information to be used for the generalizations.

Information flow collected out of administration of required test should have a systematic tabulation, schedules and graphs along with the computational work done by the researcher. The research endeavors to follows the principle of good presentation which convinces the reader in the most logical way. The analysis of data gives the synoptic view of the procedures in a most concise and meaningful way. The analysis itself speaks about the data in the most systematic way. Analysis should be in a gradual manner. The generation of hypothesis and testing of hypothesis, both are very important points of the research. Investigator also indicates the related aspects of test construction including item acceptance or rejection at the appropriate place in the research report. In this chapter, the important analysis of the data is presented along with interpretations of each data.

7.2 **Research Design:**

In the present study investigator had selected Two-Group Posttest Design. Kolb’s experiential learning programme was given to students and Achievement test were administered as a control group and experiment group of posttest to find out effectiveness of the programme. The detailed research design was discussed in chapter 4.

7.3 **Analysis Of Control Group And Experiment Group Post Test Data:**

Achievement test standardized by the investigator were used as a control group and experiment group of post-test for finding out effectiveness of Kolb’s
experiential learning model programme. Achievement test were administered on 60 students of 9th standard of Anand High School, Anand for experiment group and 60 students of 9th standard for control group thus data was obtained for post-test.

Post-test data sheet is given in Appendix – 13. Analysis of both groups’ post-test data was carried out by using SPSS as shown in Table 7.1:

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>60</td>
<td>48.85</td>
<td>12.38</td>
</tr>
<tr>
<td>Experimental</td>
<td>60</td>
<td>77.21</td>
<td>8.37</td>
</tr>
</tbody>
</table>

Histogram for control group and experiment group of post-test data is shown in Graph 7.1:

7.4 Hypotheses Testing And Its Interpretation:

Achievement test developed by investigator was used as Post-test for finding out effectiveness of Kolb’s experiential learning model programme. Effectiveness of Kolb’s experiential learning model programme was found with
reference to certain variables like gender, SES and IQ. Descriptive statistics of Post-test data were computed. To test the hypotheses, T-test was computed. Details of hypotheses testing are given below.

7.4.1 Hypothesis - 1

There will be no significant difference between mean score on Achievement test between control and experimental group.

To study the effect of Kolb’s Experimental learning model, Achievement test was given to control and experimental group. Obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.2

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>60</td>
<td>48.85</td>
<td>12.38</td>
<td>14.70</td>
<td>Sig</td>
</tr>
<tr>
<td>Experimental</td>
<td>60</td>
<td>77.21</td>
<td>8.37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table – 7.2

Descriptive statistics For Control and Experimental Group

Graph 7.2  Histogram for both groups of posttest data

Control & Experimental Groups for Post test data
It can be observed from the above table – 7.2 that

(1) Mean score and S.D. of Control Group score are 48.85 and 12.38 respectively and that of Experimental Group Score are 77.21 and 8.37 respectively.

(2) Obtained T-ratio is 14.70, which is significant at any level of confidence.

Therefore, Hypothesis – 1 “There will be no significant difference between mean score on achievement test between control and experimental group.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score of achievement test for experimental group would be higher than control group” was accepted.

Thus, Kolb’s experimental learning model was found effective for the students of 9th class.

7.4.2 Hypothesis – 2

There will be no significant difference in mean scores of Achievement test between boys and girls for experimental group.

To study the effect of Kolb’s Experimental learning model, Achievement test was given to boys and girls for experimental group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table- 7.3

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>30</td>
<td>76.20</td>
<td>9.17</td>
<td>0.938</td>
<td>NS</td>
</tr>
<tr>
<td>Girls</td>
<td>30</td>
<td>78.23</td>
<td>7.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Graph 7.3  Histogram between boys and girls For Experimental Group

It can be observed from the above table – 7.3 that

1) Mean score and S.D. of boys and for Experimental Group score are 76.20 and 9.17 respectively and that of girls for Experimental Group Score are 78.23 and 7.50 respectively.

