CHAPTER - IV

ANALYSIS AND INTERPRETATION OF DATA

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INTRODUCTION

Analysis and interpretation of the data gathered from research study, is perhaps the most important stage in any research. It is considered by experts that the 'ultimate purpose of a research be it 'quantitative' or 'qualitative' is to draw upon general principles based on observations and findings of a research–study. The researcher selects a representative population pertaining to specific purpose of the research and then through observations and analysis of sample data, draw upon inferences.

In the present study, the investigator found out the significance of difference between the Means of two Experimental Groups and a Control Group. Here the study was set up to find the relative effectiveness of two types of remedial intervention programme for children with reading difficulty. A mere comparative superiority of Mean score of one group over the other is not considered to be a conclusive evidence of relative superiority of one over the other. Determining whether a difference is significant always involves discrediting a sample error explanation. The test of significance of difference between two means is known as CR/ 't' Test. It involves the computation of the ratio between experimental variance (difference between two sample Means of two groups) and error variance (the sampling error factor).

In accordance with the above discussion and its relevance with `Major Study’ of the present research- study, the researcher chose 't' Test as the teaching of statistical analysis. This study involved formulation of hypotheses and 9 hypotheses and 3 sub-hypotheses were formulated for the present study. Each of the hypotheses and sub-hypotheses were tested following appropriate procedure.

The present study included a `Concurrent Study’, which was a part of the `Major Study’, results were quantified and statistically analysed.

Apart from this, there were two case studies, especially designed to look into the remedial intervention of two subjects minutely. Descriptive and Quantitative analysis of this part was done, as the researcher felt quantitative study often misses out many details, which only a qualitative study can pay attention to.

Details of statistical analysis of the `Major Study’ and ‘Concurrent Study’ are described below. Details of the `Case Study’ and its qualitative analysis and detailed
discussions of the ‘Major study’, ‘Concurrent Study’ and the ‘Case Study’ are given in the following pages.

4.1. ANALYSIS AND INTERPRETATION OF DATA OBTAINED FROM `MAJOR STUDY’:

Three sets of data were collected (one from Experimental Group 1, one from Experimental Group 2 and one from Control Group 3) using data gathering devices. After collecting the data, they were systematically organized and analysed.

There were two types of data-analysis: one for intra-group comparisons and a second for inter-group and inter-sub-group comparisons.

H₁, H₂ and H₃ were formulated for the intra-group comparisons.

Where,

H₁, was formulated to find out the effectiveness of Intervention Programme I, on the reading performance of Exp.Gr 1.

H₂, was formulated to find out the effectiveness of Intervention Programme II, on the reading performance of Exp.Gr 2.

H₃, was formulated to find out the effectiveness of usual classroom instruction, on the reading performance of Ctrl.Gr.3.

H₄, H₅ and H₆ were formulated for inter-group comparisons.

H₄, was formulated to find out and compare the effect of Intervention Programme I on reading performance of Exp. Gr.1 with the effect of usual classroom instruction on reading performance of Ctrl.Gr.3.

H₅, was formulated to find out and compare the effect of Intervention Programme II on reading performance of Exp.Gr.2 with the effect of usual classroom instruction on reading performance of Ctrl.Gr.3.

H₆, was formulated to find out and compare the effect of Intervention Programme I on the reading performance of Exp.Gr.1 with the effect of Intervention II on reading performance of Exp.Gr.2.

Sub-hypotheses: H₂(a) , H₂(b) and H₂(c), were formulated for intra-group and inter-group comparisons.
**H2(a)**, was formulated to find out the effectiveness of Intervention Programme II on the reading performance of the female group of children with reading difficulty in Exp.Gr2(a).

**H2(b)**, was formulated to find out the effectiveness of Intervention programme II on the reading performance of male group of children with reading difficulty in Exp.Gr2(b).

**H2(c)**, was formulated to find out the effectiveness of Intervention programme II on the reading performance of mixed-group of children with reading difficulty in Exp.Gr2.(c)

Sub-hypotheses **H7**, **H8** and **H9** were formulated for intra-sub-group comparisons.

**H7**, was formulated to find out the comparative effectiveness of Intervention Programme II on the reading performance of the female group of children in Exp.Gr2(a) with the male group of children in Exp. Gr.2(b).

**H8**, was formulated to find out the comparative effectiveness of Intervention Programme II on the reading performance of the female group of children in Exp. Gr.2(a) with the mixed –gender group of children in Exp.Gr.2(c).

**H9**, was formulated to find out the comparative effectiveness of Intervention Programme II on the reading performance of male group of children in Exp.Gr2(b) with the mixed –group of children in Exp.Gr2(c ).

4.1.1 **Analysis of Data ( First Phase )** :

Prior to data –analysis in the first phase of the study, three important research questions arose:

Q1. Was there any improvement in reading performance of Group 1 after 8 months of intervention given by teachers trained by experts of Special School ?,

Q2. Was there any improvement in reading performance of Group 2 after 8 months of intervention was given by Researcher herself?

Q3. Was there any improvement in Group 3 where no special intervention was given but usual classroom teaching was carried out?
In order to answer the above research questions, researcher was led to verify the hypotheses stated below. Description of the verificational procedure of $H_1$, $H_2$ and $H_3$ is presented in the pages to follows:-

$H_1$: The effect of Intervention Programme I, on the reading performance of the children with reading difficulty will be positive.

$H_{01}$: The effect of Intervention Programme I, on the reading performance of the children with reading difficulty will not be positive.

Consequence: The Mean – Reading Post-Test Score of Experimental Group 1 will not be (significantly) greater than their Mean-Reading Pre-Test Score.

(Experimental Group 1 indicates the group on which Intervention Programme I was given)

(M-R- Post – Test Sc. Exp. Gr .1 ≰ M- R- Pre –Test Sc. Exp. Gr.)

Statistical Technique applied: ‘t’ test

Accepted Level of Significance: 0.01

The results of the analysis can be seen at a glance from the table given below:

**Table -1:**

Showing significance of difference between the Means of Reading Pre and Post – Test Scores of Exp. Group 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>$M_1$</th>
<th>$M_2$</th>
<th>$D$</th>
<th>$\sigma D$</th>
<th>$t$</th>
<th>L.O.S (0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp. Gr 1</td>
<td>59.55</td>
<td>60.07</td>
<td>0.52</td>
<td>0.53</td>
<td>0.98</td>
<td>N.S</td>
</tr>
</tbody>
</table>

Where, Exp. Gr 1: Group of children with reading difficulty who were subjected to Intervention Programme I

$M_1$: Mean of the Reading -Test Score of Exp. Gr1 before the Intervention Programme I was given (Reading Pre - Test Score)
$M_2$: Mean of the Reading-Test Score of Exp.Gr 1 after Intervention Programme I was given (Reading Post- Test Score)

From the Table -1, it is evident that the difference between Mean Reading Pre – Test Score and the Mean – Reading Post- Test Score of Exp. Group 1 is not significant at 0.01 levels.

Therefore, $H_{01}$ is retained and $H_1$ is rejected.

Here, it is found that though the $M$- Reading Post – Test Score of Exp. Gr1 is slightly greater than their $M$ - Reading Pre- Test score of Exp. Gr1, it is not significant at the accepted level . Since significantly greater score indicates better result and therefore, positive impact of the Intervention Programme on the reading performance of the subjects, it follows that the impact of Intervention Programme I (that was devised and administered by teachers trained by the Special school) on the reading performance of the children with reading difficulty is not positive.

$H_2$: The effect of Intervention Prgramme II, on the reading performance of the children with reading difficulty will be positive.

$H_{02}$: The effect of Intervention Programme II, on the reading performance of the children with reading difficulty will not be positive.

Consequence: The Mean–Reading Post- Test Score of Exp.Group 2 will not be (significantly) greater than their Mean – Reading Pre- Test Score.

(Experimental Group 2 means the group on which Intervention Programme II was given)

(M – $H_2$: The effect of Intervention Programme 2, on the reading performance of the children with reading difficulty will be positive.

(M – R- Post – Test Sc .Exp.Gr.2 $\not\approx$ M- R – Pre – Test Sc .Exp. Gr.2)

Statistical Technique applied: 't' test

Accepted Level of Significance: 0.01
The results of the analysis can be seen at a glance from the table given below:

**Table – 2:**

Showing significance of difference between Means of Reading Pre and Post- Test Scores of Exp. Gr. 2.

<table>
<thead>
<tr>
<th>Group</th>
<th>M₁</th>
<th>M₂</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S (0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp. Gr.2</td>
<td>66.07</td>
<td>78.44</td>
<td>11.67</td>
<td>2.29</td>
<td>5.09</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Where Exp. Gr. 2: Group of children with reading difficulty who were subjected to Intervention Programme 2.

M₁: Mean of the Reading Test- Score of Exp. Gr. 2 before Intervention Programme 2 was given (Reading Pre- Test Score)

M₂: Mean of the Reading Test- Score of Exp.Gr. 2 after Intervention Programme 2 was given. (Reading Post- Test Score).

From Table -2, it is evident that the difference between the Mean – Reading Post- Test- Score and the Mean – Reading Pre- Test- Score of Experimental Group 2 is significant and the Mean-Reading Post Test score is greater than the Mean-Reading Pre-Test score.

Since, significantly greater score indicates much better result and therefore, positive impact of the Intervention Programme on the subjects, it follows that the effects of Intervention Programme II (That was devised and administered by the researcher) on the reading performance of children with reading difficulty is positive. Therefore, H₀₂ is rejected and H₂ is retained.

H₂ was further broken up in to three sub- hypotheses and each of the sub-hypotheses was again verified.

It has been seen that there is a significant difference in reading performance between the pre-test score and the post – test score of Exp Group2, which in turn indicates a
positive impact of Intervention programme 2 on the reading performance of the children with reading difficulty in the group. This Exp. Gr2 comprised of subjects from a single gender school (girls), another single gender school (boys) and a mixed gender or co-ed school. As the test result indicated a positive impact of the programme on the reading performance of the subjects in Exp. Gr2 (where the programme 2 was administered by the researcher herself), the researcher decided to look at the impact of the Programme 2 on the childrens’ reading separately in the Girls’ School, Boys’ school and Co-ed school.

Three Sub- hypotheses were formulated and calculations were done where the intra – group comparisons between the Pre- Test and Post- Test Reading -Score of all 3 sub- groups were done to find out the impact of the Programme on three sub- groups of subjects classified according to gender.

**H**$_{2(a)}$: The effect of Intervention Programme 2, on the reading performance of female group of children with reading difficulty [Experimental Gr. 2(a)] reading in Girls’ school will be positive.

H$_{02(a)}$: The effect of Intervention Programme 2, on the reading performance of female group of children with reading difficulty [Experimental Gr. 2(a)] reading in Girls’ school will not be positive.

Consequence: The Mean –Reading Post – Test Score of Experimental Gr.2(a) will not be (significantly) greater than their Mean- Reading Pre-Test Score.

[Exp.Group 2(a) indicates the female-group of subjects reading in Girl’s school on whom Intervention Programme 2 was given].

M-R-Post –Test Sc. Exp. Gr.2 (a)$\geq$M-R-Pre-Test Sc. Exp. Gr. 2(a)

Statistical Technique applied: `t’ Test

Accepted Level of Significance: 0.01
The results of the analysis can be seen at a glance from the table given below:

**Table 3:**

Showing significance of difference between Means of Reading Pre and Post – Test Scores of Exp. Gr.2(a ).

<table>
<thead>
<tr>
<th>Group</th>
<th>M₁</th>
<th>M₂</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S (0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp.Gr.2(a)</td>
<td>52.67</td>
<td>74.67</td>
<td>22</td>
<td>2.54</td>
<td>8.67</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Where, Exp.Gr.2 (a): Female group of children reading in a Girl’s school with reading difficulty subjected to Intervention Programme 2

M₁: Mean of the Reading Test- Score of Experimental Gr .2(a) before Intervention Programme 2 was given (Reading Pre- Test Score).

M₂: Mean of the Reading Test-Score of Experimental Gr.2(a) after Intervention Programme 2 was given ( Reading Post -Test Score )

It is evident from the above table that the difference between the Mean - Reading Post- Test Score and the Mean – Reading Pre- Test Score of Experimental Group.2(a) is significant and the Mean– Reading Post- Test Score of Experimental Gr.2(a) is significantly greater than the Mean – Reading Pre- Test Score.

Since, significantly greater score indicates much better reading score of the subgroup, it follows that the effects of the Intervention Programme 2 on the reading performance of female students with reading difficulty in the Experimental Gr.2(a) is positive. Therefore, H₀₂(a) is rejected and H₂(a) is retained.

H₃₀₂(b): The effect of Intervention Programme 2 on the reading performance of male-group of children with reading difficulty [Experimental Gr.2(b)] reading in Boys’ school will be positive.

H₀₂₂(b): The effect of Intervention Programme 2 on the reading performance of male-group of children with reading difficulty [Experimental Gr.2((b)) reading in Boy’s school will not be positive.
Consequence: The Mean – Reading Post-Test Score of Experimental Gr.2 (b) will not be (significantly) greater than their Mean – Reading Pre – Test Score.

[Group 2(b) indicates the male – group of subjects reading in Boy’s school on whom Intervention Programme 2 was given.]

M-R-Post – Test Sc. Exp. Gr. 2(b) ≥ M-R – Pre- Test Sc. Exp. Gr. 2(b)

Statistical Technique applied: ‘t’ Test

Accepted Level of Significance: 0.01

The table below shows the result of the analysis

**Table 4:**

Showing significance of difference between Means of Reading Pre and Post – Test Scores of Exp. Gr. 2(b).

<table>
<thead>
<tr>
<th>Group</th>
<th>M₁</th>
<th>M₂</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S (0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp.Gr.2(b)</td>
<td>61.7</td>
<td>71.55</td>
<td>11.85</td>
<td>1.88</td>
<td>6.28</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Where, Exp.Gr.2 (b): Male- Group of children reading in Boys’ school with reading difficulty who were subjected to Programme 2.

M₁: Mean of the Reading - Test Score of Experimental Gr.2 (b) before Intervention Programme 2 was given (Reading Pre- Test Score).

