CHAPTER IV
METHODOLOGY

4.1 INTRODUCTION

Methodology is a compiled work and the lay out description of the steps adopted by the investigator at the various phases in the study. The method, research design, variables of the study, construction of research tool, reliability, validity of the tool, methods of data collection and statistical techniques used to analyze the data of the present research are described in this chapter.

4.2 RESEARCH DESIGN

The experimental method having Pre-Assessment - Post-Assessment Equivalent Group design is adopted in the present study. The design is illustrated as follows:

G1 O1 X O2
G2 O3 C O4
O1, O3 - Pre-Assessment
O2, O4 - Post-Assessment
X - Application of the experimental treatment
C - Application of the control treatment
G1 - Experimental group
G2 - Control group

4.2.1 Selection of Variables

The valuable research studies done by the previous researchers provided an overall view for the selection of the variables for the present study.
Independent Variable

“Comprehensive Strategy (CS)” is the independent variable in the present study which is designed by the investigator.

Dependent Variable

English Language Proficiency (Listening, Speaking, Reading and Writing Skills –LSRW) and English Language Teaching are taken as dependent variables.

4.3 CONSTRUCTION OF RESEARCH TOOLS

The result of any research study is based on the tool used for the study. The reliable and valid tool plays a vital role to get the original result. There are ample of standard tools available which may vary in many aspects. Depending upon the nature of the study, the investigator can utilize standardized tool or they can develop their own tool for the research.

The following researchers have used various tools for their researches:


Major tools used in the above research studies are rating scale, interview, questionnaire and strategy inventories. All these devices cannot be claimed to have worked well in all other research studies. Depending upon the nature and purpose of the study, the researchers have selected appropriate tools for their study. Even though there are number of tools used by the researchers in India and Abroad on English Language Development but not specifically on English Language Proficiency and English Language Teaching. Hence, the tools used by the previous researchers are not suitable for the present study. But referring such tools gave deeper insight to the investigator to prepare the required tools for the present investigation. Considering various tools used by various researchers to assess the English Language Proficiency and English Language Teaching of B.Ed teacher trainees the investigator developed her own tool. The reliability and validity of the same is established accordingly.

4.3.1 Selection of Research Tools

The main objective of the study is to enhance the English Language Proficiency (Listening, Speaking, Reading and Writing Skills –LSRW) and to improve English Language Teaching of B.Ed. teacher-trainees. To achieve this objective, the following tools were developed.
1. Achievement test to assess the English Language Proficiency (Listening, Speaking, Reading and Writing Skills –LSRW) of the B.Ed. teacher-trainees.

2. Rating scale to assess the English Language Teaching of the B.Ed. teacher-trainees.

4.3.2 Development of the Research Tools

The main objective of the study was to enhance the English Language Proficiency (Listening, Speaking, Reading and Writing Skills –LSRW) which in turn improve English Language Teaching of B.Ed. teacher-trainees. To achieve this objective, the first step was to assess the English Language Proficiency and English Language Teaching of B.Ed. teacher-trainees. For this purpose, the investigator developed achievement test and rating scale to assess English Language Proficiency and English Language Teaching.

4.3.2.1 Development of Achievement Test to Assess English Language Proficiency of B.Ed Teacher-Trainees

To prepare the Achievement test to assess the English Language Proficiency (Listening, Speaking, Reading and Writing Skills –LSRW) of B.Ed. teacher-trainees, the investigator made a detailed survey of related literature and consulted the educationists (English Lecturers and English Teachers of schools). Thus a draft pool of items of the achievement test was prepared with utmost care and the rough draft was given to the above mentioned educationists. Based on the detailed discussion and opinion of the experts, the items in the achievement test were modified and refined to avoid ambiguity and repetition. Some items were deleted, replaced and added.
4.3.2.2 Description of the Achievement Test for B.Ed. Teacher-Trainees

The developed Achievement Test consisted of 12 tasks aimed to assess the English Language Proficiency (Listening, Speaking, Reading and Writing – LSRW).

4.3.2.3 Achievement test of Listening, Speaking, Reading and Writing Skills

The test consisted of twelve tasks on the whole. Listening Comprehension, Discriminating sound / minimal pairs and Stress/Accent are selected for assessing the listening skill in the achievement test. Audio lessons and presentations by the teachers are made and the students are encouraged to answer the questions from the presentation. In speaking skill, similarly, three tasks – short speech, role play and tongue twisters are given to the students to assess their speaking skill. Reading comprehension, sentence completion and cloze test/gap fill are given to assess the reading skill of B.Ed teacher trainees. Letter writing, essay writing and dialogue writing are presented to the students to assess their writing skill. Listening, speaking and reading are assessed with the duration of 30 minutes. Time duration of writing skill assessment is of one hour.

