CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The necessary action taken by respective countries in Europe, America, Australia, Africa and Asia to implement inclusive education has been widely researched upon. Among various variables associated with inclusive education in schools, more prominent are the training given to teachers, their attitude, the status and degree of their performance and the problems faced by them in inclusive schools. The present research problem, drawn on the basis of extensive review of related documents and research reports, is concretized to analyze the identified variables, as explained in chapter one. In this chapter the details of the sample of the study, research tools used and the statistical methods employed to analyze the collected data are given.

The present study follows descriptive method. To explore how far and to what extent the independent variables of the inclusive school teachers (gender, age, educational qualification, training in special education, years of experience, and location of school) influence the dependent variables (attitude, role performance and problems faced by inclusive school teachers), the researcher has aimed

1. To find out the attitude of inclusive school teachers
2. To find out the role performance of inclusive school teachers
3. To find out the problem faced by teachers working in inclusive schools.
4.2 METHODOLOGY OF THE STUDY

After Sarva Shiksha Abhiyan was started in the majority government and aided schools and a few private schools, research studies conducted so far aimed to evaluate infra structure, appraisal of NPEGEL, achievement of primary children through ABL, teachers’ attendance, causes for drop out of children, implementation of AIE, and bridge courses to failed students of primary schools. Action researches on effective teaching by teachers are also conducted. The primary objective of the present study is to find out the teachers’ attitudes, their classroom performance and problems faced by them in inclusive classes from the teachers working in inclusive schools under the SSA in Salem District. Hence a normative survey method was followed. The descriptive method used both quantitative and qualitative analysis of the data collected. In-depth interviews of teachers scoring highest scores on attitude scale and teachers scoring the lowest scores on attitude scale were also conducted to supplement with qualitative data.

4.3 SAMPLE OF THE STUDY

A multi-stage sampling technique was followed.

Salem revenue district is divided into two educational districts: 1. Salem educational district and 2. Sankari educational district (Figure 1. shows the blocks of Salem district). Salem educational district has 11 blocks, out of which 4 blocks were selected randomly. These blocks have 182 schools (50 urban and 132 rural). Sankari educational district has 10 blocks out of which 5 blocks were selected randomly. These blocks have 255 schools (18 urban and 237 rural).
The selected 9 blocks consist of 437 inclusive schools and 827 inclusive school teachers are working in these schools. Out of 437 schools, 37 schools had any one category CWSN like only VI/only HI/only MR/only OH. Keeping the criterion that each school has at least two or more categories of CWSN, 400 schools were listed. The 620 teachers working in 400 inclusive schools (selected on purposive basis) formed the teacher sample. Table no-1, Shows details of inclusive schools, categories of CWSN and teachers of inclusive schools.

FIGURE - 1

MAP OF SALEM DISTRICT SHOWING BLOCKS
<table>
<thead>
<tr>
<th>S. NO</th>
<th>BLOCKS</th>
<th>INCLUSIVE SCHOOLS</th>
<th>CWSN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PUES</td>
<td>ME</td>
<td>TOTA L</td>
</tr>
<tr>
<td>1</td>
<td>Tharamangalam</td>
<td>52</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Idappadi</td>
<td>48</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Kolathur</td>
<td>43</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Konganapuram</td>
<td>37</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Nangavalli</td>
<td>57</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>237</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BLOCKS</th>
<th>INCLUSIVE SCHOOLS</th>
<th>CWSN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUES</td>
<td>ME</td>
<td>TOTA L</td>
</tr>
<tr>
<td>1</td>
<td>Attur</td>
<td>54</td>
</tr>
<tr>
<td>2</td>
<td>Salem rural</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Salem urban</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>P.M.patti</td>
<td>38</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>132</td>
</tr>
</tbody>
</table>
4.4 TOOLS USED IN THE STUDY

The researcher developed attitude scale to measure attitudes of teachers in inclusive schools. To measure role performance of inclusive teachers and problems faced by them in performing their roles dealing with children with special needs, he used the tools developed by Reddy (2005).

In developing the attitude scales, the researcher made a thorough review of literature. Prominent among such scales and tools are mentioned here.

Monahan et al (1996) used a survey questionnaire of 25 statements on a five point scale to measure the attitudes of teachers towards inclusion. Major areas addressed on the survey included regular education teachers (role, attitudes and knowledge); collaboration and team teaching; special education teachers (role and resources); students (rights, performances/skills and perception) and families.