M₂: Mean of the Reading – Test Score of Experimental Gr.2 (b) after Intervention Programme 2 was given (Reading Post- Test Score).

The above table clearly shows that there is significant difference between M₁ and M₂.

It is also evident from the above Table that the Mean – Reading Post - Test Score of Group2 (b) is significantly greater than their Mean– Reading Pre- Test Score.

Since, significantly greater score indicates much better reading score and therefore, a positive impact of the Intervention Programme II on reading of the subjects, it
follows that the effects of the Intervention Programme II on the reading of children with reading difficulty in Experimental Gr.2(b) is positive.

Therefore \( H_{02} (b) \) is rejected and \( H_2 (b) \) is retained.

\( H_2(c) \): The effect of Intervention Programme 2 on the reading performance of the mixed- gender- group of children with reading difficulty [Experimental Gr.2(c)] reading in Co-ed school will be positive.

\( H_{02(c)} \): The effect of Intervention Programme 2 on the reading performance of the mixed- gender- group of children with reading difficulty [Experimental Gr.2(c)] reading in Co-ed school will not be positive.

Consequence: The Mean – Reading Post –Test Score of Exp. Gr.2 (c) will not be (significantly) greater than their Mean – Reading Pre- Test Score.

[Exp.Group 2(c) indicates the mixed – gender-group of subjects reading in Co-ed school on whom Intervention Programme 2 was given.

\( M-R- \) Post – Test Sc. Exp.Gr.2(c) \( \rightarrow \) M- R- Pre- Test Sc.Exp. Gr.2(c)

Statistical Technique applied: ‘t’ Test

Accepted Level of Significance: 0.01

The results of the analysis can be seen from the table given below

**Table 5:**

<table>
<thead>
<tr>
<th>Group</th>
<th>( M_1 )</th>
<th>( M_2 )</th>
<th>( D )</th>
<th>( \sigma D )</th>
<th>( t )</th>
<th>L.O.S(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp.Gr.2(c)</td>
<td>77.6</td>
<td>84.16</td>
<td>6.56</td>
<td>4.59</td>
<td>1.42</td>
<td>N.S</td>
</tr>
</tbody>
</table>

Where, Exp. Gr.2(c): Mixed – gender- group of children reading in Co-ed school with reading difficulty who were subjected to Programme 2.
$M_1$: Mean of the Reading-Test Score of Experimental Gr.2(c) before Intervention Programme 2 was given (Reading Pre-Test Score)

$M_2$: Mean of the Reading –Test Score of Experimental Gr.2(c) after Intervention Programme 2 was given (Reading Post-Test Score).

Here, the Mean – Reading Post- Test Score is found to be not significantly greater than the Mean – Reading Pre- Test Score of Gr.2 (c).

Since, significantly greater score indicates much better result and therefore , a positive impact of the Intervention Programme on reading performance of the subjects, it follows that the effects of the Intervention Programme 2 on the reading performance of children with reading difficulty in Gr. 2 (c) is not positive. Hence, $H_{02}(c)$ is retained and $H_{2}(c)$ is rejected.

$H_3$: The effect of usual classroom instruction, on the reading performance of the children with reading difficulty will be positive.

$H_{03}$: The effect of usual classroom instruction, on the reading performance of the children with reading difficulty will not be positive.

Consequence: The Mean-Reading Post-Test Score of Control Group 3 will not be (significantly) greater than their Mean-Reading Pre –Test Score, after a specified period (i.e. after 8 months of usual classroom instruction only).

(Group 3 Indicates the Control Group who followed usual classroom instructions only, during the specified period)


Statistical Technique applied: ‘t’ Test

Accepted Level of Significance: 0.01
The results of the analysis can be seen at a glance from the table below:

**Table 6:**

Showing Significance of difference between the Means of Reading Pre and Post- Test Scores of Group 3.

<table>
<thead>
<tr>
<th>Group</th>
<th>M₁</th>
<th>M₂</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S.(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ctrl. Gr.3</td>
<td>51.27</td>
<td>52.05</td>
<td>0.78</td>
<td>0.69</td>
<td>1.15</td>
<td>N.S</td>
</tr>
</tbody>
</table>

Where, Ctrl. Gr .3: Group of subjects with reading difficulty who followed usual classroom instructions only, during the specified period.

M₁: Mean of the Reading Test Score of the Ctrl.Gr. 3 before the specified period when usual classroom instruction was carried out only (Reading – Pre-Test Score)

M₂: Mean of the Reading Test Score of the Ctrl.Gr. 3 after the specified period when usual classroom instruction was carried out only (Reading – Post- Test Score)

Table- 6, Shows that the Mean –ReadingPost-Test Score is not significantly greater than Mean- Reading Pre-Test score of Gr.3

Though the M- Reading Post– Test Score of Ctrl.Gr .3 is found to be slightly greater than their M – Reading Pre-Test Score, it is not significant at the accepted level.

Since, significantly greater score indicates positive impact of the classroom instruction on the reading performance of the subjects, it follows that the effect of the usual classroom teaching carried out by class teachers of Ctrl.Group 3 on the reading performance of children with reading difficulty is not positive. Hence, HO₃ is retained and H₃ is rejected.

4.1.2. (B) **Analysis of Data (Second Phase):**

At the second phase of data analysis, inter –group comparisons between Experimental Gr 1 and Experimental Gr. 2 and Control Group were made to find out
the relative effectiveness of two Intervention Programmes on children having reading difficulty.

\( H_4 \) and \( H_6 \) had been formulated to make inter-group comparisons and arrive at the conclusion in this regard.

Details of the verification of hypotheses at the second phase of analysis of data (major study) are given as below.

\( H_4 \): After the specified period, the reading performance of Experimental group 1 will differ significantly from that of the Control Group

\( \text{Ho}_4 \): After the specified period, the reading performance of Experimental Group 1 will not differ significantly from that of Control Group 3

Consequence: There will be no significant difference between the Mean – Reading – Post-Test Score of Exp.Gr.1 and the Mean Reading–Post - Test Score of Ctrl. Gr.3.

(Group 1 indicates the group, on which Intervention Programme 1 was given, Group 3 indicates the group who followed usual classroom instructions only.)


Statistical Technique applied: `t’ Test

Accepted level of Significance: 0.01

The results of the analysis are presented in the table below:

**Table -7:**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Means</th>
<th>D</th>
<th>( \sigma \text{D} )</th>
<th>\text{t}</th>
<th>L.O.S(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp.Gr.1</td>
<td>( M_1=60.07 )</td>
<td>8.02</td>
<td>1.4</td>
<td>5.73</td>
<td>Significant</td>
</tr>
<tr>
<td>Ctrl. Gr.3</td>
<td>( M_2=52.05 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Where, Exp.Gr 1: Group of children with reading difficulty who were subjected to
Intervention Programme I.

Ctrl .Gr 3: Group of children who followed usual classroom instructions only.

$M_1$: Mean of Reading Test- Score of Group 1 after the specified period when
Programme 1 was given (Reading Post- Test Score of Exp. Gr1)

$M_2$: Mean of the Reading Test- Score of Ctrl. Gr 3 after the specified period when
usual classroom instruction was carried on only (Reading Post- Test Score of
Ctrl.Gr3)

The above table shows that the difference between Reading Post - Test Score of Exp.
Group 1 and that of Reading Post-Test Score of Ctrl. Group 3 is significant.

Therefore $H_{04}$ is rejected and $H_4$ is retained.

It is evident from the above table that the difference between the Mean – Reading
Post- Test Score of Exp.Gr.1 and the Mean - Reading Post- Test Score of Ctrl. Gr. 3 is
significant.

The Mean – Reading Post- Test Score of Exp.Gr1 is found to be significantly greater
than the Mean – Reading Post - Test Score of Ctrl. Gr. 3.

Since greater score indicates a better result in the reading performance of the subjects
, it follows that Intervention Programme 1 caused much more improvement in the
subjects having reading difficulty than those who followed usual classroom
instruction only.

$H_5$: After the specified period, the reading performance of Experimental Group 2 will
differ significantly from that of Control Group 3.

$H_{05}$: After the specified period the reading performance of Experimental Group 2 will
not differ significantly from that of Control Group 3.

Consequences: The Mean – Reading Post- Test Score of Exp. Gr.2 and the Mean –
Reading Post-Test Score of Ctrl.Group 3 will not be significantly different.

(Exp.Group 2 indicates the group on which Intervention Programme 2 was given;
Ctrl..Group 3 indicates the group on which usual classroom teaching was carried on.)

Statistical Technique applied: \( t \) Test

Accepted level of Significance: 0.01

The result of analysis is given in the table below:

**Table -8 :**

Showing significance of difference between the Means of Reading Post-Test Scores of Exp.Group 2 and Ctrl. Group 3

<table>
<thead>
<tr>
<th>Groups</th>
<th>Means</th>
<th>D</th>
<th>( \sigma D )</th>
<th>t</th>
<th>L.O.S(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp. Gr.2</td>
<td>M_1=78.44</td>
<td>26.39</td>
<td>1.96</td>
<td>13.46</td>
<td>Significant</td>
</tr>
<tr>
<td>Ctrl. Gr.3</td>
<td>M_2=52.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where, Exp. Gr 2: Group of children with reading difficulty who were subjected to Intervention programme 2 during the specified period.

Gr3: Group of children with reading difficulty who followed usual classroom instructions only during the specified period.

M_1: Mean of the Reading Post-Test Score of Exp. Group 2 after the specified period (Reading Post-Test Test Score of Exp. Gr .2)

M_2: Mean of the Reading Post –Test-Score of Ctrl. Group 3 after the specified period (Reading Post-Test Score of Ctrl. Gr, 3)

From Table -8, it is evident that the difference between Mean - Reading Post- Test Score of Exp.Group 2 and that of Mean – Reading Post - Test Score of Ctrl.Group 3 is highly significant .

Therefore, \( H_05 \) is rejected and \( H_5 \) is retained.

Here, the Mean– Reading Post- Test scores of Exp.Gr. 2 are found to be significantly greater than the Mean- Reading Post - Test Score of Ctrl.Gr. 3.

Since, significantly greater score indicates a much better result in the reading performance of the subjects, it follows that of Intervention Programme 2 has caused
significant improvement in the reading performance of the children with reading difficulty as compared to that in the group of subjects who followed usual classroom instruction only.

**Hₖ:** After the specified period the reading performance of Exp.Group 1 will differ significantly from that of Experimental. Group 2

**Hₒₑ:** After the specified period the reading performance of Experimental Group 1 will not differ significantly from that of Experimental Group 2

Consequence: The Mean – Reading Post- Test Score of Exp. Gr.1 and Mean – Reading Post- Test Score of Exp. Gr. 2, will not be significantly different.

(Exp.Group 1 indicates the group, on which Intervention Programme 1 was given, Exp.Group 2 indicates the group on which Intervention Programme 2 was given.)

(M – R – Post- Test Sc. Exp. Gr.1 = M- R – Post -Test Sc. Exp.Gr.2)

Statistical Technique applied: `t’ Test

Accepted level of Significance: 0.

The results of analysis can be seen at a glance from the table given below:

**Table – 9:**

Showing significance of difference between the Means of Reading Post Test Scores of Exp. Group 1 and Exp. Group 2.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Means</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp. Gr.1</td>
<td>M₁=60.07</td>
<td>18.37</td>
<td>1.78</td>
<td>10.32</td>
<td>Significant</td>
</tr>
<tr>
<td>Exp Gr.2</td>
<td>M₂= 78.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where, Exp. Gr 1: Group of children with reading difficulty who were subjected to Intervention Programme 1

Exp. Gr 2: Group of children with reading difficulty who were subjected to Intervention Programme 2
M_1: Mean of the Reading -Test Score of Exp. Gr 1 after Programme 1 was given.

(Reading Post - Test score of Exp. Gr.1)

M_2: Mean of the Reading -Test Score of Exp.Group 2 after Programme 2 was given

(Reading Post-Test Score of Exp.Gr.2)

From the Table – 9, it is evident that the difference between Mean – Reading Post-
Test Score of Exp.Group 1 and the Mean – Reading Post - Test Score of Exp. Gr 2 is
significant at the accepted level.

Therefore, \( H_{o6} \) is rejected and \( H_6 \) is retained.

Here, the Mean – Reading Post- Test Score of Exp.Gr2 is found to be significantly
greater than the Mean – Reading Post-Test Score of Exp. Gr 1.

Since greater score indicates a better result in reading performance of the subjects, it
follows that the effect of Intervention Programme 2 on the reading performance of the
children with reading difficulty in Exp.Gr.2 has shown much more improvement as
compared to children with reading difficulty in Exp.Gr. 1.

Apart from inter group comparisons, inter – sub – group comparisons were also made:

\( H_7, \ H_8 \) and \( H_9 \) had been formulated in order to make inter sub-group (2a, 2b and 2c)
comparisons. The purpose was to find out the relative effectiveness of Intervention
Programme 2 on those sub-groups. The details of the hypotheses – verification
procedure are presented below:

\( H_7 \): After a specified period the reading performance of Experimental Gr.2 (a) will
differ significantly from that of Experimental Gr.2 (b).

\( H_{o7} \): After a specified period the reading performance of Experimental Gr.2 (a) will
not differ significantly from that of Experimental Gr.2 (b).

Consequence: The Mean- Reading Post-Test Score of Experimental Gr.2 (a) and the
Mean –Reading Post- Test Score of Experimental Gr.2 (b) will not be significantly
different.

(Exp.Group 2(a) indicates the female group of subjects reading in a Girls’ school on
whom Intervention Programme 2 was administered
Exp. Group 2 (b) indicates the male group of subjects reading in a Boy’s school on whom Intervention Programme 2 was administered.

M-R-Post-Test Sc. Exp. Gr2 (a) = M-R-Post-Test Sc. Exp. Gr.2 (b)

Statistical Technique applied: ‘t’ Test

Accepted Level of Significance: 0.01

**Table 10:**

Showing significance of difference between Reading Post-Test Scores of Exp. Group 2 (a) and Exp. Group 2 (b).

