CHAPTER - 3
METHOD & PROCEDURE OF THE STUDY

3.0 INTRODUCTION

In the previous chapter the development of the problem for the present study has been traced in the light of the theoretical and research background. This chapter is devoted to the method and procedure followed in the investigation. Therefore, an attempt has been made to provide methodological plan and procedure followed under the following sub-heads.

Methodology
Sampling
Tools Used
Procedure for Data Collection
Statistical Techniques Used

3.1 METHODOLOGY

There are several methods of conducting research. Choice of method of research is determined by the nature of the problem. The present study attempts to study effectiveness of in-service teacher education programmes at elementary level in Punjab. It is obvious that the effectiveness of in-service teacher education programmes cannot be studied in any artificial settings neither is it desirable to do so. In the present study the descriptive survey method of research is found to be most appropriate one.

The descriptive method of research has been the most popular and widely used research method in sociology and education because of the ease of this method. Information can be gathered by a questionnaire, interview schedule or observation schedule. Although the descriptive method of research is relatively less sophisticated in comparison to the experimental method, it has its own advantages. The descriptive studies are more than mere collection of data. They involve measurement, classification, analysis, comparisons and interpretation. Such research seeks to find answers to questions through the analysis of variable relationships.
Descriptive studies investigate the phenomena in their natural settings. Descriptive research is designed to obtain pertinent and precise information concerning the current status or phenomena and wherever possible to draw valid general conclusions from the facts discovered. Effectiveness of in-service teacher education programmes cannot be studied in controlled situations, so survey method was adopted for the present study. Thus the approach of the study was largely a descriptive survey design.

3.2 SAMPLING

Sampling refers to the methods used to select a given number of people or things from a population. The strategy of selecting a sample influences the quality of data and the inferences that can be drawn from it. Within all approaches to research, researchers use sampling for very practical reasons. In most research studies, it is just not feasible to collect data from every individual in a setting or population. Therefore, sampling makes it possible to draw valid generalizations by studying a relatively small proportion of the population selected for observation and analysis.

The present study aims at investigating the effectiveness of in-service teacher education programmes at elementary level in Punjab. Keeping in view the delimitation of the study, sample of the present study consisted of:

1. Four districts viz. Amritsar, Jalandhar, Kapurthala and Ludhiana out of 22 districts of Punjab were selected purposively. Further, two blocks were selected from each district except for Kapurthala districts where due to less number of teachers available at the in-service teacher education centers three blocks instead of two were taken. Thus the study was conducted in nine blocks in the said districts.

2. Further elementary school teachers and head teachers attending in-service teacher education programmes under SSA on the day of visit of investigator (on the last day of training at BRC level) in their respective in-service teacher education centers were taken as sample. Teachers who were attending these programmes from last at least three years were taken as sample. Thus 578 teachers and 96 head teachers from elementary/primary
government schools attending in-service teacher education programmes under SSA constituted the sample of the study. However because of reckless attempts and incomplete responses from the respondents, finally 529 elementary/primary school teachers and 83 head teachers for the perception regarding the effectiveness of in-service teacher education programmes, and 515 elementary/primary school teachers for the perception regarding the impact of in-service teacher education programmes on their professional development of teachers and class room transactions constituted the sample of the study.

3. For the purpose of making observations of the impact of in-service teacher education programmes on the class room teaching, out of 529 teachers who underwent in-service teacher education programmes organized under SSA, 42 teachers from nine government elementary/primary schools were selected purposively. The selected schools were:

1. Govt. Primary School, Model Town, Jalandhar
2. Govt. Primary School, Adarsh Nagar, Jalandhar.
5. Govt. Elementary School, Avtar Nagar, Jalandhar.
6. Govt. Middle School, Badshahpur Jalandhar.
7. Govt. Primary School, Kambahra, Jalandhar
8. Govt. Primary School, Ladowali Road, Jalandhar.
9. Govt. Primary School, Mithapur, Jalandhar

4. Regarding the impact of in-service teacher education programmes in terms of achievement of students of those teachers who had undergone in-service teacher education programmes organized under SSA, 369 students from three schools named Govt. Primary School, Bahoma; Govt. Primary School, Wadala and Govt. Primary School, Gomal Jimidaran from Wadala cluster, Majitha-I Block of Amritsar District, (Appendices VIII, IX & X) were selected.
3.3 TOOLS USED

The following tools were used for collecting the required data:

**Tool 1:** Questionnaire for Effectiveness of In-Service Teacher Education Programmes developed and standardized by the Researcher (Appendices I(A) & I (B))

**Tool 2:** Questionnaire for Impact of In-Service Teacher Education Programmes on Class-Room Teaching and Professional Development of Teachers (as perceived by the teachers) developed and standardized by the Researcher (Appendices II(A) & II (B))