2) Obtained T-ratio is 0.938, which is not significant at any level of confidence. Therefore, Hypothesis – 2 “There will be no significant difference in mean scores of achievement test between boys and girls for experimental group.” is not rejected at any level of confidence. So the hypothesis was accepted.

Thus, Kolb’s experimental learning model was found equally effective boys and girls for experimental group of the 9th class.

7.4.3 Hypothesis – 3

There will be no significant difference in mean score on Achievement test of control and experimental group for boys.

To study the effect of Kolb’s Experimental learning model, achievement test was given to control and experimental group for boys obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.4
Table – 7.4

Descriptive statistics For Control and Experimental Group (Boys)

<table>
<thead>
<tr>
<th>Boys</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>51.20</td>
<td>12.73</td>
<td>8.74</td>
<td>Sig</td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>76.20</td>
<td>9.17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 7.4 Histogram for Control and Experimental Group (Boys)

It can be observed from the above table – 7.4 that

1) Mean score and S.D. of Control Group for boys score are 51.20 and 12.73 respectively and that of Experimental Group for boys Score are 76.20 and 9.17 respectively.

2) Obtained T-ratio is 8.74, which is significant at any level of confidence.

Therefore, Hypothesis – 3 “There will be no significant difference in mean score on achievement test of control and experimental group for boys.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score of achievement test for experimental group would be higher than control group for boys” was accepted.
Thus, Kolb’s experimental learning model was found effective for the boys of experimental group.

7.4.4 Hypothesis – 4

There will be no significant difference in mean score on Achievement test of control and experimental group for girls.

To study the effect of Kolb’s Experimental learning model, achievement test was given to control and experimental group for girls obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.5

Table – 7.5

Descriptive statistics For Control and Experimental Group (Girls)

<table>
<thead>
<tr>
<th>Girls</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>46.50</td>
<td>11.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>78.23</td>
<td>7.50</td>
<td>12.45</td>
<td>Sig</td>
</tr>
</tbody>
</table>

Graph 7.5  Histogram for Control and Experimental Group (Girls)

It can be observed from the above table – 7.5 that
1) Mean score and S.D. of Control Group for girls score are 46.50 and 11.77 respectively and that of Experimental Group for girls Score are 78.23 and 7.50 respectively.

2) Obtained T-ratio is 12.45, which is significant at any level of confidence.

Therefore, Hypothesis – 4 “There will be no significant difference in mean score on achievement test of control and experimental group for girls.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score of achievement test for experimental group would be higher than control group for girls” was accepted.

Thus, Kolb’s experimental learning model was found effective for the girls of experimental group.

**7.4.5 Hypothesis – 5**

There will be no significant difference in mean score on Achievement test between student of high SES and low SES for experimental group.

To study the effect of Kolb’s Experimental learning model, achievement test was given to between student of high SES and low SES for experimental group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.6

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>High SES</td>
<td>16</td>
<td>79.00</td>
<td>6.89</td>
<td>1.06</td>
<td>NS</td>
</tr>
<tr>
<td>Low SES</td>
<td>16</td>
<td>75.68</td>
<td>10.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It can be observed from the above table – 7.6 that

1) Mean score and S.D. of high SES for experimental Group score are 79.00 and 6.89 respectively and that of low SES for Experimental Group Score are 75.68 and 10.44 respectively.

2) Obtained T-ratio is 1.06, which is not significant at any level of confidence.

Therefore, Hypothesis – 5 “There will be no significant difference in mean score on achievement test between student of high SES and low SES for experimental group.” is not rejected at any level of confidence. So the hypothesis was accepted.

Thus, Kolb’s experimental learning model was found effective for the high SES Students of experimental group.

7.4.6 Hypothesis – 6

There will be no significant difference in mean score on Achievement test between boys and girls of high SES for experimental group.

