The researcher has attempted to study the effect of a Visual Perception: Diagnosis and Remediation Program designed on Achievement of Visual Perceptual Deficient Students. For this purpose, the researcher identified the visual perceptual impairments/deficient students at primary level with the help of developmental test of visual perception developed by “Marianne Frostig, Welty Letever and John R. B. Whitthesey, 1964”. Achievement of these students in Hindi was studied. The researcher prepared “A Visual Perception: Diagnosis and Remediation Program” and it was provided individually to students. After the treatment of this remedation program, their achievement in Hindi was again observed. In conclusion, it was observed that the visual perception program has been highly effective in the improvement of their achievement in Hindi.

[Keywords: Visual perceptual deficient students, Achievement in Hindi]

1. Introduction

Without perception, a human being cannot get any message from his environment or respond to it. The most important of these are visual and auditory. As research shows, the most of our input goes in through visual modality. Perception is an important area of deficiency in learning disabled children. And because of this, these children are not able to perceive the world properly and hence
problems in learning are seen. Visual perception plays significant role in school achievement, particularly in reading. Disabilities related to visual perception are one of the primary characteristics of learning disabled children. According to Hallahan and Kauffman, (1976), “Visual perceptual disabilities are related to learning disabilities, however, are concerned with disabilities that occur in a child despite the fact that he has structurally sound eyes and adequate muscular control over them.” Nakra, (1990) worked on the evaluation of Feurestein's Instrumental Enrichment (F.I.E.) program in the classroom. Curtis and Chmelka (1994) found the effectiveness of the reading program with four adolescents with learning disabilities who were reading below the 5th grade level. McCormick (1994) presents a case study of a non-reader, an elementary school boy with above average intelligence, who recognized only 4 words at the beginning of his 3.5 years participation in a school and clinical reading clinic. Sofie & Riccio (2002) studied various ways for identification of students with reading disabilities To gain an understanding of the psychological processes that underlie an individual's knowledge of his or her environment, then the study of perception is the best place to begin. Considering the gaps as evident in the aforesaid discussion, present study was taken up with a view to develop a Visual Perception: Diagnosis and Remedation Program for the perceptually deficient children. Keeping in view the tremendous importance of visual perception, the researcher decided to take up research to study the effect of “A Visual Perception: Diagnosis and Remedation Program” (Intervention) on achievement in Hindi of visual perceptual deficient students.

2. Objectives

Following objectives were formulated:

1. To identify the visual perceptual deficient students at primary level.
2. To study the effect of “A Visual Perception: Diagnosis and Remedation Program” (Intervention) on achievement in Hindi of visual perceptual deficient students.

3. Method

For the present study, two groups (experimental and control) of students were randomly formed. First of all, perceptually deficient students were screened out from various primary schools of West U.P. on the basis of their background information, school records, checklist for teachers, symptomology checklist of visual perceptual deficient and developmental test of visual perception (developed by Marianne Frostig, Welty Letever and John R.B. Whitthesey, 1964). On the basis of results, 300 students of class IV were identified as visual perceptual deficient students. Out of these 300 students, only 100 students were randomly selected. Then, theses were divided in two groups - cont. (50) and exp. (50). Both groups were
equated on intelligence. These students were pre tested. Then, Experimental group was exposed to “A Visual Perception: Diagnosis and Remedation Program” developed by the researcher himself. This program was provided individually to all students. After treatment both groups were post-tested.

4. Results

4.1 Control of both Groups on Intelligence

To control the students of both groups before treatment, they were administered intelligence test. t-value was calculated between the means of the scores of the students of both groups on intelligence test. The result of t-test for significance of difference between exp. group (N=50) and cont. group (N=50) before treatment on intelligence is given in table-1.

Table-1: Comparison of exp. and cont. group on Intelligence before treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S. Ed</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>50</td>
<td>69.86</td>
<td>8.12</td>
<td>1.67</td>
<td>0.84*</td>
</tr>
<tr>
<td>Control</td>
<td>50</td>
<td>68.45</td>
<td>8.42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 0.05 level of significance

It is observed from Table-1 that t-value between the students of exp. group and cont. group on intelligence was found to be 0.84. It was noted that the Table value for the degree of freedom (df = 98) was found to be 1.99 which was greater than the calculated value (0.84). It means that there no significant difference exists between the means of the students of exp. and cont. groups on intelligence. It is clear that the students of both the exp. and cont. groups were found to be equivalent on intelligence. Therefore, it was concluded that both the exp. and cont. groups were controlled on intelligence.

4.2 Control of both Groups on Achievement in Hindi before Treatment

To study the achievement in Hindi of the students of both groups before treatment, they were administered achievement test in Hindi that was constructed by the researcher himself. t-value was calculated between the means of the scores of the students of exp. group (N=50) and cont. group (N=50) on achievement in Hindi.