**Tool 3:** Observation Schedule for Impact of In-Service Teacher Education Programmes on Class-Room Teaching (as observed by the Researcher) developed and standardized by the Researcher (Appendix III)

**Tool 4:** Questionnaire for Head Teachers’ Perception for Effectiveness of In-Service Teacher Education Programmes developed and standardized by the Researcher (Appendices IV (A) & IV (B))

3.4 CONSTRUCTION OF QUESTIONNAIRE FOR EFFECTIVENESS OF IN-SERVICE TEACHER EDUCATION PROGRAMMES

The questionnaire for effectiveness of in-service teacher education programmes was developed with a view to have an instrument to measure the effectiveness of in-service teacher education programmes as perceived by teachers. Initially a pilot survey was conducted for this purpose.

**Pilot Survey**

A pilot survey was conducted by visiting a number of schools, Block Resource Centers (BRC), Cluster Resource Centers (CRC) and DIETs in order to get an insight into the in-service teacher education programmes regarding their organization, content, modules provided and transactions during in-service training programmes. Informal interviews were carried out with teachers, head teachers, master trainers and experts in the field. Initially 20 such interviews were conducted in the area of Jalandhar, Kapurthala, Ludhiana and Amritsar. The initial responses
of teachers, Head Teachers, Master Trainers and experts in the field as well as
review of related literature thus yielded significant information and an initial pool of
items was obtained. Additional items were adapted from other existing tools.

The pilot survey thus enabled the researcher in discerning information from the
actual field setting and helped in exploring the diverse facts of the problem for
preparing the tools for the study.

Writing of Statements for Scale of Effectiveness of In-Service Teacher
Education Programmes

On the basis of the study of literature, information gathered during the pilot
survey and personal experiences, an exhaustive list of items pertaining to the
effectiveness of in-service teacher education programmes for obtaining perception
of teachers was prepared. The list of items thus prepared was given to the language
expert for vetting. The preliminary draft of the tool so constructed was given to six
faculty members of different universities for their expert comments (Appendix XI).
The same was modified in the light of their suggestions. The first draft was given to
the language expert for vetting and it was then considered fit for try-out. It
consisted of 52 items belonging to organization, content, transactions by the
resource persons and material (modules) provided.

Try-out and Revision

The first draft thus prepared was given to a small group of elementary school
teachers of Punjab for the purpose of removing any ambiguities and to see if the
items properly communicated what the same were intended to. This initial try-out
led to the further revision and refinement of the tool for its effectiveness.

After the initial try-out and the revision the first draft of the tool was
administered to a large group consisting of 37 elementary school teachers of Punjab.
In the light of their responses the necessary modifications were made and the tool
was prepared for the purpose of data collection. The tool thus prepared contained 38
items viz. organization (17), content (7), transactions by the resource persons (9) and
material (modules) provided (4). In item no. 2 teachers were asked to mention the
objectives of in-service teacher education programmes. The questionnaire is
presented in Appendix I (A) and the English version of the questionnaire is presented in Appendix I (B).

Table 3.1 below provides distribution of items on various dimensions of final form of questionnaire for Effectiveness of In-Service Teacher Education Programmes:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Areas</th>
<th>Item Nos.</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organization</td>
<td>1,4, 7,8,9, 11,12,13,14, 15, 16,19,22,24,29, 32,37</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>Content</td>
<td>3,5,10,20, 25,30,33,</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Transaction &amp; Quality Of Resource Person</td>
<td>6,18,23,27,28,31,34,35,36,</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Material (modules) Provided</td>
<td>17,21,26,38</td>
<td>4</td>
</tr>
</tbody>
</table>

3.5 CONSTRUCTION OF QUESTIONNAIRE FOR IMPACT OF IN-SERVICE TEACHER EDUCATION PROGRAMMES ON PROFESSIONAL DEVELOPMENT OF TEACHERS AND CLASSROOM TEACHING

The procedure used for the development and construction of questionnaire for effectiveness of in-service teacher education programmes (3.4) was followed for the development and construction of the above mentioned questionnaire also. This questionnaire consists of 31 items pertaining 18 items regarding the impact of in-service teacher education programmes on class room transactions and 13 items regarding the impact of in-service teacher education programmes on the professional development of the students. The questionnaire is presented in Appendix II (A) and the English version of the questionnaire is presented in Appendix II (B).
3.6 CONSTRUCTION OF SCHEDULE FOR OBSERVING IMPACT OF IN-SERVICE TEACHER EDUCATION CLASS-ROOM TEACHING (AS OBSERVED BY THE RESEARCHER)

The schedule for observing impact of in-service teacher education class-room teaching (as observed by researcher) was developed with a view to have an instrument to measure the impact of in-service teacher education programmes on class-room teaching of teachers as observed by researcher. The procedure used for the development and construction of questionnaire for effectiveness of in-service teacher education programmes (3.4) was followed for the development and construction of the above mentioned questionnaire also. The observation schedule consisted of 11 items regarding class management (7), methods of teaching (1), evaluation of students (1) and handling of audio visual aids (2). The observation schedule is presented in Appendix III.