To study the effect of Kolb’s Experimental learning model, achievement test was given to between students of high SES for experimental group obtain data
and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.7

### Table – 7.7

**Descriptive statistics between boys and girls of high SES for experimental group**

<table>
<thead>
<tr>
<th>Experimental Group (High SES)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>08</td>
<td>77.25</td>
<td>8.75</td>
<td>1.017</td>
<td>NS</td>
</tr>
<tr>
<td>Girls</td>
<td>08</td>
<td>80.75</td>
<td>4.27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Graph 7.7** Histogram between boys and girls of high SES for experimental group

It can be observed from the above table – 7.7 that

1) Mean score and S.D. between boys of high SES for experimental Group score are 77.25 and 8.75 respectively and that girls of high SES for Experimental Group Score are 80.75 and 4.27 respectively.

2) Obtained T-ratio is 1.017, which is not significant at any level of confidence.
Therefore, Hypothesis – 6 “There will be no significant difference in mean score on achievement test between boys and girls of high SES for experimental group.” is not rejected at any level of confidence. So the hypothesis was accepted.

Thus, Kolb’s experimental learning model was found equally effective of the high SES Students for experimental group.

7.4.7 Hypothesis – 7

There will be no significant difference in mean score on Achievement test between boys and girls of Low SES for experimental group.

To study the effect of Kolb’s Experimental learning model, achievement test was given to between students of low SES for experimental group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.8

<table>
<thead>
<tr>
<th>Table – 7.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive statistics between boys and girls of Low SES for experimental group</td>
</tr>
<tr>
<td><strong>Experimental Group (Low SES)</strong></td>
</tr>
<tr>
<td>Boys</td>
</tr>
<tr>
<td>Girls</td>
</tr>
</tbody>
</table>

Graph 7.8  Histogram between boys and girls of Low SES for experimental group

![Histogram between boys and girls of Low SES for experimental group](attachment:graph7_8.png)
It can be observed from the above table – 7.8 that

1) Mean score and S.D. between boys of low SES for experimental Group score are 75.75 and 13.05 respectively and that girls of low SES for Experimental Group Score are 75.625 and 7.96 respectively.

2) Obtained T-ratio is 0.023, which is not significant at any level of confidence.

Therefore, Hypothesis – 7 “There will be no significant difference in mean score on achievement test between boys and girls of low SES for experimental group.” is not rejected at any level of confidence. So the hypothesis was accepted.

Thus, Kolb’s experimental learning model was found equally effective of the low SES Students for experimental group.

7.4.8 Hypothesis – 8

There will be no significant difference in mean score of boys on Achievement test between high SES and low SES for experimental group.

To study the effect of Kolb’s Experimental learning model, boys on Achievement test was given to between high SES and low SES for experimental group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.9

<table>
<thead>
<tr>
<th>Experimental Group (Boys)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>High SES</td>
<td>08</td>
<td>77.25</td>
<td>8.75</td>
<td>0.27</td>
<td>NS</td>
</tr>
<tr>
<td>Low SES</td>
<td>08</td>
<td>75.75</td>
<td>13.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It can be observed from the above table – 7.9 that

1) Mean score and S.D. between boys of high SES for experimental Group score are 77.25 and 8.75 respectively and that boys of low SES for Experimental Group Score are 75.75 and 13.05 respectively.

2) Obtained T-ratio is 0.27, which is not significant at any level of confidence. Therefore, Hypothesis – 8 “There will be no significant difference in mean score of boys on achievement test between high SES and low SES for experimental group.” is not rejected at any level of confidence. So the hypothesis was accepted.

Thus, Kolb’s experimental learning model was found equally effective of the high SES and low SES boys for experimental group.

7.4.9 Hypothesis – 9

There will be no significant difference in mean score of girls on Achievement test between high SES and low SES for experimental group.

To study the effect of Kolb’s Experimental learning model, girls on Achievement test was given to between high SES and low SES for experimental
group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.10

**Table – 7.10**

Descriptive statistics between high SES and low SES of girls for experimental group

<table>
<thead>
<tr>
<th>Experimental Group (Girls)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>High SES</td>
<td>08</td>
<td>80.75</td>
<td>4.27</td>
<td>1.60</td>
<td>NS</td>
</tr>
<tr>
<td>Low SES</td>
<td>08</td>
<td>75.625</td>
<td>7.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 7.10 Histogram between high SES and low SES of girls for experimental group

It can be observed from the above table – 7.10 that

1) Mean score and S.D. between girls of high SES for experimental Group score are 80.75 and 4.27 respectively and that girls of low SES for Experimental Group Score are 75.625 and 7.96 respectively.