Final selection of task was decided based on the due weightage to objectives, weightage to content, form of questions and level of difficulty.

Weightage to Objectives

The weightage to objectives is based on the English Language Proficiency at college level (Listening, Speaking, Reading and Writing), which are given in table 4.1.
Table No. 4.1

Weight age to Objectives

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Objectives</th>
<th>Marks</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Listening Skill</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>2.</td>
<td>Speaking Skill</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>3.</td>
<td>Reading Skill</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>4.</td>
<td>Writing Skill</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Weight age to Content

The content for the test is based on the English Language Proficiency at college level (Listening, Speaking, Reading and Writing) which are given in table 4.2.

Table No. 4.2

Weightage to content

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Content</th>
<th>Mark</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Listening Skill</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>2.</td>
<td>Speaking Skill</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>3.</td>
<td>Reading Skill</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>4.</td>
<td>Writing Skill</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Weightage to Form of Questions

In order to keep the objectivity objective type questions were selected for the test and it is represented in table 4.3.
Table No. 4.3
Weightage to Form of Questions

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Forms of Question</th>
<th>No. of Question</th>
<th>Marks</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Objective type</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Weightage to Difficulty Level

Care was taken to give appropriate weight age to easy, average and difficult questions, which are given in table 4.4.

Table No. 4.4
Weightage to Difficulty Level

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Difficulty level</th>
<th>Mark</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Easy</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>2.</td>
<td>Average</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>3.</td>
<td>Difficult</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Scoring

Answers to assess the listening, reading and writing skills were done on the test papers and the speaking skill tasks are recorded. 25 marks are allotted for each skill comprising of 100 marks on the whole. In listening skill, tasks such as Listening Comprehension ten objective type questions were given and one mark is assigned comprising of 10 marks, Discriminating Sound / Minimal Pairs. Objective type questions are given for 10 marks, Stress / Accent, Objective type questions are given and 5 marks are awarded. Objective type questions are given in the reading skill tasks Reading Comprehension, Sentence Completion, Cloze Test / Gap Fill comprising of 25 marks as a whole. In speaking skill, for Short Speech 10 marks is allotted, for Role
Play 10 marks is allotted and for Tongue Twisters 5 marks is assigned with 25 marks as a whole. The writing skill was scored for 25 marks as a whole with ten marks for Letter-Writing, 10 marks for Essay-Writing and Dialogue-Writing for 5 marks. Thus the overall achievement test is scored for 100 marks.

**Task Analysis**

Task analysis determines the effectiveness of the different tasks included in the test, it is technique of determining whether a task was too easy or too difficult and to what extent it was able to discriminate between high and low achievers. Out of 15 tasks 12 tasks were selected for the final form of achievement test.

Achievement Test for B.Ed. Teacher-Trainees is given in the Appendix - I, Ia.

**4.3.2.4 Development of English Language Teaching Rating Scale for B.Ed. Teacher-Trainees**

The second major objective of the study is to find out the English Language Teaching of B.Ed teacher trainees. For this, the investigator developed a rating scale to assess English Language Teaching of B.Ed teacher trainees.

A draft pool of items was stated with deeper knowledge acquired through thorough review of literature and discussions with experts. Based on their suggestions, the statements are edited, reviewed and arranged under three dimensions namely language mastery, execution of lesson and control of learning environment. Totally there are 25 statements in the rating scale. Against each statement four ratings are given namely Excellent, Good, Average and Poor having scores 4, 3, 2, and 1 respectively. The English Language Teaching Scores for each statement were derived from teacher educators and mentors and summed together and average score was taken for data analysis. The final form of rating scale is given in the Appendix II.
4.4 PILOT STUDY

A pilot study has been conducted to find out the suitability of the test items for the investigation. 10 teacher educators are taken for pilot study. Achievement test and rating scale have been administered to them with a request to point out suitability of the tools for the investigations. Based on their responses certain items were modified, reworded and deleted and the final form of achievement test and rating scale is given in the Appendix.

