CHAPTER – VI
ANALYSIS AND INTERPRETATION OF DATA

After advancement of Programmed Learning material and CALL Package were controlled on two gatherings of understudies’ that is trial amass I and exploratory gathering II separately. Researcher utilizing three equivalent groups only posttest plan. Conventional lecture technique assemble was taken as the third group. Instructor made unit achievement test and directed to every one of the gatherings including No guideline aggregate subsequent to managing both the systems. After that its repetition stages were done in three unique schools. It is determines that in every one of the twelve gatherings a similar unit test were directed. The appropriate response sheets of the considerable number of understudies in the unit test were assessed and their scores shaped the information of the experimentation. The unit test is affixed as appended no. 1 and 2.

By administering an opinionnaire another data was gathered. Ambasana (2002)’s opinionnaire was adapted for this purpose. Opinions towards both the Programmed Learning material and the CALL Packages sought the opinionnaire for the groups of students. The opinionnaire is enclosed in appendix no.3.

The understanding of information leads towards conclusion and results. It is exceptionally basic to have significant picture of data gathered. It uncovers what the discovering tells? What do they mean? What is their essentialness? What is the appropriate response of the first issue?

‘ANOVA’, Post hoc ‘Tukey Test’ and Chi-square technique as statistical techniques were employing to analyze and interpret the data gathered. The tabulation, graphical presentation, analysis and interpretation are presented below.

The understanding of information leads towards conclusion and results. It is exceptionally basic to have significant picture of data gathered. It uncovers what the discovering tells? What do they mean? What is their essentialness? What is the appropriate response of the first issue?
The hypothesis, their calculated results and the interpretation on the basis of their results are given from the next pages. Interpretation of the data’s is done purely on the basis of objective approach of the investigator. There is no subjectivity and the manipulation of the data occurs in any result.

**METHODS OF ANALYSIS**

The scores on the unit accomplishment test were acquired at interim scale. Computations and investigations done through one route Analysis of change (ANOVA). ANOVA was selected as statistical technique because:-

- The exploratory outline contained three independent groups.
- Dependent variable of the exploration i.e. achievement scores were at the interval scale.
- Randomized task of treatment was taken after.

After ANOVA clusters were taken a gander at using Tuckey Test as a post-hoc test. Tuckey Test works out different connections of social event suggests with exhibiting level of basic qualification. Tukey's HSD (certified basic difference) test, or the Tukey–Kramer procedure, is a lone walk distinctive connection strategy and quantifiable test. Tukey's technique is used as a piece of ANOVA to make assurance intervals for all consolidate insightful differentiations between factor level means while controlling the family botch rate to a level you decide. It is key to consider the family goof rate when making various relationships in light of the way that your chances of making a sort I blunder for a movement of examinations is more imperative than the mix up rate for any one connection alone. To counter this higher blunder rate, Tukey's technique changes the certainty level for every individual interim with the goal that the subsequent synchronous certainty level is equivalent to the esteem you determine.

Equation:

\[
M = \text{treatment/group mean}
\]
n = number per treatment/group

Steps

1. Calculate an investigation of change (e.g., One-path between-subjects ANOVA).

2. Select two means and note the significant factors (Means, Mean Square Within, and number per condition/gathering)

3. Calculate Tukey’s test for each mean correlation

4. Check to check whether Tukey’s score is measurably noteworthy with Tukey’s likelihood/basic esteem table considering fitting df inside and number of medicines.

Sentiments towards learning through Programmed Learning and the CALL Package were gathered as frequencies on ostensible scale non-parametric Chi-square method was utilized.

Data sheets were prepared on data editor. Analysis was done through SPSS. The graphs were prepared through SPSS. The data sheets are attached as appendix no. 6.

TABULATION, ANALYSIS AND INTERPRETATION

The experimentation was done in four phases i.e. experiment stage, repetition organize I, repetition organize II and repetition organize III to measure the viability of the Programmed Learning and the CALL Package. On eighty four understudies of one chose school of Haryana state, the experiment was done and repetition was done on eighty four understudies of other chose school of Haryana state. For speculation of the outcomes, next two phases of repetition were happen in two unique schools chosen from urban range of Delhi state tests are seventy five and sixty separately. Each of the four schools were co-educational schools.