2) Obtained T-ratio is 1.60, which is not significant at any level of confidence.
Therefore, Hypothesis – 9 “There will be no significant difference in mean score of girls on achievement test between high SES and low SES for experimental group.” is not rejected at any level of confidence. So the hypothesis was accepted.

Thus, Kolb’s experimental learning model was found equally effective of the high SES and low SES girls for experimental group.

7.4.10 Hypothesis - 10

There will be no significant difference in mean score on Achievement test of control and experimental group for high SES.

To study the effect of Kolb’s Experimental learning model, achievement test was given to control and experimental group for high SES obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.11

Table – 7.11

<table>
<thead>
<tr>
<th>Group (High SES)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>16</td>
<td>53.43</td>
<td>13.74</td>
<td>6.65</td>
<td>Sig</td>
</tr>
<tr>
<td>Experimental</td>
<td>16</td>
<td>79.00</td>
<td>6.89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 7.11 Histogram of Control and Experimental Group for high SES
It can be observed from the above table – 7.11 that

1) Mean score and S.D. of Control Group score are 53.43 and 13.74 respectively and that of Experimental Group Score are 79.00 and 6.89 respectively.

2) Obtained T-ratio is 6.653, which is significant at any level of confidence.

Therefore, Hypothesis – 10 “There will be no significant difference in mean score on achievement test of control and experimental group for high SES.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score of achievement test of experimental group for high SES would be higher than control group” was accepted.

Thus, Kolb’s experimental learning model was found effective for experimental group of high SES.

7.4.11 Hypothesis - 11

There will be no significant difference in mean score on achievement test of control and experimental group for low SES.

To study the effect of Kolb’s Experimental learning model, Achievement test was given to control and experimental group for low SES obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.12

<table>
<thead>
<tr>
<th>Group (Low SES)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>16</td>
<td>45.00</td>
<td>12.58</td>
<td>7.50</td>
<td>Sig</td>
</tr>
<tr>
<td>Experimental</td>
<td>16</td>
<td>75.68</td>
<td>10.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It can be observed from the above table – 7.12 that

1) Mean score and S.D. of Control Group score are 45.00 and 12.58 respectively and that of Experimental Group Score are 75.68 and 10.44 respectively.

2) Obtained T-ratio is 7.50, which is significant at any level of confidence.

Therefore, Hypothesis – 11 “There will be no significant difference in mean score on achievement test of control and experimental group for low SES.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score of achievement test of experimental group low SES would be higher than control group” was accepted.

Thus, Kolb’s experimental learning model was found effective for the experimental group of low SES.

7.4.12 Hypothesis - 12

There will be no significant difference in mean score on Achievement test between student of high IQ and low IQ for experimental group.

To study the effect of Kolb’s Experimental learning model, Achievement test was given to between student of high IQ and low IQ for experimental group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.13
Table – 7.13

Descriptive statistics of high IQ and low IQ For Experimental Group

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>High IQ</td>
<td>16</td>
<td>83.43</td>
<td>4.70</td>
<td>7.944</td>
<td>Sig</td>
</tr>
<tr>
<td>Low IQ</td>
<td>16</td>
<td>66.75</td>
<td>6.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 7.13 Histogram of high IQ and low IQ For Experimental Group

It can be observed from the above table – 7.13 that

1) Mean score and S.D. of High IQ for experimental group score are 83.43 and 4.70 respectively and that of High IQ for Experimental Group Score are 66.75 and 6.96 respectively.

2) Obtained T-ratio is 7.944, which is significant at any level of confidence.

Therefore, Hypothesis – 12“There will be no significant difference in mean score on achievement test between student of high IQ and low IQ for experimental group.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score are achievement test between students of high IQ for...
experimental group would be higher than low IQ for experimental group” was accepted.