Table-2: Comparison of exp. and cont. group on Achievement in Hindi before treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S. Ed</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>50</td>
<td>26.56</td>
<td>4.16</td>
<td>0.97</td>
<td>0.91*</td>
</tr>
<tr>
<td>Control</td>
<td>50</td>
<td>25.67</td>
<td>5.38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 0.05 level of significance
It is evident from Table-2, that mean and standard deviation on achievement in Hindi of the students of exp. group were found to be 26.56 and 4.16 respectively, while mean and standard deviation of the students of cont. group on achievement in Hindi were 25.67 and 5.38, respectively. The t-value between the means of the students of exp. group (N=50) and cont. group (N=50) before treatment on achievement in Hindi was found to be 0.91. Table value for significant difference at 0.05 level for degree of freedom (df=98) is 1.99 which is greater than the calculated value. It means that no significant difference exists between the means of exp. and cont. groups on achievement in Hindi. This indicates that the students of both exp. and cont. groups are equivalent on achievement in Hindi. Therefore, it was concluded that before treatment, both the exp. and cont. groups were controlled on achievement in Hindi.

4.3 Treatment of Visual Perception; Diagnosis and Remediation Program

The Researcher prepared Visual Perception; Diagnosis and Remediation Program based on programs developed by Frostig, Letever and Whittlesey (1964). Based on survey of research, researcher decided to provide remedial program in the eight areas. After comprehensive treatment of Visual Perception; Diagnosis and Remediation Program to experimental group, experimental and control groups were post tested on achievement in Hindi.

4.4 Comparison of Exp. and Cont. Group on Achievement in Hindi after Treatment

To find out the significance of difference after treatment between exp. and cont. groups on achievement in Hindi, t-value was calculated between the means of the scores of the students of exp. group (N=50) and cont. group (N=50) on achievement in Hindi.

Table-3 : Comparison of exp. and cont. group on Achievement in Hindi after treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S. Ed</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>50</td>
<td>29.86</td>
<td>4.64</td>
<td>1.05</td>
<td>3.48*</td>
</tr>
<tr>
<td>Control</td>
<td>50</td>
<td>26.21</td>
<td>5.68</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 0.01 level of significance

From table-3, it is observed that mean and standard deviation on achievement in Hindi of the students of exp. group were found to be 29.86 and 4.64 respectively, while mean and standard deviation of the students of cont. group on achievement in Hindi were 26.21 and 5.68, respectively. The t-value after the treatment between the means of the students of exp. group (N=50) and cont. group (N=50) on achievement in Hindi was found to be 3.48. Table value for significant difference at 0.01 level for degree of freedom (df=98) is 2.63 which is less than the calculated value. It means that significant difference exists between exp. and cont.
groups on the means of the post-test scores of achievement in Hindi. This means both exp. and cont. groups were found to be differed significantly on post-test scores of achievement in Hindi. The Mean of exp. group is higher than that of cont. groups.

To check the post-test achievement in Hindi results, given in Table-3, further gain scores (difference between pretest and post-test scores) means of exp. and cont. groups were used for analysis. To compare exp. and cont. groups on gain scores on achievement in Hindi, t-value was calculated.

Table-4 : Comparison of exp. and cont. group on gain in achievement in Hindi after treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S. Ed</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>50</td>
<td>3.87</td>
<td>2.65</td>
<td>0.43</td>
<td>5.12*</td>
</tr>
<tr>
<td>Control</td>
<td>50</td>
<td>1.66</td>
<td>1.45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 0.01 level of significance

It is depicted from Table-4 that mean and standard deviation of exp. group on gain scores of achievement in Hindi were found to be 3.87 and 2.65, respectively, while Mean and standard deviation of cont. group on gain scores of achievement in Hindi were 1.66 and 1.45 respectively. t-value between the means of gain scores of exp. and cont. group on achievement in Hindi was found to be 5.12 which was very high than that of table value 2.63 for significance at 0.01 level for degree of freedom (df=98). This indicates that there was significant difference between exp. and cont. groups on gain scores mean of achievement in Hindi. This means both exp. and cont. groups were found to be differed significantly on gain scores of achievement in Hindi. It is also clear from the table-4 that mean of exp. group on gain scores of achievement in Hindi was found to be higher than that of cont. group mean. Since intervention program related to visual perception given to exp. group, therefore, it can be concluded that visual perception skills program is effective for improving the achievement in Hindi.

5. Conclusion

It is clear from the results that after the treatment of Visual Perception; Diagnosis and Remedation Program to experimental group, both experimental and control groups were found to be differed significantly on achievement in Hindi. Means of experimental group on achievement in Hindi post-test scores were found to be higher than control groups means on achievement in Hindi post-test scores. This means that experimental group, which was exposed to Visual Perception; Diagnosis and Remedation Program, scored significantly higher on achievement in Hindi than those of control group, which was not exposed to Visual Perception; Diagnosis and Remedation Program. It is also clear from results that both groups were equated on intelligence and pretest achievement in Hindi. Therefore,
significant difference were found due to treatment of Visual Perception; Diagnosis and Remedation Program. Therefore, it can be concluded that Visual Perception; Diagnosis and Remedation Program based on visual activities was found to be effective for improvement of achievement in Hindi of visual perceptual deficient students. The findings of present study are similar to the results of the studies conducted by researchers such as Frostig (1966), Nakra (1990), Englert (1994). So, the results have consistently. Significant effect of Visual Perception; Diagnosis and Remedation Program opens windows of researchers thinking to overcome problems of visual perceptual deficient students.

References