4.5 RELIABILITY AND VALIDITY OF THE RESEARCH TOOLS

4.5.1 Reliability of the Research Tools

Henry, E. Garrett (1966) says, “A test score is called reliable when we have reasons for believing the score to be stable and trustworthy”. In fact, a comparison of scores made upon repetition of an unreliable test, or upon two parallel form of the same test, will reveal many discrepancies some large and some small test in the two scores made by each individual in the group. The correlation of the test with itself-computed in several ways is called the reliability co-efficient of the test (P. 337).

Henry, E. Garrett (1966) describes four methods of establishing the reliability of a test. They are: a) Test-retest method, b) Alternate or parallel forms, c) Split - half method, d) Rational equivalence method. Of these four procedures, the split-half method is regarded by many as the best of the methods for measuring test reliability (Garrett, E. Henry and Woodsworth, 1981). This method is used by many investigators because the data for calculating reliability are obtained from one occasion so that variations brought about by differences between the two testing situations are eliminated.
In the split-half method, the test is divided into two equivalent ‘halves’ and the correlation is found for these half-tests by using Karl Pearson’s correlation co-efficient formula:

\[
r = \frac{N \sum xy - \sum x \sum y}{\sqrt{(N \sum x^2 - (\sum x)^2)(N \sum y^2 - (\sum y)^2)}}
\]

Where

- \( r \) = Correlation co-efficient
- \( x \) = Score obtained in one half of the test
- \( y \) = Score obtained in another half of the test
- \( \sum x \) = Sum of obtained x values
- \( \sum y \) = Sum of obtained y values
- \( \sum x^2 \) = Sum of squared x values
- \( \sum y^2 \) = Sum of squared y values
- \( (\sum x)^2 \) = Squared value of the sum of obtained x values
- \( (\sum y)^2 \) = Squared value of the sum of obtained y values
- \( N \) = Number of cases

From the reliability of the half test, the self-correlation of the whole test is then estimated by using Spearman Brown Prophecy formula.

\[
r_{11} = \frac{2r_{1/2} 1/11}{1 + r_{1/2} 1/11}
\]

\( r_{11} \) = Reliability co-efficient of the whole test

\( r_{1/2} \) = Reliability co-efficient of the half test found experimentally

In this study, the investigator has used split half method to estimate the reliability of the Rating Scale.

20 student teachers were selected. Achievement test and rating scale is administered. From the obtained data, odd numbered and even numbered scores are pooled out separately and correlation between these two sets of test scores have been computed by using Karl Pearson’s formula. From the half-test reliability, the
reliability of the whole test is estimated by using Spearman - Brown’s Prophecy formula.

### 4.5.2 Reliability of the Achievement test to assess English Language Proficiency of B.Ed teacher trainees

\[
 r = \frac{N \sum xy - \sum x \sum y}{\sqrt{(N \sum x^2 - (\sum x)^2)(N \sum y^2 - (\sum y)^2)}}
\]

Reliability for the half test is found to be 0.831

From this half-test reliability, the whole test reliability is calculated by using Spearman Brown Prophecy Formula.

\[
r = \frac{2r_{1/2}}{1 + r_{1/2}}
\]

\[
 r = \frac{2 \times 0.831}{1 + 0.831} = \frac{1.662}{1.831} = 0.92
\]

The obtained r - value is high (0.92) indicating the reliability of the achievement test used in the study.

### 4.5.3 Reliability of the Rating Scale to assess English Language Teaching of B.Ed teacher trainees

\[
r = \frac{N \sum xy - \sum x \sum y}{\sqrt{(N \sum x^2 - (\sum x)^2)(N \sum y^2 - (\sum y)^2)}}
\]

Reliability for the half test is found to be 0.764
From this half-test reliability, the whole test reliability is calculated by using Spearman Brown Prophecy Formula.

\[
\begin{align*}
r & = \frac{2r_{1/2} 1/11}{1 + r_{1/2} 1/11} \\
r & = \frac{2 \times 0.764}{1 + 0.764} \\
& = \frac{1.528}{1.764} \\
& = 0.86
\end{align*}
\]

The obtained \( r \) - value is high (0.86) indicating the reliability of the rating scale used in the study.