EXPERIMENT STAGE

Jai Modern High school of Haryana state was chosen for the Experiment stage. For the samples, total 84 students were taken. The data were calculated as achievement scores on unit achievement test and was analyzed. Results are presenting in tabular form:
Table – 6.1

Tabular representation of results of Experiment Stage

Step I: ANOVA

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>f</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among Groups</td>
<td>3110.7381</td>
<td>2</td>
<td>1555.369</td>
<td>25.8713</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4869.6786</td>
<td>81</td>
<td>60.1195</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7980.4167</td>
<td>83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step II: Multiple Comparisons (Tukey Test)

<table>
<thead>
<tr>
<th>No.</th>
<th>Treatment Group</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>MD</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Programmed Learning</td>
<td>28</td>
<td>23</td>
<td>9.5801</td>
<td>(2-1) = 06.0357</td>
<td>0.05</td>
</tr>
<tr>
<td>2.</td>
<td>CALL</td>
<td>28</td>
<td>29.0357</td>
<td>8.2932</td>
<td>(1-3) = 8.7857</td>
<td>0.01</td>
</tr>
<tr>
<td>3.</td>
<td>Traditional Instruction</td>
<td>28</td>
<td>14.2143</td>
<td>4.4502</td>
<td>(2-3) = 14.8214</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>84</td>
<td>22.0833</td>
<td>9.8056</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Step I of table 6.1 is showing that f-value 25.8713 is significant at 0.01 level is greater than the table value 4.68. The mean scores of the gatherings are fundamentally extraordinary. Thus, the mean scores of the understudies of the three unique gatherings’ viz. (i) the Experimental gathering I accepting direction through Programmed Learning (ii) the Experimental gathering II getting guideline through the CALL Package and (iii) the Control bunch accepting direction through customary address technique are fundamentally unique.

Hypothesis 1: There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and Computer Assisted English Language Learning Package.

Interpretation:

Table of Step II shows the relationship between the mean scores of Programmed Learning and CALL treatment groups and mean difference is 06.03, which is significant at 0.05 level. So, the null hypothesis i.e., “There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and Computer Assisted English Language Learning Package”; is rejected. It indicates that the mean difference is significant and could be concluded that CALL Package proved more effective than Programmed learning.

Hypothesis 2: There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and receiving instruction through traditional Lecture method.

Interpretation:

Table of Step II shows the relationship between the mean scores of Programmed Learning and traditional instructions groups. The mean score of Programmed Learning is significantly higher than the mean scores group receiving traditional instruction. The mean difference of both groups is 8.7857, which is significant at 0.01 level. So, the null hypothesis of the study “There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and receiving instruction through traditional Lecture method”; is
rejected. It indicates that the mean difference is significant and could be concluded that Programmed learning proved more effective than traditional Lecture method.

**Hypotheses 3:** There will be no significant difference between the mean scores of the students receiving instruction through Computer Assisted English Language Learning Package and receiving instruction through traditional Lecture method.

**Interpretation:**

Similarly, the mean score of CALL is significantly higher than the mean scores the group receiving traditional instruction. The mean difference of both groups is 14.8214, which is significant at 0.01 level. So, the null hypothesis “There will be no significant difference between the mean scores of the students receiving instruction through Computer Assisted English Language Learning Package and receiving instruction through traditional Lecture method” is also rejected. It indicates that the mean difference is significant and could be concluded that CALL Package proved more effective than traditional Lecture method.

Graphical presentation on basis of achievement scores which shows the comparison among the all three groups of students in the Experiment stage.

![Experimental Stage Graph](image)

**Graph 6.1: Comparisons among the Groups at Experiment Stage.**

**Interpretation of Graph 6.1**
It demonstrates that the combined rate bends of the CALL gathering and Programmed Learning bunch are on the correct side of the Traditional direction gathering. Which supports the adequacy of both Programmed Learning and the CALL bundle over Traditional Lecture Method, dismissing 2&3 invalid speculation.

- The bend of the Programmed Learning bunch begins at score 8 and closures at score 44.
- The bend of CALL amass begins at score 12 and closures at score 45 and is practically on the correct side of the bend of Programmed Learning gathering.