<table>
<thead>
<tr>
<th>Groups</th>
<th>Means</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp.Gr.2(a)</td>
<td>M₁=74.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exp.Gr.2(b)</td>
<td>M₂=73.55</td>
<td>1.12</td>
<td>3.67</td>
<td>0.305</td>
<td>N.S</td>
</tr>
</tbody>
</table>

Where, Exp. Gr.2 (a): Female Group of subjects reading in Girl’s School on whom the Intervention Programme 2 was administered.

Exp. Gr.2 (b): Male Group of subjects reading in a Boys’ school on whom the Intervention Programme 2 was administered.

M₁: Mean of the Reading Test-Score of Gr.2 (a) after the Programme 2 was given (Reading Post-Test Score of Exp. Gr.2 (a)

M₂: Mean of the Reading Test Score of Gr.2 (b) after the Programme 2 was given

(Post – Reading Post-Test Score of Exp. Gr.2 (b)

It is evident from the above table that the difference between the Mean – Reading Post-Test Score of Gr.2 (a) and that of Mean - Reading Post-Test Score of Gr.2 (b) is not significant.

Therefore \( H_0 \) is retained and \( H_1 \) is rejected.

Here, the Mean – Reading Post- Test Score of Gr.2 (a) is found to be not significantly greater than the Mean -Reading Post- Test Score of Gr.2 (b).
From the above analysis, it can be inferred that the level of improvement in the two groups were not significantly different.

**Hₜ**: After the specified period the reading performance of Experimental Group 2 (a) will differ significantly from that of Experimental Group 2 (c).

**Hₒₜ**: After the specified period the reading performance of Experimental Group 2 (a) will not differ significantly from that of Experimental Group 2 (c).

Consequence: There will be no significant difference between the Mean – Reading Post- Test Score of Experimental Group 2 (a) and the Mean - Reading Post-Test Score of Group 2 (c).

Exp. Group 2 (a): indicates the female group of subjects reading in Girls’ school on whom Intervention Programme 2 was given.

Exp. Group 2 (c): indicates the mixed-gender group of subjects reading in a Co-ed school on whom Intervention Programme 2 was given.

M-R-Post Test Sc. Exp. Gr. 2(a) = M-R-Post Test Sc. Exp. Gr. 2(c)

Statistical Technique applied: ‘t’ Test Accepted Level of Significance: 0.01

The table below shows the result of the analysis.

**Table 11:**

Showing significance of difference between the means of Reading Post-Test Scores of Exp. Group 2 (a) and Exp. Group 2 (c).

<table>
<thead>
<tr>
<th>Groups</th>
<th>Means</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp. Gr. 2(a)</td>
<td>M₁=74.67</td>
<td>9.49</td>
<td>4.27</td>
<td>2.22</td>
<td>N.S</td>
</tr>
<tr>
<td>Exp. Gr. 2(c)</td>
<td>M₂=84.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where Gr. 2 (a): Female Group of subjects reading in Girls’ school on whom Intervention Programme 2 was given.
Gr.2(c): Mixed –gender Group of subjects reading in Co-ed school on whom Intervention Programme 2 was given.

M₁: Mean of Reading Test- Score of Exp.Gr.2 (a) after Programme 2 was given

(Reading – Post-Test Score of Gr.2 (a))

M₂: Mean of Reading Test- Score of Exp. Gr.2 (b) after Programme 2 was given

(Reading - Post-Test Score of Gr.2(c) after Programme 2 was given)

It is evident from the above table that the difference between Mean–Reading Post - Test Score of Experimental Gr.2 (a) and that of the Mean-Reading Post- Test score of Experimental Gr.2(c) is not significant.

Therefore Ho₈ retained and H₈ rejected.

Here , though the Mean – Reading Post- Test Score of Exp. Gr.2 (c) is greater than the Mean-Reading Post - Test Score of Exp .Gr.2 (a ) , the difference is not significant at the accepted level.

Therefore it can be said that there is no significant difference in the level of improvement of the two groups of subjects after Intervention Programme 2 was given.

H₀₉: After a specified period the reading performance of Experimental Group.2 (b) will differ significantly from that of Experimental Group.2(c)

H₀₉: After a specified period the reading performance of Experimental Group.2 (b) will not differ significantly from that of Experimental Group. 2(c).

Consequence: The Mean –Reading Post-Test Score of Experimental Gr.2 (b) and the Mean –Reading Post- Test Score of Experimental Gr.2(c) will not be significantly different.

Exp.Group2 (b) indicates the male group of subjects reading in Boys’ school on whom the Intervention Programme 2 was given.

Exp. Group 2(c) indicates the mixed-gender group of subjects reading in Co-ed school on whom the Intervention Programme 2 was given.
M-R-Post-Test Sc. Exp. Gr.2 (b) = M-R-Post- Test Sc. Exp. Gr.2(c)

Statistical Technique applied: ‘t’ Test Accepted level of Significance: 0.01

The results of analysis can be seen from the table given below:

**Table 12:**

Showing significance of difference between the Means of Reading Post- Test Scores of Exp.Group 2(b) and Exp.Group 2(c).

<table>
<thead>
<tr>
<th>Groups</th>
<th>Means</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp.Gr.2(b)</td>
<td>$M_1=73.55$</td>
<td>10.61</td>
<td>3.34</td>
<td>3.12</td>
<td>Significant</td>
</tr>
<tr>
<td>Exp.Gr.2(c)</td>
<td>$M_2=84.16$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where Exp. Gr.2 (b): Male Group of subjects reading in a Boys’ school on whom Intervention Programme 2 was given.

Exp.Gr.2(c): Mixed-gender Group of subjects reading in a Co-ed School on whom Intervention Programme 2 was given.

$M_1$: Mean of the Reading –Test score of Experimental Gr.2 (b) after the Intervention Programme 2 was given

(Reading Post- Test Score of Exp. Gr2b)

$M_2$: Mean of the Reading -Test Score of Gr.2(c) after the Intervention Programme 2 was given.

(Reading – Post Test Score of Exp.Gr2c)

It is evident from the above table that the difference between Mean – Reading Post - Test Score of Gr.2(b) and that of Mean - Reading Post- Test Score of Gr.2(c )is significant.

Therefore, $H_0$ is rejected and $H$ is retained.
Here, the Mean Reading Post - Test Score of Exp. Gr.2(c) is found to be significantly greater than the Mean Reading– Post-Test Score of Exp. Gr.2 (b).

Since significantly greater score indicates much better result in reading performance of the subjects, it follows that Intervention Programme II caused much more improvement in the reading performance of Exp. Gr.2(c) than on Exp.Gr.2(b), that is to say, it caused more improvement in reading performance of mixed-gender-group of subjects reading in co-ed school than that of male subjects reading in Boys’ school.

4.2. CONCURRENT STUDY:

The area of the present study of the researcher is: ‘Reading Difficulty’, which may or may not include children with ‘dyslexia’. It is the current opinion of some experts that dyslexia can occur as a cluster of symptoms rather than in isolation. It is to be noted that various experts are of the opinion that dyslexia may occur as a comorbidity with ADHD and also with ‘visual distress’. A significant criterion of this syndrome is that letters seem to move around on white paper and subjects find it difficult to read against start white background. Hence some experts like Arnold Wilkins are of the opinion that ‘coloured overlays’ and also ‘coloured lens’, may help in alleviating the problem ‘visual distress’ and as a consequence that of reading difficulty.

As the researcher’s investigation deal with reading difficulty the researcher thought it only pertinent to deal with the possibility of comorbidity of ‘visual distress’, with reading difficulty. Hence the researcher selected Exp. Gr2(c) to be the group where she as per requirement and symptom of the syndrome conducted a smaller informal survey with the help of a check–list whether children had difficulties like ‘moving letters’ etc. Only 8 students out of 25 children reported that they had the syndrome or had some difficulties in this regard. The researcher provided these pupils coloured overlays suitable for them and each selected a colour they felt they were most comfortable with to look at black and white prints. The subjects maintained the same overlays till the end of the period of Intervention for a period of 8 months. In order to find out if really the subjects benefitted from the use of overlays, or in other words, there was positive impact of overlays on the reading performance of subjects with reading difficulty, a research question was framed and a concurrent study was done.
**Research Question**: Do subjects with reading difficulty having problem of reading black prints on white background (like moving letters) benefit in their reading performance from use of ‘Coloured Overlays’?

As there were 8 subjects of mixed gender from the co-ed school who used overlays, the researcher also selected 8 other subjects (selected at random) who did not use overlays from the same group and compared their reading test performance before and after the 8 months period of Intervention continuously given to them. Where 8 of them used overlays continuously and other 8 did not. A researcher adapted Tool no 3 (1- Minute Reading Test) was administered as Pre-Test and Post Reading Performance Test.

A detailed analysis of the data obtained from the Concurrent Study is given below:

**4.2.1. Analysis of the data of the Concurrent Study of Gr 2c:**

**Table 13:**

Showing significance of difference between Reading Post-Test Scores of Exp.Gr.2(c)O and Exp.Gr2(c)WO (both sub-groups of Exp.Gr.2(c))

<table>
<thead>
<tr>
<th>Group- Sub-Groups</th>
<th>Means</th>
<th>D</th>
<th>σD</th>
<th>t</th>
<th>L.O.S.(0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gr.2(c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gr.2(c)O</td>
<td>88.13</td>
<td>13.63</td>
<td>5.38</td>
<td>2.53</td>
<td>N.S</td>
</tr>
<tr>
<td>Gr.2(c)WO</td>
<td>74.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where:

Gr2(c): Group of children with reading difficulty who belonged to the mixed gender school (reading in co-ed. School)

Gr2(c) O: The group of children with reading difficulty in Gr(c) who used coloured Overlays

Gr2(c) WO: The group of children with reading difficulty in Gr (c) who did not use Overlays or the group Without Overlays.
The above table indicates that though there is a difference between the Means of the groups 2(c) O and 2(c) WO it is not significant at 0.01 levels.

It can be inferred from the above findings that the use of overlays did not make a significant impact on students who used them on a regular basis for a period of 8 months compared to those who did not use them during the same period.

4.3. REPORT ON THE CASE-STUDY:

Apart from the above mentioned major parts of the study (group –study), the researcher also conducted case study of two children with reading difficulty. She wanted to study the effect of the Intervention Programme developed by her, on those children individually. They were individually and very closely attended to by her for a period of time (5 months) and improvements in their performance were noted. Descriptive and qualitative analysis of this ‘in-depth’, study was done.

4.3.1. Description of two cases under study:

Two children having average to above average IQ reading in class 5 at an English medium school and having reading difficulty were taken as subjects for this intensive study. The school was selected randomly from English medium schools of the area covered by this study. These two children were selected from among 7 children equated as regards IQ, socio- economic condition of home etc in class V of the selected having same level of reading difficulty.

Both the children were of the same gender (male), had Bengali as mother tongue and spoke Bengali language at home, whereas learnt English in an English medium school. Both of them belonged to 10-11 age-groups.

It was necessary to ascertain the level of reading difficulty of these children, as this was an important criterion in ‘one-to-one’ remedial teaching sessions held for the subjects.

4.3.2. Procedure:

Case Study method was followed in this part of the study. First of all, the cases for this ‘in-depth’ study was selected.
For this, the researcher visited one school which was selected randomly from among English medium schools within the jurisdiction of the study. Here after preliminary talks a date and time was fixed to administer the researcher constructed Tool No5 (Inventory for Identifying Reading Difficulty). This was also used to determine the level of remedial intervention needed for the children of 10-11 years. Then on another suitable date and time Tool No 6 (Malin’s Intelligence Scale for Indian Children MISIC) was administered on the identified children. Children with average to above average IQ having similar socio-economic background were only chosen. Only 7 subjects fitted the criteria, 2 children were selected randomly from those 7 children for this part of the study. Variables such as: age, intelligence and socio-economic conditions were controlled through appropriate measures.

Then again, Tool No 3 (1 Minute Reading Test) was administered as a Pre-test prior to the administration of the researcher designed one to one Schedule for Intervention Programme II (Tool No 7) for a period of 5 months, after which the Tool No 3 was again administered as a Post- Test for noting the improvement in their reading performance, if there was any.

4.3.3 Details of the subjects:

The two subjects referred as Case 1 or ‘J’ and Case 2 or ‘A’ were both male and studied in the same class: 5. The two subjects were found to be of average IQ as per findings of the MISIC Test and also; they were at the same level of reading difficulty as per findings of the Inventory for Identification of Reading Difficulty (Tool No: 5). However the interest of the two subjects differed. ‘J’ was more into science and language skills were much less developed compared to Math skills. Whereas, ‘A’, was more into language and though written and reading skills were below expected level, he had a lot of interest in general knowledge and was much better in oral language skills.

The two subjects were found to be cooperative and responded to all commands of the researcher during the remedial lessons, but they were found to be talkative and distracting one another if they sat next to one another. Though both subjects kept pace with one another in most lessons except a few where additional attention had to be given to ‘J’, keeping the work attitude of the subjects in mind they were made to sit
on two sides of the researcher where individual attention could be given to both. Discussions and talking to one another while taking dictation were discouraged.

4.3.4. Details of the Intervention Programme III:

The researcher devised Intervention Programme III which was structured and multisensory and phonetic in nature. This meant the remedial programme started with the sound awareness of the letters. The letters were then taught to ‘blend’ with one another to form words. The students were taught the basic awareness of long and short vowels. The words were read as ‘onset-rime’. Then they were taught to read words from researcher made books that were read as per level of reading of the subjects. Spelling Rules in English were taught and according to the progress of the subject written work to some extent was done every day to reinforce the spelling concept, however main emphasis remained on reading rather than writing. If the subject was found to make a lot of substitution and deletion, then remedial back–up of ‘letter deletion in words was practiced as a part of a word game. Every day’s lesson had a revision point and sometimes the subjects took home some practice lessons of some sounds as this was crucial to any reading exercise. The strategy was overall based on

The rationale that certain foundation skill is crucial to the success of English language learning. As per the findings of the Inventory that detected the foundation skills to be absent in a child’s English knowledge, that particular skill learning as per need of the child/children was incorporated in the remedial programme. This Intervention programme III is referred as Tool no 7.