4.6 VALIDITY

Validity is the quality of the research tool or procedure that measures what it purports to measure. According to John W. Best (1989), “Validity is the quality of a data gathering instrument or procedure that enables it to measure what it is supposed to measure”. The index of reliability is sometimes taken as a measure of validity (Garrett, E. Henry, and Woodworth, 1981). Several kinds of validity are ascertained. They are:

4.6.1 Content Validity

Content validity indicates how adequate is the content of a test about which inferences are to be made. The statements in the rating scale and the tasks in the achievement test are based on the review of related literature and consultation with related field experts. Their suggestions have been taken into account to enhance the
contents and quality of the above tools. Therefore, it can be said that the research tools used in the study possess content validity.

4.6.2 Face Validity

This is the term used to characterise test materials that appear to measure what the test author desires to measure. That is, the test contains items that seem to be related to the variable being measured.

The investigator here assured that, by the opinion of the experts, who are familiar with test development, the achievement test and rating scale used in this study have face validity.

4.6.3 Intrinsic Validity

Intrinsic validity is stated that as how well the obtained scores measure the test’s true score component. Square root of the reliability value of the scale mean is its intrinsic validity. The obtained intrinsic validity of achievement test and rating scale (0.95, 0.93) are high. Hence, the tools used in the study possess intrinsic validity.

4.7 DEVELOPMENT OF COMPREHENSIVE STRATEGY

One of the major objectives of the study is to plan or design a comprehensive strategy to improve English language teaching among B.Ed teacher trainees. To achieve the above stated objective, the researcher has reviewed studies on the topic under study to get in depth knowledge on different strategies applied in English language teaching and learning. Such teaching approaches already used are reviewed to design a comprehensive strategy. The Everyday materials such as train schedules, newspaper articles even brochures seemed much more meaningful and become more acknowledged classroom materials since, such materials have been affirmed more
supportive in meeting the students’ needs of learning a second language as well as it is a great way communicative competence would be developed (McCarthy & Carter, 1997). Meherunisa and Ganapathy (2006) stated that the communicative competence may be defined as the ability to autonomously use a language to communicate effectively in authentic (real life) communicative situations.

During the course, teachers are expected to teach inductive teaching rather than giving lectures and exam-oriented teaching. Teachers are recommended to apply communicative language teaching approaches like task-based approach since, the integrated lessons are more effective than teaching language in isolation and provide opportunities for learners to practice given language components in real life situation which could develop their motivation and performance (Brown H, 2000). They would be appropriate to their age, standard, preference and even their learning style. Group works and pair works are considered as primary methods of learners’ tasks. However, there would be a few individual tasks in means of assessing individuals’ performance as well as to assess effectiveness of teaching. Joseph C. Mukalel (2004) has stated that the communicative tasks assume a special meaning in communicating language teaching. The learner is provided simulated learning situations in the classroom or outside of it. This incorporates situational language teaching and employs situations as the spring-board for concrete language components for communicative purposes. Techniques that are part of other approaches are reorganized to enable learners effectively coordinate a communicative situation.

In this era of second language teaching, it is essential that in any training course for teachers there is a strong concentration on reflective practice and language awareness as a means of meeting 'local' needs, demands and expectations. The training course must be context sensitive, realistic in its objectives from the outset and
supported by a coherent rationale that draws on theoretical influences and practical examples of second language teaching.

A teacher's role is multi-faceted. A teacher is a counsellor, a subject expert, a facilitator and a role model for values, a friend, a philosopher and a guide - all at the same time. For these roles, they need skills for listening, speaking, reading, writing, questioning and motivating the learners, scaffolding the learning process and ability to give seemingly simple and effective explanations for complex concepts. To be successful in these aspects, the teacher should master all the skills beforehand to train the students.

Classroom teaching alone is not sufficient to achieve the objectives of teaching English. It is therefore essential to supplement classroom teaching with co-curricular activities specifically designed to promote pupils’ learning of English. In fact, because of the strong motivational element, these activities may sometimes be found to be more effective than the curricular ones Baruah (2005).