It recommends the understudies of CALL aggregate scored essentially higher than the Programmed Learning gathering and Traditional direction gathering. Subsequently, the graphical introduction is favoring the consequences of factual investigation. Both the bends cover between aggregate percent 80 to 100. It proposes that for upper level understudies, both the Packages are similarly successful.

**REPETITION STAGE I**

Ganga International school of Haryana state was chosen for the Repetition stage I. For the samples, total 84 students of IX standard were taken. The data were obtained and calculated in the same manner as achievement scores on unit achievement test and analyzed. Results of Repetition Stage I are presenting in tabular form:

**Table 6.2**

Tabular representation of results of Repetition Stage I
Step I: ANOVA

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among Groups</td>
<td>5227.8</td>
<td>2</td>
<td>2613.9048</td>
<td>41.6687</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5081.18</td>
<td>81</td>
<td>62.7306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10308.98</td>
<td>83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step II: Multiple Comparisons (Tukey Test)

<table>
<thead>
<tr>
<th>No.</th>
<th>Treatment Group</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>MD</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Programmed Learning</td>
<td>28</td>
<td>24.1786</td>
<td>10.3066</td>
<td>(2-1) = 0.72857</td>
<td>0.05</td>
</tr>
<tr>
<td>2.</td>
<td>CALL</td>
<td>28</td>
<td>31.4643</td>
<td>08.5353</td>
<td>(1-3) = 11.8572</td>
<td>0.01</td>
</tr>
<tr>
<td>3.</td>
<td>Traditional Instruction</td>
<td>28</td>
<td>12.3214</td>
<td>03.0191</td>
<td>(2-3) = 19.1429</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>84</td>
<td>22.6548</td>
<td>11.1447</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step I of table 6.2 is showing that F-value 41.6687 is significant at 0.01 level being greater than the table value 4.68. The mean scores of the groups are significantly different. Hence, the mean scores of the students of the three different groups’ viz. 1. The Experimental group I receiving instruction through Programmed Learning 2. The
Experimental group II receiving instruction through the CALL Package and 3. The Control group receiving instruction through traditional lecture method are significantly different.

**Hypothesis 1**: There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and Computer Assisted English Language Learning Package.

**Interpretation:**

Table of Step II shows the relationship between the mean scores of Programmed Learning and CALL treatment groups and the mean difference is 0.72857, which is significant at 0.05 level. So, the null hypothesis i.e., “There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and Computer Assisted English Language Learning Package”; is rejected. It indicates that the mean difference is significant and could be concluded that CALL Package proved more effective than Programmed learning.

**Hypothesis 2**: There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and receiving instruction through traditional Lecture method.

**Interpretation:**

Table of Step II shows the relationship between the mean scores of Programmed Learning and traditional instructions groups. The mean score of Programmed Learning is significantly higher than the mean score the group receiving traditional instruction. The mean difference of both groups is 11.8572, which is significant at 0.01 level. So, the second null hypothesis of the study “There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and receiving instruction through traditional Lecture method”; is rejected. It indicates that the mean difference is significant and could be concluded that Programmed learning proved more effective than traditional Lecture method.

**Hypotheses 3**: There will be no significant difference between the mean scores of the
students receiving instruction through Computer Assisted English Language Learning Package and receiving instruction through traditional Lecture method.

**Interpretation:**

Thus, the mean score of CALL is altogether higher than the mean score the gathering accepting customary guideline. The mean contrast of the two gatherings is 19.1429, which is noteworthy at 0.01 level. So, the null hypothesis “There will be no significant difference between the mean scores of the students receiving instruction through Computer Assisted English Language Learning Package and receiving instruction through traditional Lecture method” is also rejected. It indicates that the mean difference is significant and could be concluded that CALL Package proved more effective than traditional Lecture method.

The Graphical presentation on the basis of achievement scores which shows the comparison among the all three groups of students in the Repetition stage I.

![Graph 6.2: Comparisons among the Groups at Repetition Stage I.](image)

**Interpretation of Graph 6.2**

It demonstrates that the combined rate bends of the CALL gathering and Programmed Learning bunch are on the correct side of the customary direction gathering. This supports the adequacy of both Programmed Learning and the CALL bundle over
Traditional Lecture Method, dismissing 2&3 invalid speculation. Traditional instruction group starts at score 8 and ends at score 19

- The curve of the Programmed Learning group starts at score 7 and ends at score 43.
- The curve of CALL group starts at score 14 and ends at score 46 and is almost on the right side of the curve of Programmed Learning group.