The remedial sessions with the two subjects, who are referred as Case 1 or ‘J’ and Case 2 or ‘A’, continued for 3 days a week for 5 months. The subjects attended the sessions in addition to the regular English class they attended as apart of their regular school routine.

4.3.6. Details of the intervention given and analysis of results (descriptive and qualitative) as per Observation of the Researcher:

The remedial lessons that were spread over 5 months, the initial 4 weeks were especially devoted to an awareness of letter sounds of alphabets and sequence of the
same. Both Case 1 and case 2, were found to be unsure of the sequence of the alphabets, the former was unsure from the beginning whereas the later’s insecurity was towards the end of the sequence. This was picked up as a starting point of the remedial lessons. They were also unsure of the letter sounds so the researcher had decided to start the lessons with ground skills of letter sequence and letter sounds. In teaching the letter sounds, first the sounds of all alphabets were taught, then vowels were identified and short vowel sounds were emphasized initially for the first two months.

The first twelve lessons were kept for laying a foundation for the ‘phonetic sense’ in the subjects.

4.3.6(A) Awareness In Phonics Or Letter Sound:

In the first lesson the emphasis was placed to reinforce the sequencing skills of the alphabets. As ‘J’ had difficulty in the beginning of the alphabet recall and arrangement of alphabets blocks, whereas ‘A’ did the later part of the alphabet sequencing only as he was confident from the beginning. The subjects were given an awareness of vowels and only 2 short vowel sounds were tackled in details, as well as the consonant sounds. The repeated drills of the vowel sounds were done with the help of various work sheets. A typical example of worksheet was one in which perhaps the first letter sound of the short vowel ‘a’ and ‘e’ were identified, both initial and medially placed in words. They picked up the skill, though seemed confused in the beginning. Both J and A were able to identify vowel sounds in the beginning and medial part of words from worksheets. They traced letters on multi-surface and sanded out letter sounds.

Reading text level work was very slow in the beginning for both. They were both taught to read with confidence with proper intonation and pronunciation. Some words were difficult that was helped to decode and re-read again. 3 kinds of reading were done. They were student–student reading, student- teacher reading and Neuro-impress.

Spelling and dictation from selected text content read by subjects were given to both. Mistakes were corrected.
Subjects were asked to practice letter sounds at home.

For the second lesson, a routine practice of the alphabet sequence and sounds was done. The retention of the previous lesson of both ‘J’ and ‘A’ were noted. Sequencing was much improved in both the subjects. The sound retention was quite good with a few exceptions. At this point, the vowels were revised and at all times image of letters that will start with a vowel sound were shown some picture cards. Consonants were also quizzed from various object pictures and the first sound of each was asked. Performance of both ‘J’ and ‘A’ were satisfactory with few exceptions. As a part of new teaching short vowel sounds of ‘i’, ‘o’ and ‘u’ were introduced and activities to reinforce the sound identifications and distinctions through worksheets etc were done.

All short words with short vowels were read if and when the subjects skipped or substituted a word they were taken back to read and re-read again, then spelling dictation of these words were given. After which again they were taken back to simple text reading with the read words being incorporated. The subjects were happy with the initial simplistic nature of the work and felt comfortable thought he had slight difficulty in pronunciation etc. Case 1 or ‘J’ read better than the day before but there was slight mispronunciation of sounds of short sounds ‘a’ and ‘e’ as and when it occurred in continued sentences. ‘J’ found pronouncing ‘I’ as short vowel and often pronounced the long sound of the same. He therefore needed repeated practice of the same. ‘A’ read better than ‘J’. They also followed a paired reading technique. However both had a tendency to read haltingly. This the teacher read with proper intonation etc which was repeated by the students. This time round, the reading was better. They were both motivated to do the lessons. Additional homework was not given only routine practice of sounds was advised.

For the third lesson or the last lesson of the first week, revision of the vowel sounds and the consonant sounds was done and the retention was checked. Any mispronunciation was checked and corrected by means of listening to recorded letter sounds recorded prior to the lesson by the researcher. Practice in the short vowel sounds were done the subjects could recall and identify the short vowel sounds from the worksheets. The sound identification was done both of the initial sound and that of the medial sound as well. As a practice for vocabulary, various words incorporating various short vowels were read and spelling dictation was given. Spelling error due to
problem of vowel sound identification was immediately corrected and a repeat practice was given. A text incorporating the words introduced as part of the day’s lesson was read. Slight mispronunciation was noticed in both ‘J’ and ‘A’. Words of the text were encouraged to read as onset and rime. This time, dictation of sentences was also given. As a language exercise, if the words, introduced as a part of the lesson could be used in other context, in other words sentence making was also encouraged. Children found individualized stories interesting and the work within their comfort zone, motivating.

The 2nd week of the first month was primarily kept for a revision and consolidation of the work introduced in the first week. A phonological strategy was followed and reading was continued with much vigour with a lot of emphasis on the phonological aspect, attention to details, substitution and deletion of letters and words. In this week, emphasis was given on revision and re-revision of the sounds introduced and to develop a fine sense of sound identification. Reading was as onset-rime: where the end letters are clustered in a word and the beginning letters are changed to give an advantage in reading to the subjects ‘J’ and ‘A’. In this week the researcher also kept in mind to introduce paragraphs and reading materials in the remedial lessons which only included the short vowel sound words only. The short stories read were written by the researcher keeping the progression of lessons and advancement of children in mind. Sentences were kept short but a large number of activities that may strengthen the reading sense was encouraged. At this stage, both Case Study 1 and Case Study 2 progressed more or less at the same pace and their lessons were therefore at par with one another. However, the researcher noticed, that after reading when at discussion point the comprehension ability of the students were noted, ‘A’’s comprehension of the passages were better than ‘J’. ‘J’, needed to be explained one or two aspects of the passage and was a little behind ‘A’ in giving out answers. Substitution and deletion aspect of the two subjects though less continued in both cases from time to time.

4.3.6.(B)Consonant Blends along with short – vowel words:

For the 3rd week of the first month of the remedial programme, it was noticed that at the end of the 2nd week’s remedial programme, the subjects had much improved alphabet sequence sense and had learnt the sounds quite adequately. Short vowels were learnt quite well and sound identification was satisfactory. Decoding short words
were no longer a huge problem. Simple sentences like: ‘Ram’s hen can run.’ could be read with atomicity by both subjects. Keeping this progression in reading in mind, the first day of the 3rd week’s remediation was blending of consonant sounds such as: cl, bl, fl. These sounds were taught with word picture cards and the first two letter sounds were pronounced only …like ’bl’ from a card showing ‘blue’ colour. Over the week these introduced consonant blends were further blended into words like: ‘cl +ap’. Efforts were maintained so that words were blended with consonant blends and these were only incorporated into short sentences, which were first read, then spelt and sentence dictations were given. As a part of a remedial lesson not more than three or four sound blends were introduced. Every lesson had a routine revision time and subjects were always made to do various activities with researcher made puzzles, worksheets etc to increase more words with the introduced consonant blends.

Both ‘J’ and ‘A’s progression was on the similar level with slight exception.

The last week of the first month and the first week of the 2nd month saw the introduction of consonant blends such as ‘st’ ‘sp’, and likes of ‘cr’, ‘br’ etc A similar method of forming words with blends along with short vowel s were framed. First two days took introduction of sounds such as ‘sp’, st etc as they are found in words etc. Then following a strategy pre-determined in all lessons a reading exercise of first single words then that of the words as incorporated in paragraphs and stories were read again. Comprehension of the short stories were assessed at a discussion tat took place at the end of each lesson.

In the 2nd week of the second month a further practice of consonant blends and short –vowel words practice was continued along with a repetition of all previous work. An update at the end of the 2nd week showed that the progress of both the subjects was as per expectation. ‘J’ has picked up quite well and was no longer lagging behind ‘A’. In fact a competitive spirit guided a smooth progression. Subjects were advised to practice the sounds everyday so that the retention of the same is good.

In the week that followed similar work continued but along with researcher written texts standard texts available in the market that was of the reading level of the subjects were also introduced. The books were not only restricted to the words introduced during the phonological strategy but sometimes words which are irregular
words were encountered. The researcher helped the subjects where and when difficulties were encountered. At one point, ‘A’ started pronouncing the word ‘she’ as ‘see’ and this was corrected by the researcher. When it was ‘J’ ‘s turn , he also made similar mistake and it required with repeated practice on the pronunciation of the ‘sh’. The researcher at this stage thought that it was an opportune time to introduce the diagraphs in the following week.

4.3.6.(C) Consonant Diagraphs along with short – vowel sounds:

In the 3rd week of the second month therefore consonant diagraphs or two consonant blends that sound different from the blended consonants such as ‘sh’, ‘ch’ were introduced and similar strategy to combine the same with short vowels .The repeated practice of the pronunciation of ‘s…..sh ‘ helped the students to correct their error and the diagraph practice was also done successfully with proper motivation and cooperation of the subjects .The fact that this sort of diagraph awareness actually helped the subjects to rectify their pronunciation difficulty impressed them and they were further motivated to attend the remedial lessons . In fact the researcher was happy to note that the subjects were repeating how they were practicing the sounds at home regularly and how they were finding their English lessons at school interesting. However the teacher did not introduce the English class text during remedial lessons; the subjects were still restricted to researcher written paragraphs and stories and readers available of similar reading level that were carefully selected. Words became longer and so did sentences but the subjects remained motivated in reading and also in taking down spelling.

In last week of the 2nd month the remedial strategy remained same and was essentially a consolidation of the previous lessons but the readers and researcher made stories were different in order to keep up the interest of the subjects.

The 3rd month started with diagraphs and the soft and hard sound of ‘th’. Then following similar strategy the sound sense was strengthened and the soft and hard sound of ‘c’ was introduced on the last day of this week. In the next week or the 2nd week of the 3rd month , the soft and hard sound of ‘c’ and ‘g’ were taught following similar strategy and by keeping up the book reading with introduced sounds incorporated in it . Progress of the students was positive, however they needed
practice and consolidation work till end of the week and even in the 4th week 2 remedial classes were taken on similar lines. On the last day of the remedial lesson of this month, the magic ‘e’ spelling was done. The children from their reading of some standard texts of their reading level were found in to quite a few difficulties with words like ‘like’, face etc. hence before tackling the long vowel, silent ‘e’ word reading and spelling was considered important. Both the children picked up the idea but they needed practices for two classes as list of words introduced in limited number at a time explaining the idea etc. Worksheets and puzzles on the similar topic was carried out well into the 2nd lesson of the 1st week of the 4th month.

4.3.6.(D) Long vowel sounds:
Long vowel sounds and the related exercises were the principle topic of the 4th month. After the basic introduction to the long vowel sound, both ‘J’ and ‘A’ were made aware that long vowel sound is nothing but the letter name. Similarly over the next 4 weeks that is the first week of the fifth month long vowel sound lessons, reading of words with long vowel sounds and the awareness of the spelling or the placement of the same in words. For example: long ‘a’ sound in the middle of English word will be ‘ai’ and it will end with ‘ay’ as in ‘rain’ and ‘day’ respectively. Similarly, all long sounds of ‘o’, ‘u’, ‘i’ and ‘e’ were introduced to the children. Both ‘A’ and ‘J’ needed repeated practice. However, the children themselves realize and admitted that this method of teaching was making them decode words better as they are aware of the spelling – sound awareness. The researcher noticed both the children made less decoding error and written spelling error.

4.3.6.(E) Syllabication and its impact on reading:
Reading of the subjects became the central theme in the last month of remediation. In the first remedial lesson, both subjects were given an idea about syllabication as multi-syllable words were difficult for the subjects to read. Both ‘J’ and ‘A’ needed practice in syllabication through worksheets etc then the class room text was asked to read with syllabication. Initial prompting was necessary for both the subjects. The idea of syllabication and pronunciation in segments was beneficial to the subjects. There was a boost in the decoding skill of both the subjects. However some reading skills as to the halting style was still a problem with ‘J’. Comprehension of unknown
texts was much improved in both. Type of reading practiced was: paired reading and neuro-impress. The teacher also used demonstration techniques by reading a passage with intonation, punctuation and modulation. Here, in this case same passage was kept for both subjects, otherwise care was taken during the whole course of remedial for 5 months to give out different passages to both, so that one may not hear and remember from the previous reader’s reading and may not emphasize on decoding by word sound primarily. In the week three sight word lists 1 & 2 were re-introduced. Along with reading from researcher made stories, school texts as well as other readers. The subjects’ voices were recorded once a week and analysed. The subjects themselves when played on a recorder tried to correct. However, often they had a reaction mixed with bewilderment and excitement as they had both emerged much more confident than before. They also took part in short plays based on the researcher written stories with finger puppets as part of reading exercise. This sort of activity enthused them and enhanced their voice-modulation, speech and pronunciation skills. At the end of the 5 month period they both emerged much more confident in reading multi-syllabic words as it occurred in their standard class text, their diction and decoding was much improved and the motivation to read was all time high .It was reported by the English class-teacher, that both `J’ and `A” were reading quite well and took part in classroom reading activity and were enjoying it as well. The library in – charge also reported that both had become keen readers and borrowed books though sometimes they were simply worded. The class teacher also reported their spelling skill was much improved and there was an interest in increasing their vocabulary. They were both keen on using a dictionary. Their level of reading was of more or less same. The marked difference between the two had narrowed down and it was also noted by the researcher that they had both improved in reading significantly.

4.3.7. Progress of the two subjects mapped:

At the end of the five month period the researcher was quite satisfied with the improved in reading of the subjects: ‘J’ and ‘A’. The researcher found that the programme of Intervention Strategy III was far more comprehensive and well rounded in the developing not only in improving the reading ability but the overall language ability , which in turn helped the subjects read better with a firm grounding in English .
This was not a quantifiable study, but a study requiring descriptive and qualitative analysis that focused on the need to provide individualized, remediation with close personal attention to two subjects. The impression of the researcher is quite satisfactory as an investigator in the realm of alleviating reading difficulty. This strategy did not require expensive devices or difficult techniques. It delved in to the problems of foundational lag in the domain of reading. This level of lag in reading of both the subjects: ‘J’ and ‘A’, were adequately highlighted by the researcher devised: Reading Inventory. Accordingly, the Intervention strategy III was provided for the foundational lag in language, which proved to be very beneficial to both ‘J’ and ‘A’. The researcher of opinion that this strategy of teaching not only will help subjects with reading difficulty due some neurological deficit but also any learner who had failed to master the second language sufficiently either due to environmental issues such as parental lack of knowledge in English language as is common in first generation learners or in households where mother tongue is spoken primarily. The Intervention strategy is found to be promising in narrowing the gap between an able efficient reader and the one who is not. It therefore has the potential of preventing many readers from being the ‘At risk poor readers’ who may in the end become the ‘At risk drop- outs ‘in our society.

