

CHAPTER III

DESIGN OF THE EXPERIMENT

3.1 INTRODUCTION :

The purpose of this study is to study reading attainments of Dyslexics. It is assumed that reading attainment of dyslexics may be affected by dyslexia. The measurement has been designed to study reading behavior in the form of errors (substitution, omission, distortion, addition, repetition, reversal, hesitation, self-correction) while reading and comprehension level of the text. Due to lack of time and manpower, the study is conducted on small scale.

In this chapter the objective of study, tools used for data-collection, sample taken, scoring and tabulation and delimitation of study has been described.

3.2 OBJECTIVE OF THE STUDY :

The objective of the present study are to :

- identify the learning disabled children from the grades III, IV and V (8-10 years age group) ;
- identify learning disabled children having problems in reading.
- develop criteria to measure reading attainments i.e. accuracy and comprehension)
- study problems in different areas of reading (Accuracy and comprehension)

Under accuracy following types of errors were included ;

- Substitution
- Omission
- Distortion
- Addition
- Repetition

- Reversal
- Hesitation
- Self-Correction

Under comprehension we include the understanding of a word or a phrase recognition to the understanding of the meaning intended by the author. This involves determining the meaning of words in their language setting and at the same time linking the meaning into larger language patterns and fusing them to a chain of related ideas, usually those that author has in mind. The degree of understanding depends upon many factors, such as, the nature of the reading task, the clarity of its expression, the readers purpose, interest his background and past experiences.

Some researches have asserted that dyslexics commit very special type of errors while reading and that affect their reading attainments. The age of 8-10 is of great importance while studying reading attainments. It is known to be a period of rapidly increasing reading fluency.

3.3 VARIABLES :

Variables are attributes or qualities which exhibit difference in magnitude, and which vary along some dimensions. Variables taken into consideration in the present study are as follows :

1. Independent Variables

- a) Dyslexics
- b) Age

2. Dependent variables :

- a) Reading Attainments
 - i) Accuracy in the form of following errors; substitution, omission, addition, repetition, hesitation and self correction.
 - ii) Comprehension

3.4 TOOLS USED :

The following tools were used in the collection of data :

- Check list for the identification of L.D. Children in classroom (developed by N.C.E.R.T, New Delhi) (Appendix-A)
- Case study proforma (Appendix-B)
- Raven's Colour Progressive Matrices.
- Self developed reading attainment test (Appendix -C)

3.5 SAMPLE : SELECTION AND IDENTIFICATION

The technique of selecting sample together with its size is an important aspect of research and this enhance the reliability and validity of research findings. The adequacy of a sample will depend upon our knowledge of the population or supply as well as upon the method used in drawing the sample. Samples are of four types : random, stratified or representative, incidental and purposive.

A random sample is one drawn in such a way that each member of the population has an equal chance of being included. On the other hand, in a representative cases are selected in such a way that the characteristics of the samples are similar in important respect to the characteristics of the universe.

Incidental sampling should be applied to those groups which are used because they easily or readily obtainable. Whereas in purposive sampling a sample may be expressly chosen because in the light of available evidence, it mirrors some larger group with reference to a given characteristic.

Due to lack of time, money and manpower every individual in the population can hardly be studied, the best way to study population is through representative sample by the suitable techniques.

Operationalization of the first objective is an essential condition for the attainment of subsequent objectives of the study. Realising this fact steps were taken to identify the L.D children attaining the grade III, IV & V of age group 8-12 years in primary school meant for normal children in Jalandhar city. Four schools were selected for the present study, based on their access and feasibility for administering different tests. Out of four schools three were Public Schools and rest was Central School.

The L.D Children from four primary schools were identified using the following methodology -

Children studying in grade III, IV and V of age group 8 to 10 yrs., who were having problems in basic skills of learning specially in reading, were identified

using teacher's opinion. The teachers give their opinion on the basis of check-list developed by N.C.E.R.T., New Delhi for the identification in classroom (Appendix-A)

Table 3.1. SAMPLES SUGGESTED BY THE TEACHERS

S.NO	NAME OF THE SCHOOL	TOTAL NO. OF STUDENTS IDENTIFIED AS L.D.
1.	SCHOOL A	35
2.	SCHOOL B	38
3.	SCHOOL C	10
4.	SCHOOL D	12
	<u>TOTAL</u>	<u>95</u>

- To maintain the confidentiality of the school name of the schools are kept secret.

