THE PROBLEM, METHOD AND PROCEDURE
CHAPTER - II

THE PROBLEM, METHOD AND PROCEDURE

In this chapter the statement of the problems, delimitations, sampling procedures, objectives, hypotheses and design of analysis along with appropriate statistic has been described.

2.1 STATEMENT OF THE PROBLEM

"Development and evaluation of an activity centred curriculum for nursery children in terms of physical, social and intellectual growth".

2.2 DELIMITATIONS

1. Out of all pre-school classes, only nursery class was chosen for the present study.

2. The study was limited to the children from different schools of Jalandhar city only.

3. The study was confined to physical growth, cognitive and social development.

2.3 OBJECTIVES OF THE STUDY

The study was conducted to achieve the following objectives:

• To study the existing curricula of nursery class followed by different nursery schools of Jalandhar City.

• To analyse the curricula of nursery class in the light of objectives laid down by Kothari Commission (1964-1966) for pre-schoolers.
To construct an activity centred curriculum framework for nursery class to meet their social, physical and intellectual needs.

To evaluate effectiveness of activity centred curriculum in terms of physical, social and mental growth.

To study the interaction of activity centred curriculum, gender and place of residence.

2.4 HYPOTHESES OF THE STUDY

The present study was conducted to test the following hypotheses:

- There will be significant difference in cognitive development of the groups exposed to activity centred curriculum and traditional curriculum.
- Students exposed to activity centred curriculum will show significant difference in the acquisition of social skills as compared to the students exposed to traditional curriculum.
- The activity centred curriculum will effect significantly the physical development of the children.
- (a) There will not be any significant difference in the cognitive development of boys and girls irrespective of the type of curriculum.
- (b) There will not be any significant difference in the social development of boys and girls.
- (c) There will not be any significant difference in the physical growth of boys and girls.
- (a) Place of residence makes no significant difference in the cognitive development of children.
(b) Place of residence makes no significant difference in the social development of children.

(c) Place of residence makes no significant difference in the physical growth of children.

First Order Interactional Hypotheses

- There will not be any significant interaction between curriculum types and gender.
- The interaction between type of curriculum and place of residence will be insignificant.
- Interaction between gender and place of residence does not effect significantly the physical, social and cognitive development.

Second Order Interactional Hypothesis

- There will not be significant interaction among variables - curriculum type, gender, and place of residence.

2.5 DESIGN OF THE STUDY

The present study was designed to develop an activity centred curriculum for nursery children and to evaluate it in terms of physical, social and cognitive development. The effect of activity centred curriculum was studied through pre test - post test quasi experimental design.

**TABLE 2.01**

Schematic layout of design
One of the two groups was taught with the activity centred curriculum and another group was taught the traditional curriculum (Table 2.01). The gain scores of the two groups were subjected to statistical treatment as per the statistical design drawn for the study. Conclusions were drawn on the basis of descriptive and inferential statistics.

2.6 SAMPLE SELECTION

The population for the sample consisted of nursery class students who were admitted for the session 1998-99 in different nursery schools of Jalandhar City. A multi stage random cluster sampling technique was employed to select a sample of two hundred students. Randomization was done for the selection of schools and for the selection of sections. The complete section was taken as a group. The break up of the sample is shown in table No. 2.02

**TABLE 2.02**

Table showing breakup of the sample

<table>
<thead>
<tr>
<th>S. NO.</th>
<th>Institution</th>
<th>Total No. Of Students in Nursery Class</th>
<th>Student Selected</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>St. Joseph's Convent School</td>
<td>250</td>
<td>50</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>2.</td>
<td>Innocent Heart School</td>
<td>400</td>
<td>50</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>3.</td>
<td>Red Roses Nursery School</td>
<td>200</td>
<td>50</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>4.</td>
<td>Green Field Preparatory School</td>
<td>300</td>
<td>50</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1150</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

2.7 DESCRIPTION OF THE TOOLS USED

As pre-schoolers especially pre-nursery and nursery students cannot read and write properly, they can listen and speak, therefore, the assessment of
young children is done through observation and rating scales. In the present study three aspects namely: Physical, Social & intellectual development were to be assessed. The following tools were used:

1. Boehm’s Test of basic concepts for pre-schoolers (for measuring cognitive development) adapted to Indian conditions.
2. Social behavior measuring schedule.
3. Physical development assessment scale.

2.7.1 Boehm’s test of basic concepts preschool version (BTBC-PV)

This test assesses young children’s mastery of basic concepts. It can also assess possible development delays in language acquisition. It is a pictorial multiple choice test in which the child is required to point to one of the three pictures, after listening to a statement made by the examiner. This test is administered to children of age group 3 to 5 years. However it is also appropriate for older children who have special educational needs. The original test measures the child’s understanding of 26 basic relationship concepts that refer to characteristic of persons and objects such as size, direction, position, quantity and time etc. It consists of five warm up items followed by 52 test questions.

The test consists of picture cards with different types of pictures. For every card one statement is given and the children have to point out the right answer after understanding the basic concepts. For example:

*Point to the biggest bear*: In this example the basic concept is biggest and bear is an object. The children have to point out the picture of bear, which is the biggest one.

The test was adapted by Dr. G.S. Sodhi and adapted test consisted of 40 statements. The time limit to complete this test is approximately 40 minutes as it
is quite a lengthy test for small children and the teacher gives statement at every

card. Also 10 minutes extra are given for clearing the doubts and solving the five

elements given before the test. The scoring is done by giving one mark to the

child for every right answer. The total of the scores on 40 pictures cards gives

the final score of each child.