Thus, Kolb’s experimental learning model was found effective between the students of high IQ for experimental group.

7.4.13 Hypothesis – 13

There will be no significant difference in mean score on Achievement test between boys and girls of high IQ for experimental group.

To study the effect of Kolb’s Experimental learning model, Achievement test was given to between students of high IQ for experimental group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.14

Table – 7.14

Descriptive statistics between boys and girls of high IQ for experimental group

<table>
<thead>
<tr>
<th>Experiment Group (High IQ)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>06</td>
<td>84.67</td>
<td>5.43</td>
<td>0.75</td>
<td>Sig</td>
</tr>
<tr>
<td>Girls</td>
<td>10</td>
<td>82.70</td>
<td>4.35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 7.14 Histogram between boys and girls of high IQ for experimental group
It can be observed from the above table – 7.14 that

1) Mean score and S.D. between boys of high IQ for experimental Group score are 84.67 and 5.43 respectively and that girls of high IQ for Experimental Group Score are 82.70 and 4.35 respectively.

2) Obtained T-ratio is 0.75, which is not significant at any level of confidence.

   Therefore, Hypothesis – 13 “There will be no significant difference in mean score on achievement test between boys and girls of high IQ for experimental group.” is not rejected at any level of confidence. So the hypothesis was accepted.

   Thus, Kolb’s experimental learning model was found equally effective of the high IQ Students for experimental group.

7.4.14 Hypothesis – 14

   There will be no significant difference in mean score on achievement test between boys and girls of Low IQ for experimental group.

   To study the effect of Kolb’s Experimental learning model, achievement test was given to between students of low IQ for experimental group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.15

<table>
<thead>
<tr>
<th>Experimental Group (Low IQ)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>10</td>
<td>67.00</td>
<td>7.89</td>
<td>0.195</td>
<td>NS</td>
</tr>
<tr>
<td>Girls</td>
<td>06</td>
<td>66.33</td>
<td>5.75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table – 7.15

Descriptive statistics between boys and girls of Low IQ for experimental group
It can be observed from the above table – 7.15 that

1) Mean score and S.D. between boys of low IQ for experimental Group score are 67.00 and 7.89 respectively and that girls of low IQ for Experimental Group Score are 66.33 and 5.75 respectively.

2) Obtained T-ratio is 0.195, which is not significant at any level of confidence.

Therefore, Hypothesis – 14 “There will be no significant difference in mean score on achievement test between boys and girls of low IQ for experimental group.” is not rejected at any level of confidence. So the hypothesis was accepted.

Thus, Kolb’s experimental learning model was found equally effective of the low IQ Students for experimental group.

**7.4.15 Hypothesis – 15**

There will be no significant difference in mean score of boys on Achievement test between high IQ and low IQ for experimental group.

To study the effect of Kolb’s Experimental learning model, boys on Achievement test was given to between high IQ and low IQ for experimental
group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.16

Table – 7.16

Descriptive statistics between high IQ and low IQ of boys for experimental group

<table>
<thead>
<tr>
<th>Experimental Group (Boys)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>High IQ</td>
<td>06</td>
<td>84.67</td>
<td>5.43</td>
<td>5.295</td>
<td>Sig</td>
</tr>
<tr>
<td>Low IQ</td>
<td>10</td>
<td>67.00</td>
<td>7.89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 7.16 Histogram between high IQ and low IQ of boys for Experimental group

It can be observed from the above table – 7.16 that

1) Mean score and S.D. between boys of high IQ for experimental Group score are 84.67 and 5.43 respectively and that boys of low IQ for Experimental Group Score are 67.00 and 7.89 respectively.

2) Obtained T-ratio is 5.295, which is significant at any level of confidence.
Therefore, Hypothesis – 15 “There will be no significant difference in mean score of boys on achievement test between high IQ and low IQ for experimental group.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score are achievement test between boys of high IQ for experimental group would be higher than low IQ for experimental group” was accepted.

Thus, Kolb’s experimental learning model was found effective between the boys of high IQ for experimental group.