It recommends the understudies of CALL aggregate scored altogether higher than the Programmed Learning gathering and Traditional direction gathering. Henceforth, the graphical introduction is favoring the aftereffects of measurable examination. Here there is no covering among any bends. This obviously indicates Programmed learning treatment is successful over Traditional Lecture Method and the CALL treatment is powerful finished Traditional Lecture Method and Programmed learning treatment.

REPETITION STAGE II

Saraswati model school of Delhi city was chosen for the Repetition stage II. For the samples, total 75 students of IX standard were taken. The data were obtained and calculated in the same manner as achievement scores on unit achievement test and analyzed. Results of Repetition Stage II are presenting in tabular form:

Table 6.3
Tabular representation of results of Repetition Stage II

Step I: ANOVA
<table>
<thead>
<tr>
<th>Source of variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3165.36</td>
<td>2</td>
<td>1582.68</td>
<td>23.6892</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4810.32</td>
<td>72</td>
<td>66.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7975.68</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Step II: Multiple Comparisons (Tukey Test)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Treatment Group</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>Md</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Programmed Learning</td>
<td>25</td>
<td>21.64</td>
<td>08.8876</td>
<td>(1-2) = 5.65</td>
<td>0.05</td>
</tr>
<tr>
<td>2.</td>
<td>CALL</td>
<td>25</td>
<td>28.24</td>
<td>10.1295</td>
<td>(1-2) = 13.75</td>
<td>0.01</td>
</tr>
<tr>
<td>3.</td>
<td>Traditional Instruction</td>
<td>25</td>
<td>12.4</td>
<td>04.3397</td>
<td>(2-3) = 19.40</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>75</td>
<td>20.76</td>
<td>10.3817</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step I of table 6.3 is showing that f-value 23.68 is significant at 0.01 level being greater than the table value 4.68. The mean scores of the gatherings are altogether unique. Subsequently, the mean scores of the understudies of the three unique gatherings' viz. 1. The Experimental gathering I getting guideline through Programmed Learning 2. The Experimental gathering II accepting guideline through the CALL Package and 3. The Control bunch accepting direction through customary address technique are essentially extraordinary.

**Hypothesis 1:** There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and Computer Assisted
English Language Learning Package.

**Interpretation:**

**Table of Step II** shows the relationship between the mean scores of Programmed Learning and CALL treatment groups and the mean difference is 0.6, which is significant at 0.05 level. So, the null hypothesis i.e., “*There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and Computer Assisted English Language Learning Package*”; is rejected. It indicates that the mean difference is significant and could be concluded that CALL Package proved more effective than Programmed learning.

**Hypothesis 2:** There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and receiving instruction through traditional Lecture method.

**Interpretation:**

**Table of Step II** demonstrates the connection between the mean scores of Programmed Learning and customary directions gatherings. The mean score of Programmed Learning is fundamentally higher than the mean score of the gathering accepting conventional guideline. The mean contrast of the two gatherings is 0.92, which is critical at 0.01 level. So, the second null hypothesis of the study “*There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and receiving instruction through traditional Lecture method*”; is rejected. It indicates that the mean difference is significant and could be concluded that Programmed learning proved more effective than traditional Lecture method.

**Hypotheses 3:** There will be no significant difference between the mean scores of the students receiving instruction through Computer Assisted English Language Learning Package and receiving instruction through traditional Lecture method.

**Interpretation:**

Likewise, the mean score of CALL is altogether higher than the mean score the
gathering accepting conventional direction. The mean contrast of the two gatherings is 15.84, which is critical at 0.01 level. Along these lines, the invalid speculation "There will be no huge distinction between the mean scores of the understudies getting guideline through Computer Assisted English Language Learning Package and accepting direction through customary Lecture technique" is additionally dismissed. It demonstrates that the mean contrast is huge and could be presumed that CALL Package demonstrated more powerful than conventional Lecture strategy. The Graphical presentation on the basis of achievement scores which shows the comparison among the all three groups of students in the Repetition stage II.