Sujathamalini (2007) states that the “sequence of instructional objectives enable the teacher to achieve the goal. Good communication skill and providing conducive learning environment enrich teaching-learning process. A good teacher promotes group instruction to improve social and interactional skills. Independent work activities, self-learning methods should be encouraged by the teacher to promote self-confidence. Periodic assessment and record keeping is an important task that has to be done by an effective teacher. Developing interest, motivation and promoting learning is done effectively by the teacher. Creating awareness about cognitive and meta-cognitive strategies when instructing these students gives a progressive result. Skill in developing and using appropriate material is an important task that has to be carried out”.
Learning skills of a language can be divided broadly into skill-getting and skill-using. George, A. (2004) has stated that the key skill of communication includes skills in speaking, listening, reading and writing. Opportunities for developing this key skill are provided through English in particular and through pupils’ use of language across the curriculum. The integrating of skills in the language Classroom can be defined or tasks which use any combination of four skills – Listening (L), Speaking (S), Reading (R), Writing (W) – in a continuous and related sequence (Read, 1985). The above literatures on different teaching strategy are not the readymade one to use in the present study, as those strategies are applied in different context but they provide better insight into the concept and incorporate best strategies and provided base to design a comprehensive teaching strategy that are used to suit the Indian educational condition. With this view, the researcher developed a comprehensive teaching learning strategy. A student exhibit talents or interest in the activities related to English language skills such as listening, speaking, reading and writing. Comprehensive Strategy (CS) can help students in diverse population to solve their problems in listening, speaking, reading and writing in learning situations and make them to actively participate in learning process and attain better scholastic achievement. The comprehensive strategy designed is presented in graphical form. Figure-1.

The comprehensive strategy designed by the investigator comprises of cognitive, meta- cognitive and socio - affective strategies. The combined strategy is used to develop four skills - listening, speaking reading and writing essential for English Language Proficiency which in turn helps to improve English Language Teaching competency of B.Ed teacher trainees.
The “Comprehensive Strategy (CS)” designed by the investigator comprises the following strategies to enhance the English Language Proficiency and improve the English Language Teaching of B.Ed Teacher Trainees. Cognitive, meta-cognitive and socio-affective strategies are integrated together for the overall improvement of the teacher-trainees. Cognition refers to the process of acquiring knowledge by the use of reasoning, intuition or perception. Cognitive strategies can be used to make the teacher trainees to use what they know, actually to activate their prior knowledge, make inferences and make predictions, use their imagination, perform, use their organizational skills, find, apply, group and classify patterns, summarize, use selective attention, use variety of resources etc.,

Metacognition refers to the knowledge of own thoughts and the factors that influence the thinking of the teacher trainee. Metacognitive strategies are used to ensure learning takes or has taken place and enables the teacher trainees to be successful learners. They will guide the trainees to plan how to approach a given learning task, previewing the main ideas or language functions to be expressed, deciding in advance to attend to specific aspects of input. It will mould the trainees to manage learning as how they learn best, arranging conditions that facilitate learning, seeking opportunities for practice, focusing attention on the task, checking progress on task and to assess how well the learning task was accomplished, assessing application of strategies, deciding how effective the strategies were in accomplishing the learning task.

With the above mentioned aspects, the teacher-trainees are required to be shaped through socio-affective strategies through which the trainees may enlist the support or assistance of others or establish an emotional or attitudinal state of mind conducive to learning. For example, questioning a teacher or peer for clarification for
additional information, rephrasing examples and verification. Being the future teachers, the trainees are supposed to cooperate with others, solve a problem, pool information, check a learning activity and get feedback, the self-talk, reduce anxiety, make oneself feel competent, rehearse the steps of the task to be performed, self-awareness and to manage emotions.

The investigator integrated all the above said strategies - cognitive, metacognitive and socio-affective strategies together which are the basis for the successful teaching and learning task. On the strong foundation of well-trained cognitive, meta-cognitive and socio-affective strategies, the teacher trainees are exposed to the major skills of language learning and teaching.

To develop English Language proficiency (Listening, Speaking, Reading & Writing), the above (cognitive, metacognitive and socio-affective) strategies are combined together to form a comprehensive strategy. Comprehensive strategy is designed based on the sub strategies like listening strategies, speaking strategies, reading strategies and writing strategies and their activities also designed under each strategies. Based on top-down and bottom-up listening strategies, listening activities such as listening comprehension, discriminating the sounds / minimal pairs, stress / accent, note-taking and reporting observation are carried out.

The speaking strategies are formed based on the sub strategies like using minimal responses, recognizing scripts, using language to talk about language. The speaking activities like short speeches, role-play, tongue twisters, dramatization and debates are given for promoting speaking skills.

The reading strategies are formed by the sub-strategies, previewing, predicting, skimming and scanning, guessing from context and paraphrasing. The reading activities are planned under this strategies are Reading Comprehension,
Sentence Completion, Exercises, Cloze Test/Gap Fill Exercises, Skimming and Scanning and group reading.

The writing strategies are formed based on the sub-strategies like generating ideas, developing and organizing ideas, revising and editing. The writing activities for the above strategies are: Letter writing, Essay writing, Dialogue Writing, Situational composition and Precis-writing.