7.4.16 Hypothesis – 16

There will be no significant difference in mean score of girls on Achievement test between high IQ and low IQ for experimental group.

To study the effect of Kolb’s Experimental learning model, girls on Achievement test was given to between high IQ and low IQ for experimental group obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.17

<table>
<thead>
<tr>
<th>Table – 7.17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive statistics between high IQ and low IQ of girls for experimental group</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experimental Group (Girls)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>High IQ</td>
<td>10</td>
<td>82.70</td>
<td>4.35</td>
<td>6.018</td>
<td></td>
</tr>
<tr>
<td>Low IQ</td>
<td>06</td>
<td>66.33</td>
<td>5.75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It can be observed from the above table – 7.17 that

1) Mean score and S.D. between girls of high IQ for experimental Group score are 82.70 and 4.35 respectively and that girls of low IQ for Experimental Group Score are 66.33 and 5.75 respectively.

2) Obtained T-ratio is 6.018, which is significant at any level of confidence.

Therefore, Hypothesis – 16 “There will be no significant difference in mean score of girls on achievement test between high IQ and low IQ for experimental group.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score are achievement test between girls of high IQ for experimental group would be higher than low IQ for experimental group” was accepted.

Thus, Kolb’s experimental learning model was found effective between the girls of high IQ for experimental group.

**7.4.17 Hypothesis - 17**

There will be no significant difference in mean score on achievement test of control and experimental group for high IQ.

To study the effect of Kolb’s Experimental learning model, achievement test was given to control and experimental group for high IQ obtain data and
descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.18

**Table – 7.18**

Descriptive statistics of Control and Experimental Group for high IQ

<table>
<thead>
<tr>
<th>Group (High IQ)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>16</td>
<td>52.00</td>
<td>13.28</td>
<td>8.92</td>
<td>Sig</td>
</tr>
<tr>
<td>Experimental</td>
<td>16</td>
<td>83.43</td>
<td>4.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 7.18 Histogram of Control and Experimental Group for high IQ

It can be observed from the above table – 7.18 that

1) Mean score and S.D. of Control Group for high IQ score are 52.00 and 13.28 respectively and that of Experimental Group for high IQ Score are 83.44 and 4.70 respectively.

2) Obtained T-ratio is 8.92, which is significant at any level of confidence.

Therefore, Hypothesis – 17“There will be no significant difference in mean score on achievement test of control and experimental group for high IQ.” is rejected at any level of confidence. So the alternate research hypothesis, “The
mean score of achievement test of experimental group for high IQ would be higher than control group for high IQ.” was accepted.

Thus, Kolb’s experimental learning model was found effective of experimental group for high IQ.

7.4.18 Hypothesis - 18

There will be no significant difference in mean score on Achievement test of control and experimental group for low IQ.

To study the effect of Kolb’s Experimental learning model, Achievement test was given to control and experimental group for low IQ obtain data and descriptive statistics and T-test were computed. Results of descriptive statistics and T-test are presented in Table – 7.19

Table – 7.19

Descriptive statistics of Control and Experimental Group for low IQ

<table>
<thead>
<tr>
<th>Group (Low IQ)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>16</td>
<td>42.12</td>
<td>11.13</td>
<td>7.505</td>
<td>Sig</td>
</tr>
<tr>
<td>Experimental</td>
<td>16</td>
<td>66.75</td>
<td>6.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 7.19 Histogram of Control and Experimental Group for low IQ

Control & Experimental Groups for Low IQ

- Control
- Experimental
It can be observed from the above table – 7.19 that

1) Mean score and S.D. of Control Group for low IQ score are 42.12 and 11.13 respectively and that of Experimental Group for low IQ Score are 66.75 and 6.96 respectively.

2) Obtained T-ratio is 7.505, which is significant at any level of confidence.

Therefore, Hypothesis – 18 “There will be no significant difference in mean score on achievement test of control and experimental group for low IQ.” is rejected at any level of confidence. So the alternate research hypothesis, “The mean score of achievement test of experimental group for low IQ would be higher than control group for low IQ.” was accepted.