Jennifer Marie Olson's (2003) 5 point scale to measure special education and general education teacher attitude towards Inclusion consisted of 19 statements and the 20th statement was ‘please write any additional comments you have about inclusion’. Kgaugelo Daphney Kubyana (2005) used focus group interviews. Allan Jim Mapsea (2006) used questionnaire and interviews. Lisa R. Waligore (2002) employed two tools: 1) survey questionnaire for background information 2) effective teaching practices checklist having 28 items. Loreman, Sharma et al (2005) employed a four part survey instrument. Its first part was to collect background information of teachers; the second part was attitude towards inclusive education ATIES (Wilczenski, 1992) having 16 items regarding inclusion of
students with disabilities into regular schools on 6-point Likert Scale scoring SA6 and SDA1; 4 factor scores reflecting participants’ attitudes towards students requiring social, physical, academic or behavioral accommodations in the classroom. The third part utilized the Concerns About Inclusive Education Scale (CIES) of Sharma & Desai (2002) which has 21 items allowing the participants to reflect their intensity of concern which can range from Extremely Concerned (4), Very Concerned (3), A Little Concerned (2) and Not At all Concerned (1). The maximum score is 84 and minimum score 21. The four factors were: concern about resources, concern about acceptance, concern about academic standards and concern about workloads.

Padmanabhan (2007)’s attitude scale was structured for teachers of inclusive schools and teachers of integrated schools in order to measure the-I. attitude towards education of special children in an inclusive set up; II. curriculum transaction, evaluation and co-curricular activities for the special children in an inclusive set up and III. attitude pertaining to socio-emotional climate of an inclusive classroom.

In this present study, the researcher developed one tool apart from two more tools used that developed by others and used in earlier investigations.

1. ATTITUDE SCALE

After careful review of various scales, the researcher set out to develop attitude scale specifically for his study. It has three sub scales as per the objectives of the study. The researcher consulted with the experts in the area of special education and listed out various statements / aspects on concept of disabilities, causes & characteristics, identification & assessment of children with special needs, views and opinions of teachers working in
normal schools and teachers working in special schools, integrated schools, curriculum for special needs children, teaching & training methods and activities in integrated schools. The Tamil version of the statements was simultaneously prepared. The draft pool of statements were given to a panel of experts who are familiar with the education of disabled children and the concept of inclusive education, with a request to review and restructure or reword the items to best describe the attitudes of teachers in inclusive schools. In the Attitude Scale, a Score of 3 is given to agree, 2 to can’t say and 1 to disagree for positive statements. The reverse is followed for negative statements.

a) **Attitude towards inclusive schools**

The informal collection of views of inclusive school teachers about the concept, infrastructure, class arrangements, students (both normal and CWSN) in the classrooms, special material and teaching aids, in the inclusive schools were framed into statements. Vagueness of expression, repetition, and overlap with other dimensions of attitude were reference points to edit the statements. After modifying a few statements and removing a few, a list of thirty statements was ready for pilot study.

b) **Attitude towards education of CWSN in inclusive schools**

This scale focused on the nature of education provided to CWSN, the quality of education received by them in inclusive classrooms along with normal children, suitable teaching and learning methods, role of special educator and special coaching. A list 25 statements with Tamil version were prepared after editing and reframing sentences as per need.
c) **Attitude towards teaching CWSN in inclusive schools**

This scale is intended to measure the positive or negative attitude of teachers in involving themselves in teaching CWSN in inclusive schools along with normal children in the same class. The adaptations to be made, the workload, special ability to teach, special training required to teach, the use of special attention to disabled children were included in this scale.

**Pilot study**

The constructed drafts of ‘Attitude scales’ were administered to teachers who teach CWSN in the classes comprising 10(VI), 14(HI), 22(MR) and 14 (OH), with necessary instruction. The completed forms from these 60 teachers were scored as per scoring procedure already explained. Applying the ‘t’ test, statements yielding ‘t’ values of 3 and above only were selected.

**Table-2**

**Detail of Attitude Scale to measure the Attitude of Teachers**

<table>
<thead>
<tr>
<th>Attitude of Teachers</th>
<th>Number of statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude of Teachers towards Inclusive Schools</td>
<td>20</td>
</tr>
<tr>
<td>Attitude of Teachers towards Education of CWSN in Inclusive Schools</td>
<td>16</td>
</tr>
<tr>
<td>Attitude of Teachers towards teaching in inclusive schools</td>
<td>14</td>
</tr>
</tbody>
</table>

**Reliability and Validity of Attitude Scale**

The statements are rated by respondents on 3 point Likert scale. Construct validity and content validity was ascertained by the team of experts that the three sections and respective statements of the scale truly and satisfactorily measure what the scale is intended to. Test- retest reliability with a time gap of 15 days was found using a representative
teacher group of 60 members, and ‘r’ was found to be 0.86, 0.78, 0.92 and 0.88 for each sub-scale and the whole scale respectively.