- The physical, sensory, emotional, cultural and socio-economic level of these children were observed by the investigator, by using Case-Study Proforma, before administering the intelligence list. Through the personal observation school health records, asking by the teachers of the class and consulting to the parents other information were collected. Children having above mentioned disability were eliminated from the study.

Table 3.2 : NO. OF STUDENTS ELIMINATED AND RETAINED

S.NO	CRITERIA	CHILDREN ELIMINATED N = 95	CHILDREN RETAINED N = 95
1.	SENSORY PROBLEM	1	94
2.	EMOTIONAL PROBLEM	4	90
3.	IRREGULARITY IN ATTENDENCE	6	64
4.	CULTURAL DEPRIVATION	2	62
5.	SOCIO ECONOMIC PROBLEM	5	77
	<u>TOTAL</u>	<u>18</u>	<u>77</u>

- Later, on these children intelligence test was administered to identify the level of intelligence and to locate the L.D. children on the basis of Raven's Colored Progressive Matrices (Raven 1965) children were classified superior, above average, average and below average on intellectual ability. Only superior, above average and average students were retained for further study.

Table 3.3 NO. OF STUDENTS IN DIFFERENT GRADE ON RCMP TEST

GRADE	INTERPRETATION OF GRADE	NO. OF STUDENTS	%
I	SUPERIOR	10	10.5
II	ABOVE AVERAGE	24	25.26
III	AVERAGE	14	14.7
IV	BELOW AVERAGE	29	30.5

From the above table it is clear that 48 L.D. children were belonging to average, above average or superior grade and 29 were belonging to below average.

The test of reading attainment i.e. accuracy and comprehension were administered only on those children who were belonging to grade I, II and III on R.C.M.P. test. Out of 77 students only 43 were identified as L.D. children. Only 48 students were considered for further studies.

3.5 SCORING OF RESPONSES AND TABULATION OF DATA :

After recording student's reading ability and getting their answer for comprehension test, it was scored manually. The criteria of scoring was considered as a mistake in accuracy and in comprehension was to know whether the child has got the main idea or not. Number of students read incorrectly and correctly with respect to all 8 types of errors were tabulated separately, for suitable statistical analysis discussed in Chapter IV.

3.6 STATISTICS USED :

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3.6 STATISTICS USED :

In the present study Descriptive statistics is used. First the mean of the error are found out and then the percentage of the errors are calculated. These are presented in graphic forms also . It is discussed in detail in Chapter IV.

3.7 DELIMITATION OF THE STUDY :

Every research work have some delimitations and the delimitation of this study are :

1. This sample was confined to 77 L.D. children of Jalandhar city which consisted 48 dyslexic children.
2. The identification of L.D. children were done by check-list developed by N.C.E.R.T., New Delhi. Reliability and validity of this check-list is not known.
3. Problems in reading accuracy and comprehension were identified, others skill like writing, spelling and arithmetic were not taken into consideration.
4. The list developed by the investigator regarding accuracy and comprehension could not be standardised, its validity and reliability could not be checked due to shortage of time.
5. Teacher's perception for identification of L.D. children with the help of check-list was used, which may be contaminated with some subjectivity.
6. Only few threats to validity (internal,external) were taken into consideration.



CHAPTER - IV

CHAPTER - IV

DESCRIPTION OF MEASUREMENT OF TOOLS AND TECHNIQUES

4.1 INTRODUCTION :

In previous chapter tools and technique used to collect, have been discussed. This chapter describes in detail about the measurement of tools and techniques used in present study.

4.2 DESCRIPTION OF TOOLS :

1. Check-List :

This check-list was developed by N.C.E.R.T., New Delhi (1987) to identify L.D. children under Project Integrated Education for Disabled (P.I.E.D.). This check-list consists of some characteristics in the field of behaviour and academic (reading, writing, spelling, arithmetic), which L.D. Children exhibit in the classroom. It can measure 26 characteristics of L.D. children. The check-list for the identification of L.D. children is given in appendix -A.

2. Case Study Proforma :

This case study proforma generally used to identify the students having different types of problems i.e. sensory problems emotional problems, cultural deprivation and socio Economic problem, was used. This case study proforma show the whole history of the child. The case study proforma for the identification of students having above problems, is given in appendix -B.