Thus, Kolb’s experimental learning model was found effective of experimental group for low IQ.

7.5 Analysis Of Students’ Feedback On Kolb’s Experiential Learning Model Programme:

To get students’ feedback, 60 students’ were taken who had undergone the Kolb’s experiential learning model programme. Student’s feedback was taken to get their feelings and responses towards Kolb’s experiential learning model programme. A set of statements was given to students after the completion of Kolb’s experiential learning model programme as shown in Appendix – 12. Students have to give their feedback regarding experiences during implementation of Kolb’s experiential learning model programme by stating ‘Yes’ or ‘No’. Statements were framed keeping following things in mind.

1) Interest level of the programme.
2) Questions ability to promote thinking.
3) Familiarity towards such type of questions.
4) Difficulty of questions.
5) Change in attitude towards difficult questions during progression of programme.
6) Effectiveness of figures in solving questions.
7) Usefulness of practice questions.
8) Change in thinking level felt by students.
9) Effectiveness of worksheet provided during programme.
10) Comfort level in answering for post-test
11) Success of the programme.
12) Confidence in experience such questions in future.
13) Willingness to join such programme in future.

Apart from this investigator has tried to gather feedback as open responses which are analyzed qualitatively.

After counting the frequencies the analysis was done employing Chi square technique. The results are shown in table 7.20

**Table 7.20**

**Chi-square Values of Student’s Feedback for Kolb’s Experiential Learning model Programme**

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Fe</th>
<th>Yes</th>
<th>No</th>
<th>Chi square Value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>During whole programme, We enjoyed.</td>
<td>30</td>
<td>60</td>
<td>00</td>
<td>60.00*</td>
<td>S</td>
</tr>
<tr>
<td>2</td>
<td>Programme consists thought provoking questions</td>
<td>30</td>
<td>59</td>
<td>01</td>
<td>56.06*</td>
<td>S</td>
</tr>
<tr>
<td>3</td>
<td>I had thought this type of items in past.</td>
<td>30</td>
<td>09</td>
<td>51</td>
<td>29.4*</td>
<td>S</td>
</tr>
<tr>
<td>4</td>
<td>Questions of the programme were found difficult.</td>
<td>30</td>
<td>01</td>
<td>59</td>
<td>56.06*</td>
<td>S</td>
</tr>
<tr>
<td>5</td>
<td>Programme questions solved by experiences base on pictures or other techniques were easily understood</td>
<td>30</td>
<td>59</td>
<td>01</td>
<td>56.06*</td>
<td>S</td>
</tr>
<tr>
<td></td>
<td>Practice questions given at the end of each question were found helpful in enhancing understanding.</td>
<td>30</td>
<td>58</td>
<td>02</td>
<td>52.26*</td>
<td>S</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------------------------------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>--------</td>
<td>---</td>
</tr>
<tr>
<td>7</td>
<td>Worksheets given during programme were found useful.</td>
<td>30</td>
<td>60</td>
<td>00</td>
<td>60.00*</td>
<td>S</td>
</tr>
<tr>
<td>8</td>
<td>I felt change in my thought ability at the end of the programme</td>
<td>30</td>
<td>60</td>
<td>00</td>
<td>60.00*</td>
<td>S</td>
</tr>
<tr>
<td>9</td>
<td>Activities at the end of programme were useful in solving problems of myself and society</td>
<td>30</td>
<td>60</td>
<td>00</td>
<td>60.00*</td>
<td>S</td>
</tr>
<tr>
<td>10</td>
<td>Answering Achievement test was found easy after programme.</td>
<td>30</td>
<td>60</td>
<td>00</td>
<td>60.00*</td>
<td>S</td>
</tr>
<tr>
<td>11</td>
<td>I would like to join again in such type of programme.</td>
<td>30</td>
<td>60</td>
<td>00</td>
<td>60.00*</td>
<td>S</td>
</tr>
<tr>
<td>12</td>
<td>Whole programme was successful.</td>
<td>30</td>
<td>60</td>
<td>00</td>
<td>60.00*</td>
<td>S</td>
</tr>
</tbody>
</table>

* Significant at 0.01 level = 6.635 ** Significant at 0.05 level = 3.841

S = Significant, NS = Not Significant

By observing Table 7.20, it is observed that except statement no. 3 all the chi-square values are significant at 0.01 levels.