Test of Basic concept for measuring the cognitive development of the pre-
schoolers has been appended as Appendix - I.

2.7.2 Social behavior measuring schedule

A scale to assess social development of the child in the form of social

behavior measurement schedule was developed by Dr. G.S. Sodhi. This

teacher rating scale was designed to measure preschool children's interpersonal

behavior and assumption of social responsibility. A teacher rates a child on

different items covering a wide range of behavior such as response to routine,

response to the unfamiliar, following instructions, making explanations, helping

others, sharing, initiating activities, giving directions to activities, reaction to

frustration and accepting limits etc.

Its first draft consisted of eighty items measuring various social aspects

such as playmates, attitude towards adult intervention, and traits as cooperation,
tolerance, sharing, adjustment, helping others etc. These statements were given
to judges to judge whether these statements are appropriate to assess social

behavior of pre-school children or not. On the basis of feedback sixty items were

retained.

Second draft which consisted sixty items were given to nursery class
teachers to administer to nursery class. On the feedback from teachers ten
items were dropped. The final draft of social behavior measuring schedule has fifty items. The schedule is appended as Appendix – II.

2.7.3 Physical development assessment scale

For assessing physical development of pre-schoolers a schedule was constructed by Dr. G.S. Sodhi. In this schedule mainly two types of skills were identified – Gross and Fine. The Gross motor skills are those which involve control and coordination of large muscles e.g. running, climbing, jumping, crawling and skipping etc. The fine motor skills involve the finer muscles e.g. painting, writing, cutting etc. While constructing the scale, the following principles were kept in view:

1. Only positive numbers will be assigned to all scale points.
2. Effort will be made to keep the constant error and their controls at minimum level.
3. Error of leniency, error of central tendency, error of regression, halo effect and proximity error will be avoided.

First Draft: In the first draft fifty statements were written to assess physical growth and development. These statements were given to ten judges to judge whether these measure physical development or not. Five teachers and five doctors who were looking after the growth of children were selected to judge the statements. They were asked to evaluate the statements against the objectives of physical development at pre-school level.

Second Draft: On the basis of feedback from judges, ten items were discarded and three items were modified. Second draft consisted of forty items and were given to two teachers to observe and report about the validity of the
items. On the basis of feedback from individual try out, five items were dropped.
The final draft contains thirty-five items. The schedule is given in Appendix – III.

2.8 PROCEDURE

The study was proceeded under three main steps i.e. planning, execution and evaluation. The planning section consists of phase - I of the study, the execution section includes phase - II & III and the evaluation section is the concluding section comprising phase - IV. The schematic layout of procedure is given in Fig. 2.01

PHASE – I

The planning started with phase - I in which different nursery schools of the city were visited by the investigator. The existing curriculum implemented in these pre-schools was collected. Content analysis of the curriculum was done by keeping in view the three criterion variable i.e. social, physical and cognitive development through actual observations of the transactions of the curriculum in the classroom and by consulting teachers, parents and principals of the nursery schools, the views about the existing curriculum were noted. Based on the feedback and by keeping in mind the principles of pre-school education, the objectives were outlined and an activity centred curriculum was constructed.

PHASE – II

This was the pre-testing phase. Out of various schools of the city, four schools were randomly selected. A sample of 200 nursery children was raised through cluster random sampling technique. Different tests for physical, social and cognitive development were administered to the entire sample. The tests were administered strictly according to the directions laid down in the test manuals.
PLANNING

Phase-I

Studying the existing Pre-school Curriculum

Existing Pre-school Principal and Staff

Feed Back

Planning Activity Centred Curriculum

EXECUTION

Phase-II

Exposed to Activity Centred Curriculum

Pre Testing

Phase-III

Exposed to Traditional Curriculum

1. Boehm's Test of Basic Concepts.
2. Social behaviour measuring schedule.
3. Physical development assessment scale.

EVALUATION

Phase-IV

Post Testing
PHASE – III

This was the experimental phase. The experiment lasted for one full session. In this experimental stage the whole sample was divided randomly into two groups having equal number of boys and girls in each group. The group named A₁ was exposed to activity centred curriculum and the group named A₂ was exposed to traditional curriculum of the school.

PHASE – IV

At the end of phase - III, both the groups were administered tests to assess physical, social or cognitive development. Pre test were used as post test.

2.9 DATA COLLECTION

The responses of the students on all the tests were scored as per the scoring procedure given under the respective tests. The data yielded following scores.

1. Pretest scores of the measure, physical growth.
2. Pretest scores of the measure, social development
3. Pretest scores of the measure, cognitive development
4. Post test scores of the measure, physical growth
5. Post test scores of the measure, social development
6. Post test scores of the measure, cognitive development

2.10 STATISTICAL DESIGN

The data collected was subjected to statistical analysis through descriptive and inferential statistics.
Descriptive statistics in the form of Mean, Median, Standard Deviation, Skewness and Kurtosis were worked out to study the nature and distribution of scores. To test the hypotheses $2 \times 2 \times 2$ factorial design was used.

The schematic layout of the total number of combinations is shown in Fig. 2.02.

Fig. 2.02 Schematic layout of combinations

2.11 LAYOUT OF THE CHAPTERS

Chapter - I  
Introduction

Chapter - II  
The problem, method and procedure

Chapter - III  
Development of pre-school curriculum

Chapter - IV  
Experimentation

Chapter - V  
Analysis of data and discussion of results

Chapter - VI  
Summary