4.4. DISCUSSION:

The major findings of the study indicate that reading difficulty in individuals be it from whatever reason: environmental or neurological processing disorder, benefit from an intervention rather than the lack of it. It is therefore a primary focus of this study to find out what role intervention in reading difficulty plays in, if not eradicating at least in alleviating the difficulty. The study focuses on the role of an intervention programme , to help in meaning the difficulty to such an extent that there may be significant changes in reading performance of the subjects before and after administration of it, be it ‘non-phonetic’ or ‘phonetic’, in nature.

Therefore, there is no denying of the fact that, once the reading difficulty of a subject gets identified, early and appropriate intervention is the ‘call of the day’. By early intervention one means, advancement of appropriate intervention without any kind of wastage of time. The reason for this being, that when an individual is not attended with reading help, the person is likely to further lag behind his/her peer group in a
general mainstream school. This not only creates difficulty in dealing with the problem, that may get further aggravated but other issues are likely to get added to the reading problem alone. This added burden of problem that complicate the reading problem issue could be confidence issue in the subject herself/himself, which leads to demoralization and lack of interest in improving the difficulty.

This apart, the child with reading difficulty can become prey to teasing and bullying by some aggressive peers due to his/her poor performance in reading in the classroom. Further deterioration in reading performance of a student, especially in a general classroom ambience is likely to highlight two dimensions of the problem. Firstly, the lack of awareness of reading difficulty of some students, among the teachers may further add to a situation where being unable to deal with the problem the teacher may choose to ignore the presence of the child in the class and hence the reading problem of the child. Secondly, as the child becomes more and more non-existent, research shows they become ‘At-Risk drop outs’, as they lost interest in studies, as reading is the key to any kind of formal instruction in a mainstream teaching-learning scenario.

Another dimension to add to this scenario is the social aspect of the child who not only lags behind in studies but may also end up as an ‘eye-sore’, not only to the immediate family but also to the extended family. Then again, when the parents are repeatedly called to the school to face further humiliation for the ‘reading failure’ of their ward, this makes a direct impact on the child’s relationship with his/her parents. The final negative impact or further deterioration of relationship of the child and his/her parents perhaps completes the vicious cycle.

The above fact can be further elaborated with some facts and figures that are available of student suicide when educational problems escalate. Though a direct link is not established with reading difficulty and student suicide, it is perhaps in ways more than one indicative of disappointments and failure at educational performances that lead to such fatal ending of young lives. The following facts and figures are supportive of the present point:
Frustration with our Indian educational system and academic failure are the two primary reasons of suicide of school going children, adolescents and young adults below the age of 29 years.

On a national level the number of drop-outs from educational institutions was 42% in the year 1990-1991. This decreased to only 2% even after a span of ten years in 2000-2001.

West Bengal recorded 21% drop-outs in the year 2002. It further increased to 31% in the year 2003 from secondary level of school education. West Bengal also has an alarmingly high rate of student suicide!

It requires little effort to realize that a student with reading difficulty is deeply frustrated when he lags behind his/her classmates in achievement and gets gradually isolated from his/her peer group. Apart from the possibility of his/her becoming a drop-out from the school and getting attached to bad companions, this frustration may also generate suicidal tendency in him/her.

Hence, to prevent all the above possible undesirable development in the life of children with reading difficulty, all caring parents and teachers should emphasise upon the need for early detection of their difficulties and administration of timely appropriate remedial intervention.

It is widely accepted among experts that, earlier detection of reading difficulty even at pre-school stage is extremely beneficial for the child. If after detection of reading difficulty, the child follows a strategy of remedial intervention, and aggravation of the difficulty can be alleviated. A continuity of remedial intervention at the primary level has often led to noticeable improvement in reading difficulty.

In the present study the researcher concentrated upon children who were following West Bengal Government’s curriculum and regulations, where any kind of written assessment before class 5 was not allowed. Class 5 being the class where assessments were allowed throughout the year and at the year end, the researcher chose this class for her study, in other words, children belonging to age group 10-11 were chosen as subjects of the present study. The advantage of choosing this class was that the teachers had a fair idea about the reading level of the children, as assessments were
allowed for the first time in this class. It was thus a most appropriate time to administer remedial help, to the group of subjects of the study.

The researcher, however feels, that though earlier identification and remedial help for these subjects could have helped the matter further, this age–group was definitely an interesting group to study from two perspectives. The first being that the chosen age group interestingly, had endured reading difficulty and its associated humiliation over the last 5 years, so the children had a ‘crying need’ to look into their difficulty. The researcher’s experience with the group of subjects highlighted that this group although wanted to do better had lack of confidence and motivation which was a direct corollary to poor performance in reading over the past few years. All three gender groups that the researcher gave intervention to, had to be counselled regarding the rationale to put in that extra effort or the justification to cooperate with researcher during the intervention process. The direct result of this small talking point and addressing the grievances of these subjects had a positive bearing on their motivation and cooperation with the researcher. The researcher feels, as this age group was a little mature than the younger primary school attendees or pre-school children, it was perhaps easier to motivate them towards a desired goal.

The second perspective that the researcher feels helped the programme in the remedial process was that the foundational knowledge although needed in all, did not have to be introduced from the scratch, which might have delayed the matter further. It was more like correcting one’s error about which they had some idea rather than fumbling in the dark with no concept of the alphabets and so on. This is however, an entirely subjective opinion of the researcher.

It was noted that, in spite of the motivation in most children, lack of parental support in the remedial intervention programme due to their own lack of literacy often slowed the process of progress as per expectation. However, in individual cases, where the parents took an active interest in their ward’s education irrespective of their own education level, showed motivated learning and better performance compared to others who did not get such support.

It may be reminded that the researcher studied 3 groups of children with reading difficulty, one with no intervention given to them; another was given a ‘non-phonetic’
intervention by the class teachers, who were sensitized by the experts and the third group was given ‘phonetic’ intervention by the researcher following her own strategy.

It was found that in the group of subjects who were identified with reading difficulty in both mother-tongues: Bengali and in ESL but no remedial intervention was given to this group. This group of subjects only followed the usual class room teaching in ESL classes. After a period of 8 months, when the group was assessed for their reading performance, no improvement was noticed between their Pre- Reading Test Score and that in the Post –Reading Test Score. It is to be noted that this score was found to be statistically not significant (vide Table No: 6, p 220)

This study, concentrated primarily on first generation learners; hence the researcher after carefully selecting the subjects as per given parameters, took detailed notes as to how the reading problem of the subjects were affected in spite of remedial help during the intervention period and also what might have played significant part in learners with reading difficulty where, subjects were identified with reading difficulty but were not given any kind of remedial support( be it non-phonetic or phonetic) for a prolonged period of time.

Here, one needs to be reminded that the finding was that of a group as a whole But individually there seemed to be a subject or two / three who had practically lost interest in studies and though some- how maintained school attendance showed performance on reading test after the 8 month period where only regular classroom instruction was given, negative performance was evident. One child simply skipped more words, put in more substitute words rather than reading the actual words and mis- read more. This led to poorer reading score in post-test as compared to pre-test reading score. One subject in particular developed strange mannerism as fidgetiness and shrugging before reading out, which the researcher did not notice 8 months previously during administration of the 1 minute reading test on the subject as a pre-test reading battery. Discussion and consultation with this particular candidate in general with class teacher in ESL lesson and in Bengali FL lessons and in practically all subjects where reading was required, shared similar experience.

The teachers showed their distress in general regarding ways and means of helping these children and then there were some teachers who had apathy regarding the
progression of academic achievement of these students. It was in fact distressing on the part of the researcher, as a teacher expressed the wish that these children who failed to read as per required standard be removed from the classroom, so that the regular teaching can progress smoothly and the set curriculum be finished. This attitude was however supported by some teachers, as they believed that this group of children who were getting increasingly unfit to follow regular studies due to their poor reading tend to become disruptive and defiant. The Head – teacher of the institution did recognize the implications of having ‘at-risk drop-out’ candidates in the institution and realized the threat it may pose to society in general.

The researcher during her informal discussions explained to the administrative and teaching staff that these students who were increasingly getting labelled as ‘reading-failure’ in school may indeed be of average to above average intelligence and may improve in reading by following some strategy which may not be cumbersome, brought about positive reaction from many. Many teaching staffs expressed wish to follow such strategy and the Head –Teacher in particular wished to bring in the misfit group within the fold of general stream with immediate effect.

Some of the findings of the researcher regarding the need to provide remedial help of some kind have been corroborated by the findings of various experts. Karanth (2003) is of the opinion that in countries like India reading difficulties as well as other language related difficulties get compounded by the presence of other factors such as parental illiteracy and lack of adequate exposure to literacy related skills in home environment. Identification of children who would need remedial support is poor in schools because of lack of awareness of teachers and also due to the imbalance of teacher student ratio. Here, Karanth refers to a situation similar to the group that is similar to the one that was subject of the researcher’s study, where the group of children were not advanced any remedial help in spite of their difficulty due to perhaps teachers’ failure to recognize the problem of the subjects, as the number of the teachers are often too few as compared to the children. Karanth, Elaborates the situation where a single teacher inadequately trained and equipped may have to deal with 50 to 100 students.
Epidemiological study of children with Learning Disability has been a difficult task even in countries such as US. Wong (1996) gave the percentage of such children in general classroom in US to be 1-5% with up to 10% being mildly disabled.

One is reminded of the enormous task of bringing the whole educable population within the fold of general mainstream education. As otherwise it will be a tremendous waste of human resource, who could have successfully contributed to the country’s progress.

The class-room situation in schools under study, were found to be much alike those described by Karanth. The classes were over crowded often had an improper teacher-student ratio of one inadequately trained teacher, teaching in a class with students ranging from number 70-100. None of the teachers were adequately trained and equipped to deal with children with learning disability, as a result of which children with reading difficulty remained mostly unidentified. In such situations, implementation of some remedial programme for their help remains a far cry. There is strong possibility that their problem gradually get aggravated in absence of support services and social apathy.

Pandit (2003), from her case study experience of Maharashtra, empathises the urgent need to assess children with reading difficulty and administer remedial intervention programme to them. Here, she states about SCERT of the state of Maharashtra who deliberates on special provisions (exemptions) to this group of children at Board level. However, the researcher feels more than exemptions the crying need is the provision of remedial help as per need of this group. Pandit in this regard elaborates the sentiments of the Vice Chancellor of Mumbai University (1997). He in a lecture meeting, expressed his commitment to provide a better future for the group of children with reading difficulty who are otherwise quite intelligent. He further stated that the it should be ensured that the efforts of these children will not be frittered away because of the society’s inability to recognize the need to teach them in a way that they can learn. It was also recognized that frustration in academics leads to desperation and when these children are forced to give up their studies they misuse their intelligence to avenge their anger on a society that fails to understand them or their needs.
Pandit further laments at the lack of remedial help to this group of children as many schools are still reluctant to accept the fact that there are students with learning difficulty in every general classroom that is to say in any mainstream school. She emphasized that: ‘Early intervention leads to faster progress’.

From the above discussion it is quite evident that when remedial intervention is not provided to children with reading difficulty they deteriorate in their reading performance. It has also been noticed during the study, that children who did not receive any kind of remedial help due to their constant reading difficulty and its repercussions in the school and home, develop further emotional and confidence related problems. It is therefore, quite obvious that once the reading difficulty of the children are established, they must receive appropriate remedial help immediately. At present, most experts and practitioners in the field of reading difficulty advocate phonological intervention but non-phonological intervention is also given out in many instances. It is important to find out the comparative benefits of the two types of remedial intervention programme.

In this context, the second group of subjects will be discussed, who were identified with reading difficulty and were given remedial intervention by the class–teachers of the school who were sensitized about the reading difficulty of the subjects by some experts. This group of subjects followed a ‘non- phonological’ intervention programme for 8 months in addition to attending the general ESL lessons along with their peers. A comparison of Pre-Test Reading Score and that of Post –Test Reading Score of this group of subjects at the end of 8 months showed that the level of improvement in the reading performance of the subjects was statistically not significant ( vide Table No:1 p 212).

It is the observation of the researchers that subjects who were given remedial help of non- phonetic nature in ESL, did seem to have some benefit on the reading performance of the subjects (Exp.Gr1), in general. There was a marked improvement in motivation in the subjects who had lost interest in the ESL and in academics, who started taking a renewed interest in the subject. The researcher conducted feedback with the ESL class–teachers and found out that the teachers were reasonably satisfied with the progress of the subjects. However, the class – teachers also felt that had there
been adequate support for the remedial help received at school, from parents at home, the level of performance would have been much better.

It is the opinion of the researcher that statistical analysis or quantitative analysis looks only in to the collective progress rather than giving attention to individual progress. Hence, perhaps the comparison of the Pre-Test Reading Scores and the Post-Test Reading Scores of the group was found to be not-significant.

In this regard, it is important to highlight the findings of Goswami, and Bryant (1999), who from research findings of some experts, states the possible connection that may exist between illiterate subjects who cannot read at all and their inability to follow phonological method of teaching English.

Goswami, U in her book: ‘Essays in Developmental Psychology: Phonological skills and learning to read’, elaborates the research findings of Morais and his colleagues (1979) that have shown that illiterate people find phonological tasks difficult. However his findings do not highlight the difficulty of the subjects exactly down to phonemes. Apart from this original study, Morais, Content et.al carried out another further study by which the experimenters managed to show ways to help illiterates in their phonological tasks. This study was carried out on illiterate Portuguese adults.