For statement – 1 the frequencies for ‘yes’ is 60 (100%). The chi-square value being 60.00 is significant at 0.01 level. It shows that all students found Kolb’s experiential learning model programme interesting and they have enjoyed the programme a lot.
For statement – 2 the frequencies for ‘yes’ is 59 (98.33%) which is higher than ‘no’. The chi-square value being 56.06 is significant at 0.01 level. It shows that students felt that questions in the programme were thought provoking.

For statement – 3 the frequencies for ‘yes’ is 09 (15%) which is lower than ‘no’. The chi-square value being 29.4 is significant at 0.01 levels. It shows that most of students have not solved type of questions involved in Kolb’s experiential learning model programme.

For statement – 4 the frequencies for ‘yes’ is 01 (16.67%). The chi-square value being 56.06 is significant at 0.01 levels. It shows that almost all students does not found Kolb’s experiential learning model programme difficult at initial stage.

For statement – 5 the frequencies for ‘yes’ is 59 (98.33). The chi-square value being 53.00 is significant at 0.01 levels. It shows that all students found that questions solved by experiences base on pictures or other techniques were easily understood.

For statement – 6 the frequencies for ‘yes’ is 58 (96.67%). The chi-square value being 52.26 is significant at 0.01 levels. It shows that all students found that practice questions given at the end of programme were very useful.

For statement – 7 the frequencies for ‘yes’ is 60 (100%). The chi-square value being 60.00 is significant at 0.01 levels. It shows that all students found that the worksheets given during the programme were very useful to them.

For statement – 8 the frequencies for ‘yes’ is 60 (100%). The chi-square value being 60.00 is significant at 0.01 levels. It shows that almost all students felt that there is increase in their experience and thinking level at the end of the programme.

For statement – 9 the frequencies for ‘yes’ is 60 (100%). The chi-square value being 60.00 is significant at 0.01 levels. It shows that all students found that Activities were useful in solving problems of me and society at the end of programme.
For statement – 10 the frequencies for ‘yes’ is 60 (100%). The chi-square value being 60.00 is significant at 0.01 levels. It shows that all students found that they could easily answer on Achievement test during posttest than that of Kolb’s experiential learning model programme.

For statement – 11 the frequencies for ‘yes’ is 60 (100%). The chi-square value being 60.00 is significant at 0.01 levels. It shows that all students found willing to join such programme in future.

For statement – 12 the frequencies for ‘yes’ is 60 (100%). The chi-square value being 60.00 is significant at 0.01 levels. It shows that all students found that a programme was completely successful.

**List of Open Responses Analyzed Qualitatively:**

Students’ feedback on Kolb’s experiential learning model programme was also taken as an open response in given space. Many of the students had given their responses which are listed as out below:

1) We have liked this programme a lot. Such programme helps to solve similar questions in future. The programme was very good.

2) We enjoyed the programme and also had learnt lots of new things. We can now answer to such questions without fear in future.

3) I liked this programme very much and I will not feel boring to undergo such programme for whole day. I like this programme than mathematics and science.

4) Students should take part in such programme.

5) Solving such questions at this stage helps in experince.

6) I found change in my thinking level due to this programme.

7) This programme was easy and very useful.

8) This programme was easily learnt and was very useful.

9) We enjoyed solving the questions given in the programme.

10) Such type of programme can be enjoyed if given again.
11) I like the programme very much and would like to undergo such programme again.

12) Questions were thought provoking which enhances my intelligence.

The analysis of the data from student’s feedback showed students’ favor towards Kolb’s experiential learning model programme. Students were asked to give their feedback towards the given set of statements along with open responses. Their responses were positive towards Kolb’s experiential learning model programme and found it interesting and necessary for their enhancement of achievement.

Next chapter comprises of summary, findings, implications and recommendations.