![Graph 6.3: Comparisons among the Groups at Repetition Stage II.](image)

**Graph 6.3: Comparisons among the Groups at Repetition Stage II.**

**Interpretation of Graph 6.3**

It demonstrates that total rate bends of the CALL gathering and Programmed Learning bunch are on the correct side of the Traditional direction gathering. Which supports the viability of both Programmed Learning and the CALL bundle over Traditional Lecture Method, dismissing 2&3 invalid theory.
It recommends the understudies of CALL bunch scored essentially higher than the Programmed Learning gathering and Traditional direction gathering. Consequently, the graphical introduction is favoring the aftereffects of measurable investigation. Like Repetition Stage I, Here additionally no covering among any bends. This unmistakably indicates Programmed learning treatment is viable over Traditional Lecture Method and the CALL treatment is successful over Traditional Lecture Method and Programmed learning treatment.

**REPETITION STAGE III**

Happy child model school of Delhi city was chosen for the last Repetition stage III. For the samples, total 60 students of IX standard were taken. The data were obtained and calculated in the same procedure as achievement scores on unit achievement test and analyzed. Results of Repetition Stage III are presenting in tabular form:

Table 6.4
Tabular representation of results of Repetition Stage III

Step I: ANOVA
<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2406.2333</td>
<td>2</td>
<td>1203.1167</td>
<td>25.6355</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>2675.1</td>
<td>57</td>
<td>46.9316</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5081.333</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Step II: Multiple Comparisons (Tukey Test)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Treatment Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Difference</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Programmed Learning</td>
<td>20</td>
<td>22.25</td>
<td>08.1942</td>
<td>(2-1) = 01.1</td>
<td>N.S.</td>
</tr>
<tr>
<td>2.</td>
<td>CALL</td>
<td>20</td>
<td>23.35</td>
<td>07.9556</td>
<td>(1-3) = 12.85</td>
<td>0.01</td>
</tr>
<tr>
<td>3.</td>
<td>Traditional Instruction</td>
<td>20</td>
<td>09.4</td>
<td>03.2184</td>
<td>(2-3) = 13.95</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>18.333</td>
<td>09.2803</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Step I** of table 6.4 is showing that F-value 25.6355 is significant at 0.01 level being greater than the table value 4.68. The mean scores of the groups are significantly differing. Hence, the mean scores of the students of the three different groups viz. 1. The Experimental group I receiving instruction through Programmed Learning. 2. The Experimental group II receiving instruction through the CALL Package and 3. The Control group receiving instruction through traditional lecture method are significantly differing.

**Hypothesis 1:** There will be no significant difference between the mean scores of the
students receiving instruction through Programmed Learning and Computer Assisted English Language Learning Package.

**Interpretation:**

Table of Step II shows the relationship between the mean scores of Programmed Learning and CALL treatment groups and the mean difference is 1.1, which is not significant at 0.05 level. So, the null hypothesis i.e., “There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and Computer Assisted English Language Learning Package”; is not rejected. It indicates that the mean difference is not significant and could be concluded that CALL Package is not differ in terms of effectiveness than Programmed learning.

**Hypothesis 2:** There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and receiving instruction through traditional Lecture method.

**Interpretation:**

Table of Step II shows the relationship between the mean scores of Programmed Learning and traditional instructions groups. The mean score of Programmed Learning is significantly higher than the mean score the group receiving traditional instruction. The mean difference of both groups is 12.85, which is significant at 0.01 level. So, the second null hypothesis of the study “There will be no significant difference between the mean scores of the students receiving instruction through Programmed Learning and receiving instruction through traditional Lecture method”; is rejected. It indicates that the mean difference is significant and could be concluded that Programmed learning proved more effective than traditional Lecture method.

**Hyptheses 3:** There will be no significant difference between the mean scores of the students receiving instruction through Computer Assisted English Language Learning Package and receiving instruction through traditional Lecture method.

**Interpretation:**
Similarly, the mean score of CALL is significantly higher than the mean score the group receiving traditional instruction. The mean difference of both groups is 13.95, which is significant at 0.01 level. So, the null hypothesis “**There will be no significant difference between the mean scores of the students receiving instruction through Computer Assisted English Language Learning Package and receiving instruction through traditional Lecture method**” is also rejected. It indicates that the mean difference is significant and could be concluded that **CALL Package proved more effective than traditional Lecture method**.