3. Raven's Colour Progressive Matrices :

The progressive matrices developed by Raven in Great Britain, were also designed as a measure of Spearman's 'g' factor. Requiring chiefly the education of relations among abstract item, this test is regarded by most British Psychologists as a best measure available of 'g'. It consists of 60 matrices, or design, from each of which a part has been removed. The subject has to choose the missing part and insert it into right place from six to eight given alternatives. The item is grouped into five series, each containing 12 matrices of increasing difficulty but similar in principle. The earlier series require accuracy of discrimination ; the later, more difficult series involve analogies, permutation and alteration of pattern and other logical relation.

An easier coloured form of progressive matrices has been prepared for use with children between the age of 5 to 11 with feeble minded adults. At this level test is available in book form and there are 36 matrices in it. The items are grouped into three series. The test is administered with no time limit, and can be given individually or in group. The simple oral instruction is required.

The author has given following classification of persons based on the performance of test score

Grade -

- I 'Intellectually Superior' if his score lies at or above 95th percentile for people of his age group.
- II 'definitely above the average is intellectual capacity' if his score lies at or above the 75th percentile.
- III 'If the score is greater than 50th percentile than the student is average.
- IV 'definitely below average in intellectual capacity' if his score lies at or below 20th percentile.

The Coloured Progressive Matrices sets A,Ab,B, is constructed to give, for children 5 to 11 years of age, a wider dispersion of scores, and to make the test more suitable for use with persons who are for any reasons mentally subnormal or impaired.

The first series of matrices to be used experimentally, were all nine figures determinants resembling a test used by Spearman, with the difference that whereas be asked people to state the rule exemplified they were now asked to find a missing figure.

As the coloured matrices scale is designed to assess as accurately as possible a person's present clarity of observational and level of intellectual development, his erroneous responses cannot be used satisfactorily for the qualitative assessment of intellectual dysfunction. They only indicate where a person is failing, and possibly why.

4 READING ATTAINMENT TEST :

This test was developed by the investigator to find out the problems of dyslexics. Due to lack of time, the validity and reliability of the test could not be taken out. This test only fulfills the requirements of the investigator.

It was taken into consideration that the paragraph chosen to measure reading attainments, should be taken from the earlier grade of the students grade, so that the students do not have any new words.

Two paragraphs were taken for reading accuracy and comprehension. One designed for grade III was taken from the book of grade I, and the other one designed for the students of 9-10 years i.e. grade IV and V was from the English text book of class III.

4.3 ADMINISTRATION OF TOOLS :

The head of institutions were contacted to administer the tools. After getting permission, the class-teacher, maths teacher and the language teachers were contacted and check-list were provided to suggest the name of the students, then the case-study proforma was used to identify the students having different problems. Then the intelligence test and the test of reading accuracy and comprehension were administered on the students in game like situation.

1. Administration of Check-list :

First of all teachers teaching language and maths to students of class III, IV and V were oriented about learning disabilities and check-list developed by NCERT for the identification of L.D. children then they were given copies of check-list to go through and to give the detailed information on the points given on the information sheets. After one week check-list were collected from the teacher by the investigator.

2. Administration of Case Study Proforma

The students identified as L.D., identified by using check-list were further identified as students having physical/sensory disabilities. The case study proforma was filled up by the students on the basis of the information given by the parents of the L.D. students. After identifying these students having sensory problems emotional problems, cultural deprivation and socio-economic problem, these students were eliminated from the study i.e. 29 students.

3. Administration of Intelligence Test :

Raven's Coloured Progressive Matrices was administered on the samples of 77 students of 8-10 years age group belonging to 3 public schools and one central school of Jalandhar city. First of all proper instructions were given to the children about the test. There was time limitation given 20 min for the test. On the basis of scores obtained by the student on intelligence test, the children were

4. ADMINISTRATION OF READING ACCURACY AND COMPREHENSION TEST :

The test was administered on 48 students who are identified as L.D. The instructions were properly given. The students were called one by one and were given a paragraph to read, errors committed by the students were marked and it was followed by the process of recording in a cassette. Then the students were asked to read the paragraph silently so that they can concentrate on the paragraph. In the end questions based on the paragraph were asked.

Errors committed by the students while reading were tabulated under accuracy and answers given for the questions were under comprehension. Identified problems are given in detail in chapter V.