4.7.1 Implementation of the Comprehensive Strategy (CS)


Comprehensive Strategy (CS) is implemented in four aspects listening, speaking, reading and writing to enhance English Language Proficiency which in turn improve English Language Teaching of B.Ed students.

The duration of one class session is one hour consisting of four aspects in a well arranged manner, providing sufficient material support/ facilities.

4.7.2 Validation of Comprehensive Strategy (CS)

The developed comprehensive strategy is subjected to expert opinion including educationists English Language experts and validated. Based on the expert’s opinion with regard to phases, content, coverage and correctness of the teaching strategy the comprehensive strategy was found to be valid.

To know whether the teaching strategy is effective or not, the CS was applied to a random sample of 10 B.Ed students for a period of 1 month. It is observed that the B.Ed teacher trainees are able to improve their English Language Proficiency and it is evident in their teaching competency to a greater extent within one month, and it
is felt that the developed comprehensive strategy (CS) was a valid one to English Language Proficiency.

4.8 LOCALE OF THE STUDY

The study was conducted on the 70 samples of Teacher Trainees who have undergone B.Ed. Degree Course in (Vetri) Venkateswara College of Education, Pondicherry, the Union Territory of India.

4.8.1 Sample for the Study

A sample is a small proportion of a population selected for observation and analysis. By observing the characteristics of the sample, one can make certain inferences about the characteristics of the population from which it is drawn (John W. Best and James V. Kahn (2007). Thus, the investigator has chosen a set of B.Ed. teacher-trainees who represents the whole population for the study.

The sample for the present study was confined only with the B.Ed. Teacher Trainees who have opted General English as their Second Optional (language) subject. More care was taken by the investigator to ensure that the selected samples were equivalent in many aspects like the language they have studied and treatment they receive etc. For the smooth conduct of the experiment and for practical reasons, it was decided to select the sample from the college ensuring equivalence in both groups. Based on these, the investigator has selected the teacher training college (Vetri) Venkateswara College of Education, Puducherry.

4.8.2 Allocation of Experimental Group and Control Group

It is not feasible to carry out an experimental study on a large sample. Due to practical reasons, the investigator has limited the choice, and selected 80 teacher-
trainees who have opted ‘General English’ as their Second Optional subject. The main or major subjects may vary as Special English, Mathematics, Physical Science, Biological Science and Social Studies. But their optional language is uniformly General English for all the 80 teacher-trainees selected. After administering the pilot study, the investigator has finally chosen 70 teacher-trainees. All the teacher-trainees were rank ordered based on their qualifying examination and alternate ranks were assigned in two different groups such that two equivalent groups of experimental and control were formed with 35 students each. The experimental and control groups were named by taking a lot.

Figure - 2
Allocation Of Experimental Group And Control Group

4.9 STATISTICAL ANALYSIS USED IN THE STUDY

The hypotheses of the present study were tested by employing appropriate statistical techniques. The entire statistical process was done by using the statistical software SPSS. Descriptive statistics like Mean, Median, Mode, Standard Deviation, T-Test, F-Test and Co-relation were the statistical techniques used in the study.

To find out the effectiveness of comprehensive strategy to enhance the English Language Proficiency and improve the English Language Teaching of B.Ed Teacher Trainees, mean and standard deviation have been computed. By using the test of
significance of difference between means of large and small independent samples of control group and experimental group were compared with respect to their pre and post assessment scores of English Language Proficiency and the English Language Teaching of B.Ed Teacher Trainees. The difference in means was tested using two tailed test of significance.

To compare the mean scores of English Language Proficiency and English Language Teaching of experimental group at pre and post assessment stages correlated ‘t’ test was computed.

To compare the mean gain scores of English Language Proficiency and English Language Teaching of experimental group at pre and post assessment stages gain score analysis was conducted.

To compare adjusted mean scores of English Language Proficiency and English Language Teaching of experimental group and control group by considering Pre-English Language Proficiency and Pre-English Language Teaching as co-variate, one way ANCOVA has been computed to equate the pre experimental status of the treatment groups in terms of English Language Proficiency and English Language Teaching.

To find out the relationship between English Language Proficiency and English Language Teaching of experimental group before and after implementing “Comprehensive Strategy (CS)”, Karl Pearson product moment correlation was used.

The obtained results are presented in the succeeding chapter.

* * * * *

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