The Graphical presentation on the basis of achievement scores which shows the comparison among the all three groups of students in the Repetition stage III.

**Graph 6.4: Comparisons among the Groups at Repetition Stage III.**

**Interpretation of Graph 6.4**

It demonstrates that the combined rate bends of the CALL gathering and Programmed Learning bunch are on the correct side of the Traditional guideline gathering. Which supports the adequacy of both Programmed Learning and the CALL bundle over Traditional Lecture Method, dismissing 2&3 invalid speculation.
It proposes the understudies of Programmed Learning gathering and CALL aggregate scored essentially higher than the Traditional direction gathering. Subsequently, the graphical introduction is favoring the consequences of measurable examination. Here, bends of Programmed learning gathering and CALL are extremely close from each other and at a few focuses concurring and at a few focuses covering as well. This plainly indicates Programmed learning treatment and the CALL treatment offset the viability of each other.

SUMMING UP ANALYSES

Along these lines, the CALL Package produced for instructing of 'Activity Verbs' and "Tenses" is observed to be more viable than the Programmed learning in three phases of experimentation out of four and in one phase the Programmed learning and the CALL Package are observed to be similarly compelling to build understudies' accomplishment.

The CALL Packages created for educating of 'Activity Verbs' and "tenses" are observed to be more powerful than guideline through customary address technique in each of the four phases of experimentation.

Opinions towards the Programmed learning and CALL Package

An opinionnaire was directed to every one of the 101 understudies got guideline through Programmed learning of all the four phases of experimentation and each of the 101 understudies got guideline through CALL Package of the four phases of experimentation.

About the Opinionnaire

- An opinionnaire contained 10 statements - five positive and five negative.
- It was a three point rating scale, the three focuses being 'Sure', 'can't sure', 'and oppose this idea'.
- The code numbers 1, 2 and 3 were given to the focuses 'Sure', 'can't sure' and...
"dissent” individually as ostensible scale.

- After numbering the frequencies the investigation was finished utilizing Chi-square method. The outcomes are given in table no. 6.5.

**Chi-square Technique**

A measurable technique surveying the integrity of fit between an arrangement of watched esteems and those normal hypothetically.

**Table 6.5**

**According To Method of Instruction Chi - Square Values of Opinions**

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Method of Instruction</th>
<th>Fe</th>
<th>FO</th>
<th>Chi sq.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sure</td>
<td>Can't</td>
<td>Oppose</td>
</tr>
<tr>
<td>1.</td>
<td>I Would Like to learn other subjects by this method</td>
<td>Programmed Learning</td>
<td>31.3</td>
<td>78</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CALL</td>
<td>31.3</td>
<td>87</td>
<td>14</td>
</tr>
<tr>
<td>2.</td>
<td>It is tiresome to learn by this method</td>
<td>Programmed Learning</td>
<td>31.3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CALL</td>
<td>31.3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>It is difficult to remember the subject matter learnt by this method</td>
<td>Programmed Learning</td>
<td>31.3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CALL</td>
<td>31.3</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>4.</td>
<td>It is difficult to understand the subject by this method</td>
<td>Programmed Learning</td>
<td>31.3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CALL</td>
<td>31.3</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>5.</td>
<td>Concentration increase in learning by this method</td>
<td>Programmed Learning</td>
<td>31.3</td>
<td>89</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CALL</td>
<td>31.3</td>
<td>85</td>
<td>10</td>
</tr>
<tr>
<td>6.</td>
<td>This method of learning is more interesting than the ordinary learning method</td>
<td>Programmed Learning</td>
<td>31.3</td>
<td>97</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CALL</td>
<td>31.3</td>
<td>98</td>
<td>3</td>
</tr>
<tr>
<td>7.</td>
<td>The Classroom discipline is not maintained while learning by this method.</td>
<td>Programmed Learning</td>
<td>31.3</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CALL</td>
<td>31.3</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>8.</td>
<td>Tension/stress is experienced while learning by this method.</td>
<td>Programmed Learning</td>
<td>31.3</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CALL</td>
<td>31.3</td>
<td>4</td>
<td>5</td>
</tr>
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</table>
Learning by this method lasts longer.