It is necessary to point out the difference in sample group of the present study (Exp.Gr 1) and that of the study conducted by experts discussed earlier. As compared to the researcher’s sample group that dealt with children who were primarily first-generation learners and were of the age group 10-11 years, the group discussed by Morais et.al was that of illiterate adults only. The variable factors that might have influenced the two differing sample groups need to be taken into consideration. Then also the most important fact that deserves some consideration is the research finding of Morais, that illiterate individuals may have difficulty in mastering phonological tasks.

The Brussels group (1986) received strong support from a very different group of people. The work of Read, Zhang et.al (1986) on Chinese people who had been taught an alphabetic version of written Chinese (pinyin) as well as traditional Chinese orthography which was logographic. The authors compared subjects taught pinyin
with another group who had learned only the traditional scripts in tasks which were exact equivalents of original Morais et al. (1979) tests.

The results of the study were strikingly similar to those of experimental findings of Morais et al. Goswami, comments that both the groups had left out certain gaps but in spite of that accepts the findings of Morais et al / The Brussels group and that of Read et al that illiterates people may have specific difficulty in phonological task with phoneme.

The findings of this study are perhaps significant from the perspective of administration of non-phonetic intervention in ESL for first generation learners as well.

Having discussed the probable implications of the studies discussed as well as the possible implications and justifiability for and against a non-phonetic method of teaching the subject of the study, one need to elaborate the efficacy of this particular group of children who may have parents who are completely illiterate. However, as compared to the group on which study was conducted by Morais et al and Read et al, the subjects of the present study (Exp. Gr 1), have had at least 4 years of formal education in First language Bengali and at least 2 years of educational support in ESL. One may deliberate further into the methodologies of teaching ESL at that point of time in the schools attended by the subject of the study and the effectiveness of the same but there is no denying that the subjects were exposed to formal education for at least 4 years and this have an important bearing on the learning style of the subjects.

Other studies like the study conducted by Roberts (2003), on the ‘Effects of alphabetic-letter instruction on young children’s word recognition’, throw light on the effectiveness of non-phonetic approach. Roberts examined the influence of letter-name instruction on beginning word recognition. The study that was published in Journal of Educational Psychology, elaborated the details of thirty-three pre-school children from low–socioeconomic status families who participated in a 16 weeks letter name or comprehension focused instruction. The findings highlighted the fact that the children who received letter-name instruction, learned words phonetically, spelled with letters included in instruction significantly better than other words. Thus
the results demonstrated the beneficial effects of alphabet-letter instruction on beginning phonetic word recognition.

Thus one may deliberate on the relative significance of letter-name instruction and its effect on phonological tasks, thereby emphasizing the compatibility of the two methods of learning rather than one being exclusive of the other.

**Miles(1970)** discussed the relevance of the traditional ‘look and say’ method in respect of children with reading difficulty especially the ones with dyslexia. He argued that when this traditional’ look and say ‘method is used, a child is required to look at a word as a whole and recognize the word as a whole without being concerned with the details of individual letters. Thus Miles further explains that by following this particular method the child may be presented with words like ‘aeroplane’ that such a word is so distinctive that will be recognized at a later date. Miles adds in contrast to the ‘look and say’ method of reading, in the phonic method the child is required to sound out individual letters and hence build up the complete word. In the ‘phonic’ method, it is usual to start reading with short ‘cvc’ or words that will have a consonant, then a vowel and again a consonant in the end, for example: words like’ cat’, ‘sat’ etc

In his opinion, children with dyslexia benefit from’ phonic ‘method rather than the traditional ‘look and say’ method. Miles reiterates that children with pronounced reading difficulty are as good as ‘word blind’ and traditionally in the past they used to be referred as the same. When, a word fails to make sense at the first glance may fail to do so on a second and third attempt, as well. He concludes in such situation under stress, things might get worse.

Miles, states that there may be a significant minority with reading difficulty who may benefit from the traditional ‘look and say’ method. He clarifies that as dyslexia in most cases has visual deficits, in which case the ‘look and say’ method will not work. However in the rest where auditory rather than the visual deficits are pronounced, there lies the greater likelihood of the ‘look and say ‘method benefiting children with reading difficulty. He reiterates his opinion that phonic method of reading is better suited to children with reading difficulty in general.
The above discussion about ‘non phonetic’ intervention and reading performance of Exp.Gr 1 of the present study, shows that though ‘non-phonetic’ intervention is beneficial to some children, it was not very effective. Supportive evidence provided by Miles, emphasizes the possible benefits of a ‘phonetic’ remedial intervention programme for children with reading difficulty.

In line with this discussion therefore, it seems pertinent to relate about the third group of subjects of (Exp.Gr 2) of the study who followed a ‘phonetic’ remedial intervention programme for 8 months. Here the researcher devised and administered ‘phonetic’ strategy of intervention was given to 57 subjects in ESL only. These subjects apart from receiving remedial intervention 3 days a week also attended the general ESL class of the school as well. At the end of the stipulated period a comparison of Pre-Test Reading and Post-Test Reading performances was found to have a positive impact on the subject’s reading performance. Statistical analysis of the Means of the Pre-Test Reading and Post-Test Reading scores was found to be highly significant (vide Table No:2 p 214).

In these remedial intervention lessons, a phonological strategy was followed, whereby the subjects were given lessons in basic skills in phonological awareness in the initial few weeks. Children were also made aware of the short and long vowel sounds, consonant blends, diagraphs etc. At same time spelling rules were taught and reading was also administered as per advancement of the subjects. These reading materials ranged from words of lesson to simple sentences and also teacher made books. These particular books were read as ‘onset-rime’, a special way of reading whereby the subject reads last few letters as clusters; for example ‘c+ at’.

The subjects of the group were given a 1-Minute Reading Test prior to the inception of the programme and they were again give a post test with the same 1-Minute Reading Test. The researcher’s observation of the study was that as most of the identified subjects were in need of basic foundational skill, as per the preliminary assessment of the researcher. The basic grounding of the language skills that focused on sounds, definitely improved the pronunciation skills of the subjects. Keeping in mind, the lack of educational support at home, the researcher was amazed to see that how the sounds such as ‘s’ were perfected. This observation is in regard to the fact that most of the subjects had difficulty in pronouncing ‘s’ and would pronounce as
‘sh’ instead. Again when words like ‘shape, shark’ had to be pronounced, they would pronounce as ‘sape, sark’.

Being ESL learner with only primary knowledge in mother tongue Bengali, which was not only their spoken language at home but also their language of instruction at the school even during the ESL lessons in school. Hence confidence to speak and sound out words were not there as blending of sounds was grossly inadequate. Some of the students though showed gross problem with decoding initially, it soon improved and caught up with the level of the rest of the group. However the researcher feels in spite of exposure to ESL text books with multi-syllabic words at class 5 level most of them were like ‘word blind’ and merely memorized the word image after the teacher. Then again the book that was being taught in the school in 2008 had many Bengali words as cues written underneath the English words. The children though had problem in Bengali reading as well , caught on with the Bengali way of pronunciation of English words as they were often not reading the English alphabets as decoding the same was difficult and was merely reading out the Bengali version of the English word without any comprehension what so ever . The intervention programme progressed at a slow pace; sounds were repeated every day and also ‘sounding out letters’ was the only homework given to children to practice at home.

The researcher found out as the remedial lessons had started at a comfort level of the children, including ones who had more pronounced problem than the others, all of them were extremely motivated and were rarely absent . This the researcher feels may have added to the motivating factor in following the lessons and also the fact that the researcher set aside time routinely, to speak to the subjects individually to motivate them and guide them towards the successful completion of the programme. Any particular subject who showed exasperation was taken aside and counselled. There was in particular a girl who though had pronounced difficulty asked the researcher the need to study a whole new language when her mother tongue is different and she found English difficult to learn , anyway. The child was then made to see the benefits of the language. She was counselled that if she learnt English, she would be able to read hoardings and papers and might be to help out her parents with official work, post office work etc. This kind of a small talking points had enormous benefit and she
soon settled down to the lesson enthusiastically took part in practice of sounds not only at school but at home also. Yet again some of the subjects found the lessons that taught foundational skills to be like ‘baby lessons’ being advanced to them and came out to the teacher to say that they found these lessons demeaning to be learnt. The students then had to be settled down and counselled in to learning basics yet again in a different way. Over all, most of the subjects were really well motivated and carried on the intervention with motivation, which the researcher thought enormously helped towards their better performance.

Then again, individual attention was given to students even in groups of 10/12 as their particular level of progress was important. However the researcher felt the ideal would have been one to one attention, as this kind of special lesson could be very demanding on the remedial teacher/ researcher. However, one positive aspect the researcher noticed was that as the students already knew the alphabets and the language was not new to them, it helped in the quick progress of the lesson.

Another positive aspect that the researcher observed was that the students had often demonstrated a competitive spirit while demonstrating the output or reading out aloud, be it a sound, a word, a sentence or a paragraph towards the end of the programme.

Perhaps the advantage of the group lesson was the competitiveness that motivated the group in general to perform well. However the researcher did realize the comparative benefits of guidance on one-to-one level as is ideal in these remedial sessions.

Another aspect that motivated the readers was that, once they became a little more proficient, they were greatly enthused to read personalized stories that the researcher wrote as per reading level of the group. However, often one or two subjects of the group stayed on the previous level as per level of advancement in reading of the child. Efforts were made by the researcher to give more attention to the specific needs of the subjects who lingered behind in the group. At the end of 8 months the researcher was satisfied to note that all subjects of the group did indeed show a good amount of enthusiasm and improvement in reading English texts.

A transfer of learning effect was noticed, though the researcher thinks it is too early to comment on it, it still deserves mention that the group in general improved not only in
reading their class English text but reports from class teachers confirmed that the subjects took renewed interest in studies in general. One male subject, who was otherwise intelligent had lost interest in studies had taken to being a truant. This child in particular showed a gross amount of improvement in studies and was showing renewed interest towards school by the end of the programme. This overall renewed interest was common in most subjects who had become poor performers in study and would resort to class disturbance. The researcher feels, subjects in Gr2 benefited from this phonological intervention programme to a great extent. The progress was significant as the group emerged at a much elevated level of reading performance and it was obvious in the statistical analysis (vide Table No: 2 p 214).

Every methodology of teaching is supported by a theory. A phonology based teaching instruction especially for children with reading difficulty is based on the ‘The Phonologic-Deficit Hypothesis’. The theory is based on the hypothesis that there is abundant evidence that a deficit in phonologic measures predict later reading achievement .It is further postulated especially from the perspective of advancement of intervention programmes, instructions in phonologic awareness promotes the acquisition of reading skills According to Shaywitz, to be able to read children have to discover that spoken words can be broken down into smaller units of sound. She further states that it important for readers to realize that letters on the page represent these sounds and the written words have the same number of sequence of sounds heard in the spoken words .To realize all this is to realize the alphabetic code which children usually able to according to Shaywitz by the end of grade one (US), however children with reading difficulty with or without dyslexia may not be able to do so. Children with dyslexia in particular do not acquire the phonological skills that are pre-requisites of reading, thus according to Shaywitz: concepts of ‘phoneme awareness’ should be taught explicitly.

Shaywitz further adds that learning that words can be segmented into smaller units of sounds (phoneme awareness) and that these sounds are linked with specific letters and letter patterns (phonics). In addition to this Shaywitz postulates, that children with dyslexia need practice in reading stories, both to allow them to apply their newly acquired decoding skills to reading words in context and to experience reading for meaning.
In support of dyslexic readers and phonological deficits, Snowling (2000), put forward various examples of research conducted by exponents in the field in her book titled: ‘Dyslexia’. She highlighted the work of Bradley and Bryant (1978), who conducted a study on 12 year old dyslexics with a younger RA control group on tests of alliteration oddity the result of this study showed positive significance of deficit in phonological awareness in dyslexics.

Snowling further highlights the study conducted by Swan and Goswami (1977) on dyslexic readers in tasks on syllable, rime and phoneme segmentation. Results of this highlighted yet again that dyslexics were impaired on asks of phonological awareness.

Snowling on further analysed the Swan and Goswami’s study and concluded that their study results were indicative of the fact that ability to analyse phonemic segments is a more critical determinant of reading ability or rather disability than segmentation processes that operate on larger units such as rimes. However, Velentino et al. (1975) were perhaps the first to associate phonological deficits and dyslexia.

In educational environment where educators are constantly deliberating about various strategies, it is important to discuss, the relative effectiveness of the various strategies that are being administered on children with reading difficulty.

In this respect one can put forward the numerous strategies that are being practiced and being experimented upon children with reading difficulty, however, the two principle type of strategies that are followed still in schools all over the world are either the ‘alphabetic’ / ‘non –phonetic’ strategy and the other one being a ‘phonetic’ one. As stated earlier it is to be remembered that every strategy precedes a theory or vice versa. Exponents like, Snowling, believes that the best way to find out the effectiveness of a strategy is to carry out the effectiveness of the same from an experimental study conducted and then to draw upon a theory from the same rather than the other way round.

The educational methods that are being practiced in teaching English traditionally in schools of West Bengal as well as in India, is the traditional alphabetic ‘or ‘letter-name based non-phonetic’, method, be it the EFL or the ESL. This method of teaching is traditional and is practiced in most of the schools for all children whether they have reading difficulty or not. Recent reports by various experts have highlighted
the fact that the letter name method of teaching as well as the look and say method may not be as effective for subjects with reading difficulty, especially due to neurological deficits. Exponents like Miles have supported the opinion based on his extensive work experience with children who may have had neurological deficits of visual nature. He however specifies that if the neurological deficit is in the domain of auditory deficit, then traditional methods may work. However, there are yet again another group who openly advocates the importance of ‘letter- sound’ based or ‘phonetic’ method of teaching English children with neurological deficits or dyslexia. There are yet again another group of Experts in the field who although supports that a phonetic method or a letter-sound method is the best method for teaching dyslexics, opposes that dyslexia or reading difficulty or neurological deficit can be either visual or auditory. As opinions regarding teaching of English are varied, so are various methods being put forward.