Part-I of the Attitude Scale seeks Personal Information of Teachers (respondents of the study), which comprises name of the teacher, name of the school, teaching class, gender, age, community, educational status, marital status, total years of service in teaching, the type of differently-abled children taught, total years of service in teaching differently-abled children, special training taken to teach differently-abled children, and vocational training taken to teach differently-abled children.

2. RATING SCALE TO MEASURE ROLE PERFORMANCE

One of the main objectives of the study is to measure the role performance of teachers dealing with VI, HI, MR, and OH children in inclusive schools. For this, the researcher adopted the following rating scales developed by G. Lokanadha Reddy (2005). In the present study, teachers in inclusive classrooms faced one category of CWSN like VI/HI/MR/OH children and their teaching-training role performance was pertaining to that category only. Hence, according to the category of CWSN children the teachers deal, the respective scale of role performance was relevant.
Table-3

Details of Rating Scales to measure the Role Performance of Teachers

<table>
<thead>
<tr>
<th>Name of the rating scale to measure the role performance of teachers</th>
<th>Number of statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>The role performance of teachers dealing with visually impaired children in inclusive schools</td>
<td>28</td>
</tr>
<tr>
<td>The role performance of teachers dealing with hearing impaired children in inclusive schools</td>
<td>24</td>
</tr>
<tr>
<td>The role performance of teachers dealing with mentally retarded children in inclusive schools</td>
<td>32</td>
</tr>
<tr>
<td>The role performance of teachers dealing with orthopedically handicapped children in inclusive schools</td>
<td>17</td>
</tr>
</tbody>
</table>

Reliability of the Role Performance Rating Scales

Reddy (2005) reported the reliability (using the split-half method) of the role performance rating scale as 0.90(VI); 0.88(HI); 0.69(MR) and 0.90(OH). For the present study, the suitability of Reddy’s Role Performance of Teachers Scale has been established by administering the same on random sample of 10 teachers each for VI, HI, MR and OH category of inclusive schools teachers. For the present study, the suitability of Reddy’s Role Performance of Teachers Scale has been established by administering the same on random sample of 10 teachers each for VI, HI, MR and OH category of inclusive schools teachers. The obtained reliability of each role performance rating scale has been given under.

(a) Reliability of rating scale to measure the role performance of teachers dealing with visually impaired children in inclusive schools: \( r=0.88 \)

(b) Reliability of rating scale to measure the role performance of teachers dealing with HI children in inclusive schools: \( r=0.92 \)

(c) Reliability of rating scale to measure the role performance of teachers dealing with MR children in inclusive schools: \( r=0.77 \)
(d) Reliability of rating scale to measure the role performance of teachers dealing with OH children in inclusive schools: \( r=0.89 \)

**Validity of the Role Performance Rating Scales**

A research tool is considered to be valid only when it measures what it purports to measure. Reddy (2005) reported that The Role Performance Rating Scales possessed content validity (verified by experts) and intrinsic validity (VI: 0.94; HI: 0.93; MR: 0.83 and OH: 0.94). To facilitate better responses from the teachers, the scales were translated in Tamil, the regional language and the investigator used the Tamil version of the scales. The team of experts whom the investigator consulted expressed satisfaction that the role performance scales were suitable for the present study, as found from the try out described above. The investigator found the intrinsic validity of role performance scales as VI: 0.94; HI: 0.96; MR: 0.88 and OH: 0.94. Thus, the role performance scales possess both content validity and intrinsic validity.

**3. PROBLEM CHECKLISTS**

The other major objective of the study is to identify the problems faced by the inclusive schools teachers dealing with VI, HI, MR, and OH children. Earlier researches identified the problems confronted by teachers in normal, special and integrated schools while dealing with students with diverse abilities. Barriers and challenges prevalent in integrated as well as inclusive classrooms also were considered by the researcher. The Problem Checklists developed by Reddy (2005) specifically structured the problems teachers face while dealing with the VI, HI, MR, OH children in the classrooms. Hence the researcher, consulting his supervisor, decided to select the tools developed by Reddy (2005) for the present study:
### Table-4

**Details of problem checklist to measure the problems faced by teachers**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the problem checklist</th>
<th>Number of problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The problems of teachers dealing with VI children in inclusive schools</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>The problems of teachers dealing with HI children in inclusive schools</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>The problems of teachers dealing with MR children in inclusive schools</td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td>The problems of teachers dealing with OH children in inclusive schools</td>
<td>9</td>
</tr>
</tbody>
</table>

**Reliability of the Problem Checklists**

Reddy (2005) reported that using split-half reliability method, he arrived at reliability of the Problem Checklists as: 0.89(VI); 0.87(HI); 0.86(MR) and 0.79(OH). For the present study, the suitability of Reddy’s Problems Checklist has been established by administering the same on random sample of 10 teachers each for VI, HI, MR and OH category of inclusive schools teachers. The obtained reliability of each problems checklist has been given under.