<table>
<thead>
<tr>
<th></th>
<th>Programmed Learning</th>
<th>CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>31.3</td>
<td>31.3</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>164.77**</td>
<td>170.57**</td>
</tr>
</tbody>
</table>

Pictures and animations in this method make learning joyful.

<table>
<thead>
<tr>
<th></th>
<th>Programmed Learning</th>
<th>CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>31.3</td>
<td>31.3</td>
</tr>
<tr>
<td></td>
<td>96</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>5</td>
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</tr>
<tr>
<td></td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>170.57**</td>
<td>164.77*</td>
</tr>
</tbody>
</table>

**Significant at 0.01 level

**Interpretation**

As observing table 6.5, it is find that the obtained Chi-square values for all the statements for both the methods of instruction are significant at 0.01 level.

**Statement no. 1** the frequencies for "agreement" are higher than for "difference" and 'can't state' reactions for both the Programmed learning and the CALL techniques. The Chi-square estimates being 89.45 and 125.19 are noteworthy at 0.01 level. It elucidates that the understudies jumped at the chance to learn by this technique.

**Statement no. 2** the frequency for "difference" reaction is higher than the other two reactions. As the Chi-square values 170.57 and 182.06 for both the techniques are noteworthy at 0.01 level. Along these lines, it was not tedious to learn by this technique for the understudies.

**Statement no. 3** Chi-square estimates 176.26 and 154.30 of both the techniques are huge as the frequencies for "contradiction" reaction are higher than other two reactions. Along these lines, one might say that the understudies thought that it was anything but difficult to recall the topic learnt by this strategy.

**Explanation no. 4** the frequencies for "difference" are higher than that of "understanding" and 'can't state' reactions. The acquired Chi-square estimates 176.26 and 154.30 for both the strategies for direction are huge at 0.01 level. It proposes that understudies found no trouble in understanding the subject by this strategy.

**Proclamation no. 5** the Chi-square esteem 133.36 and 113.64 for both the techniques for direction are noteworthy as the frequencies of "understanding" are higher. It
demonstrates that understudies discovered their focus expanded in learning by this technique.

**Explanation no. 6** A large portion of them opined for the "assertion" reaction, it come about into making the Chi-square esteem s 170.57 and 176.26 huge at 0.01 level. For the understudies, the strategy for learning through the CALL Packages was additionally fascinating.

**Articulation no. 7** The vast majority of them opined for the "contradiction" reaction, it come about into making the Chi-square esteem s 104.26 and 96.08 critical at 0.01 level. Understudies opined that the classroom teach was kept up amid learning by this technique.

**Articulation no. 8** The Chi-square esteem s 159.60 and 148.36 acquired by breaking down their suppositions are noteworthy at 0.01 level. As the frequencies of "contradiction" reaction are higher. Understudies of the Programmed learning or the CALL technique did not encounter any strain/stretch while learning by this technique.

**Explanation no. 9** It is recommended by the gotten Chi-square esteem s 170.57 and 164.77, which is critical at 0.01 level. The greater part of the understudies were evident that learning by this technique endures longer.

Proclamation no. 10 the got Chi-square regards 170.57 and 164.77 are colossal at 0.01 level as the understudies are not differentiating in their decisions. So the understudies of both the procedures for bearing opined that photographs and energy in this strategy make learning upbeat.

The information examination on opinionnaire demonstrating understudies' very similar to learning through the Programmed learning and CALL Package. In the wake of controlling of the opinionnaire the scientist casually words with the understudies who got direction through the Programmed learning and the CALL Package and assembled the understudies' casual suppositions too. They gave some intriguing sentiments concerning why they loved learning through these strategies. In short their responses resembled following give understudies work space.
- are brilliant for bore and practice.
- are fun and engaging.
- are extraordinary helpers.
- give rehearse in PC utilize.
- do not get furious with understudies who commit errors.
- give prompt criticism.
- help understudies enhance their spellings.
- never neglect to remedy or appreciate.
- never get drained.

On the bases of above examinations and understanding, the following finishing up part abridge the entire work, specify the discoveries of the test and their suggestions and extension for additionally explores in the important territory.