Table 3.3 below provides distribution of items on various dimensions of final form of observation schedule for impact of in-service teacher education programmes on class-room teaching.

Table 3.2
Distribution of Items on Observation Schedule for Impact of In-Service Teacher Education Programmes on Class-Room Teaching

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Dimensions</th>
<th>Total Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Class Management</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Methods of Teaching</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Evaluation of Students</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Handling of Audio-Visual aids</td>
<td>2</td>
</tr>
</tbody>
</table>
3.7 CONSTRUCTION OF QUESTIONNAIRE FOR HEAD TEACHERS’
PERCEPTION TOWARDS EFFECTIVENESS OF IN-SERVICE
TEACHER EDUCATION PROGRAMMES

The procedure used for the development and construction of questionnaire
for effectiveness of in-service teacher education programmes (3.4) was followed for
the development and construction of the above mentioned questionnaire also. The
questionnaire consists of 32 items. These belonged to five dimensions of
headmasters’ perception towards effectiveness of in-service teacher education
programmes viz. organization of in-service programmes (7), content of in-service
programmes (3), material (module) provided during in-service programmes (2),
impact on class room transactions after attending these programmes (15) and impact
on professional development of teachers after attending these programmes (6). The
questionnaire is presented in Appendix IV ( A) and the English version of the
questionnaire is presented in Appendix IV (B). Table 3.5 below provides
distribution of items on various dimensions of questionnaire for head teachers’
perception towards effectiveness of in-service teacher education programmes.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Dimensions</th>
<th>Total Items</th>
<th>Item Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organization</td>
<td>7</td>
<td>1, 2, 3, 4, 5, 6, 10</td>
</tr>
<tr>
<td>2</td>
<td>Content</td>
<td>3</td>
<td>7, 8, 9</td>
</tr>
<tr>
<td>3</td>
<td>Material (Module) Provided</td>
<td>2</td>
<td>11, 12</td>
</tr>
<tr>
<td>4</td>
<td>Impact on Class Room Transactions</td>
<td>13</td>
<td>13,14,15,16, 17,18,19, 20,21,22,23, 29, 31</td>
</tr>
<tr>
<td>5</td>
<td>Impact on the Professional development</td>
<td>6</td>
<td>24,25,26,27,28,30</td>
</tr>
</tbody>
</table>
3.8 PROCEDURE FOR DATA COLLECTION

The procedure followed for the purpose of data collection is given below:

1. Data pertaining to the effectiveness of in-service teacher education programmes regarding their organization, content, material (modules) provided and transactions by resource persons was collected through a questionnaire developed by the investigator, administered to elementary school teachers attending in-service teacher education programmes organized under SSA.

2. Data pertaining to the impact of in-service teacher education programmes on the class room transactions and professional development of teachers was collected through a questionnaire developed by the investigator, administered to elementary school teachers attending in-service teacher education programmes organized under SSA.

3. Data regarding the impact of in-service teacher education programmes on the class room transactions was collected through an observation schedule. Class room transactions of 42 teachers who had undergone in-service teacher education programmes organized under SSA, were observed by the investigator for twenty five consecutive days after the interval of one month of completion of the in-service teacher education programmes.

4. Data regarding the effectiveness of in-service teacher education programmes was collected through a questionnaire developed by the investigator, administered to elementary head teachers attending in-service teacher education programmes organized under SSA.

5. Data regarding the effectiveness of in-service teacher education programmes in terms of achievement of students taught by those teachers who had undergone teacher education programmes was collected from the school records [achievement of students is assessed by every school through testing tools provided by SSA authority termed as Baseline Test, Mid Test and Post Test [School records of achievement of students are maintained by every
school]. These tools are administered at three occasions viz. pre test (before the teachers has undergone the in-service teacher education programme), mid test (after the first phase of in-service teacher education programme of 3-5 days) and post test (after the completion of twenty days in-service teacher education programme).

3.9 **STATISTICAL TECHNIQUES USED**

The following statistical techniques have been employed:

1. In order to assess the perception of teachers and head teachers, frequency and percentage technique has been used.
2. In order to assess the divergence of observed perception of teachers and head teachers from the expected one, Chi-square technique has been employed.
3. To check the significant difference between the achievement of students at three occasion viz. pre test, mid test and post test, technique of significance of difference between two percentages has been employed.