The researcher conducted a study to find out the comparative effectiveness and the differential contribution of two strategies: where one strategy is ‘non-phonetic’ or non-phonology based and the other is ‘phonetic’ or phonology bases method, in teaching a ‘non-phonetic’ language like English to children with reading difficulty. In a study conducted by the researcher, the subjects of the study had reading difficulty in both Bengali FL and ESL here all identifiable parameters being same 60 children with reading difficulty were administered a ‘non-phonetic’ remedial programme of remedial intervention by the class- teachers of Government schools, who were sensitized by experts of the field. Here for 8 months for 45 minutes period for 3 days a week, remedial help in ESL to the subjects of the study (Exp.Gr1) was carried out in traditional’ letter-name method’ and ‘look and say ’method. This remedial group also attended the general class for ESL lessons conducted by the subject’s teacher of ESL in their respective schools along with their peers, as well. In comparison to the previous group the second group of subjects of the study (Exp.Gr2), followed a ‘phonetic’ or phonology based method of remedial intervention in ESL. Here the parameters of selecting the subjects were exactly the same as the previous group. The remedial lessons also lasted 45 minutes each for 3 days a week for 8 months; however the subjects received help in ESL by’ phonological’ method or ‘letter- sound method’ only. The primary distinguishing features were that the subjects in this group learnt letter –sounds, short and long vowel sounds, consonant
blends and diagraphs as well as vowel diagraphs. Reading of sounds, words, sentences and short researcher made stories were read as per reading level of the subjects. All reading tasks were done as’ onset and rime ‘. Here at this point one needs to clarify that the intervention strategy was in ESL only although in both the groups subjects showed pronounced reading difficulty in FL : Bengali as well . Inter-group comparison of the two groups showed that the second group that received phonological intervention progressed significantly and the statistical analysis was found to be highly significant (vide Table No: 9, p 224). Thus, the comparative study perhaps highlight yet again, the effectiveness and the significant contribution of a ‘phonological’ intervention programme, meant for subjects with reading difficulty.

Corroborative evidence to researcher’s findings can be found as provided by Carroll et al(2011) in the book ‘Developing Language and Literacy’, which highlights various studies by Hulme, Hatcher et al and later by a commendable study funded by Nuffield Foundation and conceptualized and conducted by experts: Carroll, Bower-Crane, Duff, Hulme & Snowling. In a path breaking study now in UK, Hatcher, Hulme et al, (1994) tested out the effectiveness of phonological awareness coupled with structured reading in dealing with early phases of reading difficulty. Here three phases of intervention were compare on 7 year olds where they were give a strategy only based on phonological awareness only(P), Reading only ( R ) and a combination of remedial strategy where both P+ R was combined . At the end of the stipulated period the P+R programme turned out to be the most effective in dealing with early reading difficulty (RD).

The researcher conducted study also emphasized on P+R, however the exact strategy may have differences and it is to be noted though that the study conducted by experts like Hatcher, Hulme et al emphasized on metacognitive exercises as well. In spite of specific differences, the overall strategy of the researcher and the experts seem to corroborate the importance and significance of a P+R strategy in as a reading intervention.

In another comparative study that highlighted the long term follow up of children in 5th grade revealed that those were trained in phoneme identity emerged superior to a control group studied by Bryne, Fielding-Barnsley (1995). The study showed the
gains of children who received training for just 6-7 hours in phoneme identity prior to starting school.

Another comparative analysis showed that the study designed by Lundberg, Frost and Peterson (1988) designed a programme for a group of Danish pre-school children that included metalinguistic games involving rhymes and phonemes. At school entry a year later, the trained children gained higher scores than children in a control group on tests of phoneme awareness. Their reading performance was then monitored at approximately seven monthly intervals over the first three grades in school. At each point in time, the group who had received pre-school training did better than the untrained group in reading. The results suggested that pre-school training in phonological awareness can have a long term positive effect on reading development.

Two further studies also reinstated the importance of phonological awareness such as the one by Cunningham (1990) and the one by Ball and Blachman (1991). The results of these two studies suggested the benefits of training phonological awareness are increased when children are taught to make explicit links between sounds and letters. The results concur with those of Bradley and Bryant (1993) who worked with children who were identified as ‘at risk’ of reading failure by virtue of their poor performance on a test of sound categorization at 4 and 5 years of age. These children received two years of intervention. At end of the intervention it was found out that experimental group had again outperformed the control group. Thus reinstating that the experimental group had made most progress was the one that were taught the letter-sound correspondences in the context of phonological training. The Experimental group’s progress was 8-10 months ahead of the Control group.

In lieu with the comparative analysis and reinstating the effectiveness of phonological training on improving reading difficulty. the researcher will about the subject of the study (N=57) Exp.Gr 2, who had difficulty in ESL where administered a phonological remedial strategy for 45 minutes period about thrice a week for 8 months in comparison to a Control group or Exp.Gr .3 (N=60) , who received no remedial help but followed the general ESL class in the school. At the end of the stipulated period it was found out the progress in reading made by subjects in Exp.Gr.3 , was significantly positive as compared to the Control group or Gr.3 (vide Table N: 8, p 223). Thus the researcher conducted study corroborated with the
findings of the exponents in the field and their findings and it yet again emphasised the superiority of ‘phonetic’ remedial intervention programme for subjects with reading difficulty.

It is important to mention, that, the stalwarts in the field of reading difficulty, have reinstated again and again the effectiveness of a ‘phonological ’intervention programme. Interestingly , the researcher designed’ phonological’ remedial intervention programme or Intervention Strategy II, when compared with a control group who only followed the usual classroom teaching, corroborated the expert’s findings.

At this juncture, the researcher will state, the findings of another comparative analysis of the present study, where the subjects of experimental. Exp.Gr.1 (N=60), were administered a ‘non- phonological’ intervention strategy for a period of 8 months in comparison to the subjects in Control group or Gr.3 (N=60), who only followed the class-room instruction. At the end of the stipulated period of 8 months , it was found out that subjects in the Gr.1 had progressed in reading significantly compared to the Control group or Gr.3( vide Table No: 7 p 221).

The ‘alphabetic’ or ‘non-phonological’ intervention strategy followed by Exp.Gr.1 ,was found to be beneficial to some extent for the student having reading difficulty, though when this was compared to ‘phonological’ intervention strategy or Intervention Programme II (Tool No: 4), followed by Exp.Gr.2, was found to be comparatively less effective.(vide Table No:9 P 224). The findings of the study indicate that the phonological intervention programme is more effective and this is supported by a number of studies in the field.

While recognizing the relative superiority of ; phonological Intervention strategy over ‘non-phonological’ one in improving level of reading of students with reading difficulty, the role of the factor like: ‘gender-difference’ in influencing their reading performance should also be kept in mind. In fact, a number of expert are of opinion that girls are linguistically superior to boys which, according to them, serve as an explanation for the fact that reading difficulty is more prevalent in male children than in females. Quite a number of experts in the field of reading difficulty again, oppose
this view. Experts in stalwarts in the field of reading difficulty have different opinion in this regard, which is worth deliberation.

Hornsby (1994), in her book ‘Overcoming Dyslexia’ has expressed the opinion that there are more dyslexics among boys than among the girls. She has given the figure 4:1 – 7:1, as the ratio of boys with dyslexia in proportion to those of girls with dyslexia. She believed that, the imbalance is due to the language area in the brain, which is usually more mature girls than in boys until puberty in early teens. This seems to give girls advantage in language skills over boys especially in the formative years.

Goodacre (1971) elaborates the perspective of gender difference and its perspective on reading difficulty. She cites the survey given by Inner London Educational Authority (1969) where 20.9% boys were poor readers as compared to 10% of the girls. This was based on a survey carried out on 31,308 eight year olds, who were tested. Relative superiority of girls is found to be evident at lower order reading ability tasks. The spread of raw sore for boys are wider on a reading attainment test, making it that there are perhaps many poor readers and good readers among the boys where as the girls were less distinguishable

The theory that backs the thought that girls may have relative linguistic superiority is that that girls mature physically at a much faster rate than the boys and if mental maturity into match, then teacher’s of younger classes may assume superiority of girls in reading tasks over boys.

Moore (1967) outlined a theory which links early speech development to the typical interests and identification s of boys and girls. His findings on an average was that girls talk earlier than boys appear top confirmed by National Child Developmental Study (Pringle et al, 1966). Moore, further claims that the girls showed a constant development in language as compared to the boys .Although girls show early verbal superiority , the survey confirms , later on , by the time of school going age the boys catch up with the girls.

Pringle (1966), reported girls are superior to boys in regard to mispronounced words, suggesting that boys are less likely to be careful listeners as compared to the girls.
All these aspects of gender issues from the perspective of reading difficulty are perhaps significant. However, one need to consider some important dimensions such as race, culture as well as look into latest trends in research that may not give much importance to gender bias in reading difficulty. Experts in Reading Difficulty such as Reid, quite opposed to the idea that gender may have a bearing on reading difficulty at all. The current trend in 2012 perhaps supports the opinion of Reid, both nationally and internationally. In this perspective, however, Karanth (2003) puts forward the data regarding familial risks of dyslexia which found out those 35-40% boys and 17-18% girls with an affected parent had dyslexia. Discussions and deliberations still continue from way back in 1960’s to the present 2012 and perhaps beyond in this domain.

The above discussion highlights various theories regarding gender differences in linguistic ability as well as the role played by gender in familial risk in dyslexia. The present study looked in to the differential ability of the different gender group of subjects in benefiting from a ‘phonetic’ remedial intervention to improve the reading performances.

The researcher, carried out a experimental study with identified subjects with reading difficulty into identifiable gender groups as female group of subjects (Exp.Gr.2a), male group of subjects (Exp.Gr.2b) and mixed-gender group of subjects (Exp.Gr.2c), on whom a phonological intervention strategy was administered for 8 months (45 minutes period thrice a week). Pre-test Reading score and Post-Test Reading score analysis of the female group of subject was found be significantly positive (vide Table No: 3, p 216). The Means of Pre-Test Reading of the subjects and Post-Test Reading was significantly different, that is to say there was a big gap between the two. The level of reading performance of the female subjects (10-11 years in class 5) rose significantly after remedial intervention given to them after the stipulated period of time and the subjects emerged much more confident and motivated in their ESL reading tasks. Improvement in the group of subjects reading performance after the intervention reflects the effectiveness of the researcher devised and administered ‘phonetic’ strategy of remediation or Schedule for Intervention programme (Tool No: 4), on this female-group of subjects.
In a similar kind of study conducted by the researcher on male group of subjects (Exp. Gr. 2b), where the subjects with pronounced reading difficulty in ESL, received the same researcher devised phonological intervention programme, by which male subjects at the end of 8 months showed significant progress in reading performance as well (vide Table N:4, p 217).

Although conflicting evidences were available regarding the reading skills of females and males, the studies so far conducted by the researcher highlights that both the male and female benefited from the ‘phonic’ intervention programme or Tool No:4. The study concentrated on finding out if any differential ability in linguistics among the different gender group of subjects had significant difference in benefiting from the remedial intervention as well. It is important to clarify at this point, that the researcher at no point established any link with differential linguistic ability if any among different gender groups on any advantage in benefiting from remedial intervention programmes.

Moore cited some experimental study thereby highlighting that girls respond more too auditory stimuli more than the boys and similarly boys respond more to visual stimuli. This study in conjunction with Miles, who is of the opinion children with visual deficit of dyslexia may benefit from phonic training, may implicate that as per Moore’s findings boys will benefit from phonological intervention than girls or vice-versa. However the researcher found that both the genders benefited from the phonic programme. Considering this the researcher again conducted a comparative analysis of the reading performance of girls and boys in an inter-test comparison. contrary to the expectation however the Reading Post-Test analysis of the girls -group of subjects and Reading Post-Test analysis boys –group of the subjects were found to be non significant (vide Table No:10, p 226) This therefore had implication that both boys and girls benefited from the intervention programme, though there was slight higher score on the part of the girls, it was found to be statistically ‘non significant’ when compared to that of the boys.

Reading performance of a mixed –gender group of subjects with reading difficulty in ESL in particularly so as get a comparative study of the whole area of gender influence on reading difficulty in particular. The mixed –gender group also received the same phonological remedial treatment (researcher –devised) for a period of 8
months, but no significant difference between Reading Pre-Test and Reading Post-
Test scores of the group (Exp.Gr2c) of subjects was found (vide Table No: 5 p 218). Interestingly, it was found that the Mean-Post-Test Reading score of this group was not lesser than that of the female group (Exp.Gr.2a) (vide Table No :11 p 227) and even greater than male group Exp.Gr.2b (vide Table No : 12 p 229), signifying that after remedial intervention this group’s level of reading ability was at par with or even better than the other two groups. The absence of significant difference between Mean-Reading –Pre-Test score and Mean-Reading-Post-Test score of mixed gender group may be ascribed to the fact that the Mean-Reading –Pre-Test score of this group was already much higher than those of the female and male groups.

Studies on male subject’s preferences in terms of teacher’s gender or their attitude towards studies in general may shed light on the performance of male subjects in the present study. Goodacre suggests that there are quite a few evidences to suggest that boys are less likely to have favourable attitude towards school and it may be more difficult to secure their attention and cooperation. Pringle et al claimed that boys tend to be more aggressive. Research therefore suggests that boys are less concerned with pleasing their teachers, whereas girls are more concerned with the teacher’s opinion and feelings towards them. The researcher’s findings from the present study corroborate that of Goodacre and Pringle.

She experienced that the girls in the female group was very attached to the researcher and in spite of many hurdles tried to follow the instructions of the researcher. The subject-teacher relationship was very good and perhaps this motivated this gender group to out-perform the boys.