1. Reliability of the problem checklist to identify the problems of teachers dealing with VI children in inclusive schools: r=0.84
2. Reliability of the problem checklist to identify the problems of teachers dealing with HI children in inclusive schools: r=0.87
3. Reliability of the problem checklist to identify the problems of teachers dealing with MR children in inclusive schools: r=0.78
4. Reliability of the problem checklist to identify the problems of teachers dealing with OH children in inclusive schools: r=0.77
A research tool is considered to be valid only when it measures what it purports to measure. Reddy (2005) reported that The Problem Checklists possessed content validity (verified by experts) and intrinsic validity (VI: 0.94; HI: 0.93; MR: 0.92 and OH: 0.88). To facilitate better responses from the teachers, the checklists were translated in Tamil, the regional language and the investigator used the Tamil version of the scales. The team of experts whom the investigator consulted expressed satisfaction that the problem checklists were suitable for the present study, as found from the try out described above. The intrinsic validity was found by the investigator as VI: 0.92; HI: 0.93; MR: 0.88; OH: 0.88. Thus the problem checklists possess both content validity and intrinsic validity.

4. UNSTRUCTURED INTERVIEW

The survey of attitudes, role performance and problems faced by teachers in inclusive schools follows quantitative analysis to find out differences due to background (independent) variables and the relationship among the three dependent variables. The researcher felt that further personal interviews with a few teachers who scored highest or lowest in attitudes dealing with VI/HI/MR/OH children. Hence, he also made use of unstructured interview, the questions flowing as per response of respective teachers to describe their reflection of their roles. Audio recording was used by the researcher for analysis.

4.5 COLLECTION OF DATA AND SCORING

All the teachers working in 400 schools were approached after getting permission from the respective head masters. The researcher personally contacted the teachers and explained the purpose of seeking data from
them. He had to make multiple visits to collect the filled up forms consisting of 1.Attitude Scale, 2.Role Performance Scale of Teachers dealing with CWSN and 3.Problem Check List. Out of the 460 forms distributed, 211 only could be collected back by the researcher. It was noted by the researcher that VI children number was less than MR, HI and OH children in the inclusive schools.

There were 18 special educators on periodical visit to these inclusive schools, but they were not included in the sample for the study.

Of the 211 teachers responded to the tools, 26 were dealing with VI children, 63 were dealing with HI children, 71 were dealing with MR children, and 51 were dealing with OH children.

In the Attitude Scale, a Score of 3 is given to agree, 2 to can’t say and 1 to disagree for positive statements. The reverse is followed for negative statements.

In the Rating Scale of Role Performance, against each statement/activity, 5 ratings have been given namely very difficult to perform; difficult to perform, moderately performed, easy to perform and very easy to perform having the scores 1,2,3,4 and 5 respectively for positive statements and 5,4,3,2 and 1 respectively for negative statements. The ratings ticked by a teacher are scored and totaled to arrive at the role performance sore of the teacher.

Problem Checklists covered the 11 problems under teaching and training for VI children, 18 for HI children, 16 for MR children and 9 for OH children. Against each problem statement, ‘yes’ or ‘no’ is given and the teachers are requested to point out a tick mark on ‘Yes’ when they are facing
the problem and put a tick mark on ‘No’ facing the problem. The scores are given as 1 or 0 for ‘Yes’ and ‘No’ responses respectively.

4.6 STATISTICAL TECHNIQUES USED IN THE STUDY

Based on the personal data, sub samples of the total sample of teachers were identified to arrive at N according to gender, location, teaching class, age group, community, educational qualification, marital status, years of teaching experience, experience in teaching disabled children, special training received, vocational training received. The researcher personally visited the schools to establish good rapport and administered the attitude scales, rating scales and problem checklists to the teachers of inclusive schools. The teachers were instructed to go through each statement and asked to mark their response against the gradations of each statement in the respective scales. The collected data were analyzed by using appropriate statistical techniques such as

1. Descriptive Analysis (Percentages, Mean, SD) 2. Correlation Analysis (Correlation Coefficient “r”) 3. Differencetial Analysis (‘t’ - test,) 4. Inferential analysis (F - test) 5. Non-parametric tests (Chi-square test) the obtained data are presented in the form of tables and discussed.
4.7 SUMMARY

The methodology followed in the present study giving details of the sample, procedure of tools constructed and adopted with data collection and scoring were explained. The chapter concluded with the specification of statistical techniques used for analysis.

In the next chapter both quantitative and qualitative analysis followed with interpretation of the results will be presented.