The researcher feels that the boys individually got on well with the teacher and there was a lot of attention and motivation expect a few instances, however the boys in a group perhaps tend to be a little disruptive and inattentive especially in male group of subjects that was part of the study. Mixed –gender group as stated earlier were extremely well motivated and had a healthy competitive spirit that perhaps helped them to out-perform the boys.
Before the discussion draws to an end, the researcher deems necessary to draw attention to the bilingual group she attended to and the fact that Critchley (1970) speculated that bilingualism may pose as a hindrance to poor readers. However, Sankaranarayana, cited Chall (1996), that from a developmental perspective, bilingualism per se should not pose a risk especially during early stages of reading when the child is acquiring the mechanics of reading. Sankaranarayana and Kagan also came out with evidence that monolingual and bilingual children learning to learn English had similar profiles and indicated that bilingualism per se is not risk factor for learning to read. However, they agreed that bilingualism children may encounter difficulties in some aspects of phonological awareness in their non-native language. The researcher from her experience found subjects in general facing no amount of additional difficulty in ESL; this perhaps is due to the sample group that was chosen with same amount of RD in both FL Bengali as well as in ESL. However, the researcher feels this area needs further attention in further studies.

Before a conclusion is drawn, another issue needs attention, that is the aspect of the kind of material provided for story reading that may motivate the learners as well as last but not the least important issue of teacher’s teaching style, attitude etc that may motivate the learner to learn with or without reading difficulty. McNeil found out that female subjects were more into mythologies, fairytales, family life stories etc. Whereas, the boys preferred adventure and historical themes. The researcher in her own experience found out as the researcher made personal stories were given out as per interest of the subjects in general in the remedial programme, the females loved stories about kings and queens and family/personal type stories, whereas the boys preferred adventure and sports stories, spanning around sportsmen or some sports or games etc. Having kept the varying interest in mind, in spite of many hurdles both gender groups were attentive and motivated in the class and thus adding to the progress in their reading performance whatever level that may be.

Last, but not the least important issue the researcher observed was the teacher’s awareness, empathy and the quality of the teacher’s personality that brings in respect, attention and motivation from the students. The little time the researcher took out to deal with the students to know them, their difficulty and to deal with it went a long way. Even a little smile, gesture and an empathetic attitude that made way for
rectification of errors in an ambience of respect and empathy helped to the success of the remedial programme that the researcher conducted. Thus the researcher deems necessary to draw conclusion to the discussion with a quote from

Ginott, H.G.’s ‘Teacher’s Poem’:

I have come to a fighting conclusion.
I am the decisive element in the class.
It is my personal approach that creates the climate.
It is my daily mood that makes the weather.
As a teacher, I possess tremendous power to make a child’s life miserable or joyous.
I can be a tool of torture or an instrument of inspiration.
I can humiliate or humour, hunt or heal.
In all situations, it is my response that decides the whether a crisis will be escalated or deescalated, and a child humanized or dehumanized.

The importance of the teacher’s role in the teaching-learning process of a child with reading difficulty is well established. Findings of various experts in the field of reading difficulty shed light on the fact that, the teacher if and when is aware about the identifiable features of reading difficulty, can help in early recognition of the difficulty. As wastage of time in the area of reading difficulty not only complicates the reading difficulty itself, but also adds emotional burden on the child. A teacher with awareness to deal with the difficulty can provide the much needed timely and appropriate help, without wastage of time. Interestingly, exponents in the field have therefore advocated not only the special teachers be trained in the most effective ‘phonetic’ method of teaching English but also that the general English teaching methodologies in Training Colleges be attuned to teach in ‘phonetic’ style to all children, as well. Teacher’s role is thus an essential one in helping ‘at-risk’ children of ‘reading failure’. It is also well recognized that however well versed the teacher is in his or her area, the lessons will not be effective if it is not to the understanding of all children in a class-room. Only a teacher well aware about the varying individual needs of the children in a class-room, especially in the perspective of the RTE Act (2009), which advocates an inclusive set-up, will be able to bring out the fullest
potential of the educable population of our country. Thus, once again one needs to reiterate the importance of the role of teacher, whose timely intervention can help to cope with the difficulty and in many cases help children with reading difficulty to emerge as successful readers, at par with their more able peers.

4.4.2. Discussion on Concurrent Study:

The researcher conducted a Concurrent Study as a part of the present study, to find out the possible benefits of using ‘coloured overlay’ for the children having reading difficulty. Wilkins an expert in this area is of opinion that a sizeable number of children with reading difficulty may benefit from coloured overlays as in his opinion children suffering from ‘Visual Stress’, have high rate of co morbidity with reading difficulty. Wilkins describes the demonstrative feature of ‘Visual Stress’, where letters move around and also individuals find it difficult to read black prints against white background. In the present smaller part of the study, the mixed-gender group of subjects or Exp.Gr.2c was taken. After a survey as per the check-list of required symptom of the ‘Visual Stress’, 8 children out of 25 were found to have to have the difficulty. These children were given ‘overlays’ of their chosen colour to read all reading matter given out as part of the Intervention Programme II (Tool No: 4), during the stipulated 8 months period of the study. The researcher also randomly selected 8 other children from the group, who did not use overlays. The Post –Test Reading score of the group of subjects with overlays (Exp.Gr.2(c).O) at the end of 8 months, was compared with the group of subjects who did not use overlays (Exp.Gr2(c) WO). A comparison of Means of the Post-Test-Reading scores of the two groups, showed that though there was slight difference between the means, it was not - significant at 0.01 level of significance (vide Table No :13, p 231).

The findings of the concurrent study, highlight the fact that the use of overlays did not make a significant positive impact on children having reading difficulty of Exp.Gr.2(c) O, who used ‘overlays’ on a regular basis, during the remedial intervention programme for 8 months did not score significantly better than children in Exp.Gr.2(c) WO, who did not use them. The researcher did not establish a direct link between reading difficulty and ‘Visual Stress’, but only wanted to find out the comparative benefits of the use of overlays on the reading performance of children with reading difficulty. The researcher observed that there was individual variation in
the level of reading progress at the end of the stipulated period. Hence at most it can be said that there might have been individual cases of who perhaps had benefited from the use of ‘coloured overlays’ in reading, but these individual cases did not make any significant impact on the group reading performance. Findings of the Concurrent Study, could not establish the beneficial effects of the use of “coloured overlays” on reading performance of children with reading difficulty.

4.4.3. Discussion on Case Study:

After completing remedial programme as the main part of the present study, that consisted of groups of 12 to 25 at a time, the researcher thought that though the outcome of a phonological remedial programme or Intervention Programme III, on subjects with reading difficulty was positive and statistically highly significant, from a practitioners point of view examining the comparative benefit of an individualized remedial programme, considered ideal by experts in the field is highly required. Hence, the researcher endeavoured to carry out an individualized remedial programme that dealt with two male subjects with reading difficulties. All important parameters such as age, socio-economic conditions etc were controlled. However as till date the remedial programme available was in English the researcher this time selected subjects who studied in English medium school. This was only to assess if there was to be any comparative benefit of subjects with more exposure in the language of remediation than those of the major study who learnt primarily in mother language: Bengali but learnt English as a second language. The researcher wanted to weigh whether English at all posed as an additional burden on children who spoke primarily in mother tongue at home. These two subjects of the case study spoke Bengali primarily at home and learnt English at school only. Although their primary caretaker and their mother (in both the cases) were not confident in English, they could read and write English. Extended family and friends spoke in mother tongue Bengali as well. As in the major study, here also one major criterion for selection of subject was that they had great deal of difficulty in both the languages at school (in English as well as mother tongue Bengali). However remedial intervention was given out in English only. From the practitioner’s point of view the researcher had a comparative advantage of gauging the exact level of difficulty or lag in language skill as she had used the self –devised tool (No: 5): ‘Inventory for Identification of
Reading Difficulty’. This tool helped the researcher to identify the exact deficits in foundational skills in English and advance the remediation accordingly. It also helped the researcher to exactly know the level of reading difficulty of the subjects and here in this case both the subjects were of the same level. They both needed to start the remedial programme at the very base level of the foundational skill. The researcher at the end of the stipulated period of 5 months was very satisfied as both the subjects not only progressed well but she given out specific help as per need of the individual subjects. It was a matter of personal satisfaction to cater to the specific requirement of the subjects rather than give out general programme roughly based on their reading deficits. Here for example when the subjects were given a ‘sound- awareness’ programme, which involved a ‘letter name to sound of the letter’, progress was noticed in their awareness. Then the subjects were given remediation as per the remedial structure of the Intervention Programme III). As the programme was with two subjects only, it looked into their specific needs and kept on providing help at the individual level. Individual interest could be accommodated while writing story and this enormously motivated the subjects. The subjects were noticed to progress at a much faster rate and their motivation too was at an all time high. They themselves came back to share their transfer of learning and positive experiences. If syllabication technique helped them to spell better, this in turn helped them also to pronounce better as a part of the remedial programme. It was found that they themselves did not restrict themselves in applying their improved pronunciation in remedial lesson only. They applied their newly acquired skills in other lessons at school, such as in the English class as well as social studies and science. The confidence level of the two subjects improved enormously and so did their vocabulary skills within a very short span of time. In class there was a renewed interest in academic subjects and at home the parents were heard reporting to the class teacher that they were taking interest in leisure time reading at the cost of their favourite television serials. One child even enrolled at a book library and took keen interest as the fact that he had become a much more confident reader delighted him and so he wanted to demonstrate it continuously. Parents also encouraged the boys further though the parents played no active role in the remedial programme other than keeping an eye on the children to see that they practiced certain sounds etc on a routine regular basis.
A comparative analysis of the performance and outcome of the subjects who were given remedial help as per Schedule of Intervention Programme II, in a group: Exp.Gr2, with that of the help given at individual level following the schedule of Intervention programme III and presented bellow.

In the major study, as well as the case study the remedial intervention programme essentially was phonological in nature. The subjects of the major study received remedial instruction from the researcher in groups of 12 to 25 children, where as in the case study, two male children received remediation on an individual level. Though individual differences were kept in mind in the major study, it was not possible to make 12 to 25 individual lesson plans. The researcher paid special attention to specific difficulty or improvement or interest in children in the group, noted it down in the comment section of the lesson plans and tried to cater to these difficulties specifically on the following lesson days as far as possible. If any subject lagged behind due to any specific problem that was kept in mind and to bridge the gap additional attention was given. Though the subjects who followed phonological programme showed marked improvement in their reading performance at the end of 8 months period the researcher still was not satisfied, as it is ideal to provide individual remedial lessons and she felt that she could have provided closer attention to children individual needs in an individualized programme. In the individualized remedial programme, the researcher had a fair bit of satisfaction regarding the advancement of remedial help as per needs of the children individually. Individual lesson plans were prepared for two cases under study. It was therefore easier to map their progress and provide closer attention to the needs of the children which the researcher felt could never be generalized. Additional time spent on them individually helped the routine practice of sounds nearing (approaching) perfection and thus these two children improved in their pronunciation and reading as well as in basic spelling sense manifold as compared to the subjects in the major study. The progress in reading achievement level of the 57 children in the phonological intervention programme in the major study was assessed through a quantifiable assessment technique. However descriptive and qualitative analyses of data gathered through minute observation of the two cases were done, as it was felt that quantifiable assessment might miss out many important details. In this qualitative analysis of the performance of the students, the researcher could assess their progress. It was found
that the leap in reading performance of both the children was enormous as compared to any randomly selected subject in the major study. Thus, in the opinion of the researcher the progress of the subjects in the individualized programme was much more and it was her feeling that as a teacher she could do more justice to the specific needs of the children with reading difficulty when individualised remedial treatment was given. This apart, the individual rapport and bond that developed with two under study perhaps were responsible in motivating them to do well. For example, the researcher made those two children sit on her two sides and the focus and attention on them was direct. Looking and checking their work from such close quarter might have helped the subjects as well as the researcher in completing their task successfully.

After close observation it can be clearly stated that the level of progress of the subjects in the case study was much higher than those of the subjects in a group (Exp.Gr.2) in the major study. That children with reading difficulty are likely to have different types of needs has been well recognized by stalwarts in the field like, Snowling (2000). The researcher felt, in comparison to larger group her guidance and advancement of remedial help to two children having difficulty (case study) was far more effective. It was as per her own strategy but the freedom and ability to advance modified remedial help to two subjects who in some respects differed from one another was of great satisfaction to her. This somehow helped to plug in the loose ends which might not have been possible in a group of 12-25 children. The case study , therefore looked in to many minute details in the remedial intervention, such as: exact detailed difficulty in the sounding of letters, more and more exercises in sound deletion exercises etc could be increased or decreased as per the need of the subjects. Individual word games to increase vocabulary for example with certain blends like ‘bl, Pl, cl, gr, pr etc’ could be designed. This sort of work could only be done as this was an individual programme. Then again close attention to syllabication, not only in given out texts but also in any magazine or even in daily newspaper was included as a routine regular task at home to be checked by the teacher before every session. Thus the researcher felt was highly motivating and beneficial for the children that could never be accommodated in a larger group. Then again there was an instance where one of the two subjects mixed up the vowel sounds of ‘e’ with ‘a’. In order to help the subject then and there the researcher could practice more beginning and medial
sounds of some words additional to the set work as case study involved only two children and liberty to modify the lesson was much more than any larger group.

Once the subjects had progressed to some extent and gained a reasonable amount of confidence, the subjects often brought in their own task, such as help to pronounce certain words that they have come across in the class or in their story books or even comic books they had started taking interest in library periods or at home. Often the books and comics were of much lower reading standard but the teacher encouraged them, as this had a positive impact on their reading at school. To be able to read and keep a personal dictionary (student made, as taught by the researcher), was attempted even in the major study group, but was not entirely successful as it was difficult to monitor the student, who were in large groups. However, these two children in the case study group caught on the work very well. In this individualized programme some amount of spelling work as incorporated in to single word reading, sentence reading to paragraph reading was again backed up by dictation work as well. This seemed to strengthen their confidence in the language in general. The researcher feels this could not be achieved in a larger group. Miles, also corroborates the importance of spelling rules to be learnt through a specific strategy that only improves dyslexic children’s’ reading.

Finally the researcher is of opinion that much more perhaps can be done for the children with reading difficulty especially since, though identified with difficulty in both mother tongue and in ESL, remedial was given in English only. It is perhaps a matter of deliberation and further study to tackle with the reading difficulty in Bengali as well in second language English (ESL). The intensive study of the two cases allowed insights in to many a factors that are likely to may produce positive impact on reading performances of children having reading difficulty, but there are still many questions that need to be answered in order to bring in further improvement in scheduling suitable intervention programme for remediation of reading difficulty of children, particularly at individual level.