CHAPTER – III

RESEARCH METHODOLOGY

3.1 Introduction:

Research Methodology involves the systematic procedures by which the researcher starts from the initial identification of the problem to its final conclusion. The role of methodology is to carry on the research work in a scientific and valid manner and also is the set of materials use for statistical analysis. Method is a style of conducting a research work which is determined by the nature of the problem. Research is an art of scientific investigation. The meaning of research is “a careful study or investigation in order to discover new facts or information”. According to George J. Mouly research is “a systematic and scholarly application of the scientific method”. He defines educational research as “the systematic and scholarly application of the scientific method interpreted in its broad sense, to the solution of educational problem, conversely, any systematic study designed to promote the development of education as a science can be considered educational research”. John W. Best and James V. Khan has been defined research as “the system and objective analysis and recording of controlled observations that may lead to the development of generalizations, principles, or theories, resulting in prediction and possibility ultimate control of events”. According to Sadhu and Amarjit, there are six categories of research they are,

a) Ex-post Facto Research.

b) Laboratory or Experimental Research.
c) Field investigation.
d) Survey
e) Evaluation
f) Action Research.

The present research work is Survey Type. This type of research has become very popular these days as a scientific method for discovering relevant impact and inter-relationships of social and psychological variables from the given population. From this study the opinions, attitudes and behaviour of individuals can be noted and then can study scientifically to examine their impact on the population as a whole. This type of research can be approached through the methods of personal interviews, mailed questionnaires. Gupta defined, “The term survey is used for the technique of investigation by a direct observation of the phenomena or systematic gathering of data from population by applying personal contact, and interviews when adequate information about a certain problems is not available in records, files and other sources. It is currently being used in those investigations also where published data is used. There are some writers who still believe that the term survey can be applicable only when a direct contact is made and does not include any study from the libraries or archives”.

Method is a style of conducting a research work which is determined by the nature of the problem. According to M. Verma, “Method is only in the abstract as logical entities that we can distinguish between matter and methods in reality, they form an organic whole and
matter determines method analogously as objective determines means and content and spirit determine style and form in literature”. He classified the method of research into three types namely.

a) Theoretical Problem (Survey and experimental methods)

b) Factual Problem (Historical, Case study and genetic methods) and

c) Application Problem (Action research)

Broudy’s opinion regarding method is “Method refers to the formal structure of the sequence of acts commonly denoted by instruction. The term method covers both strategy and tactics of teaching and involves the choice of what is to be taught, and the order in which it is to be taught”. But this definition is meant for method of teaching.

R. A. Sharma defined the term method as “Orderliness and regularity or habitual practice of them in action”. Thus, research method may be regarded as all those methods which are adopted for conducting research work. Research methodology is a way to systematically solve the research problem. It may be regarded as a science of studying how research is to be done scientifically. It has many dimensions and research method has been constituted a part of the research methodology. So the scope of research methodology is wider than that of research method. Method is more general, as such it also includes techniques. The research techniques are ways of implementing a method. Different techniques may be employed within the same method. The methods to be used in a research work have the common characteristics of facilitating the systematic collection of data that can be used to formulate an
evidence report. The method of study for the research work played a very important role in keeping the objectives of the study in view. The present research work belongs to the theoretical problem, adopting survey method. The work ‘survey’ has been derived from the words ‘sur’ or ‘sor’ means ‘over’ and ‘veer’ or ‘veir’ means ‘see’. The methodology with reference to research means that, it is a type of inquiry. The role of the methodology is to carry on the research work in a scientific and valid manner. The method of research provides the tools and techniques by which the research problem is attacked. The methodology consists of procedures and techniques for conducting a study. Methodology and procedure of the study outlines the entire research plan. It describes just what must be done, how it will be done, what data will be needed, what data gathering devices will be employed, how sources of data will be selected and how the data will be analysed and conclusions be drawn. The role of methodology is to carry on the research work in a scientific and valid manner and also it is the set of materials used for statistical analysis. The technique of survey research has been highly developed so that when proper sampling is taken extremely accurate restricts have been obtained. The details of the methodology are given under the following heads as, exploration of the documents, survey, and construction of tools, sampling and collection of data.

3.2 **Exploration of the documents**:

The study is primarily intended to make a comprehensive analysis of the B. Ed curriculum in West Bengal and Assam. The curricula that are
being analysed in the present study have already been in use by the Gauhati University, Dibrugarh University, Assam University in Assam and Vidyasagar University, Calcutta University, Rabindra Bharati University, Kalyani University, Burdwan University, North Bengal University in West Bengal. It has therefore been thought fit to take up a preliminary documentary analysis. The basic documents that have been explored are –

a) Teacher Education Curriculum. A Framework (1978)

b) National Curriculum for Teacher Education. A Framework (1988)

c) UGC curriculum Committee Recommendations.

d) Syllabus of the Universities in W.B.

e) Syllabus of the Universities in Assam.

On going through the curricula outline developed by these Universities it is found that each of the University Departments of Education has clearly specified the content for each area and course along with the distribution of time for different subjects. Thus, having explored the approved courses of the above mentioned Universities and the recommended courses as going by the NCTE, an attempt has been made to carry out a comparative analysis of the course outlined by preparing a flow chart and analysis sheet. The analysis has been done mainly in qualitative and quantitative fashion.

In order to analyse the courses it would be necessary to specify the criteria on the basis of which one could evaluate its suitability. Therefore, an attempt has been made to derive a set of criteria from the Teacher
Education Curriculum – A Framework developed by NCTE in 1978 and 1988, and also the Recommendations of the UGC curriculum Committee for Teacher Education. The curriculum framework of NCTE (1978), for the B. Ed level, particularly for the secondary school teachers contains the following features.

Objectives of Teacher education for the secondary stage are in line with new ten year curriculum. It has given clear direction to the B. Ed programme by providing nine specific objectives followed by the structure of the teacher education for the secondary stage. The detailed course structure has been provided for achieving the objectives of the programme. It has also improved the course outline so that the trained teacher may effectively teach the new curriculum of the ten-year school. The methods and techniques for organizing the theory course as well as organization of content-cum-methodology and Practice Teaching including related practical work and working with the community have been clearly spelt out by the NCTE curriculum framework. It has also suggested the possible procedure and techniques of evaluation. The process of Internal Evaluation, Evaluation of pedagogical theory working with the Community, Evaluation of Practice Teaching, Practical work, Tutorial System and introduction of Grade system in evaluation have been suggested in the curriculum of NCTE (1978).
Table - 6
Methodological description of the study

<table>
<thead>
<tr>
<th>Objectives of the study</th>
<th>Description of tools / techniques</th>
<th>Nature of data</th>
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<tbody>
<tr>
<td>To examine whether the curriculum prescribed and practiced for B. Ed in the secondary Teacher Education Institutions in the Universities of Assam &amp; W.B.</td>
<td>College information, official records, website books, journals.</td>
<td>Qualitative &amp; Quantitative</td>
</tr>
<tr>
<td>To study how for the course of the syllabus are in consonance with the prescribed content of the NCTE.</td>
<td>Website, books, journals.</td>
<td>Qualitative</td>
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<tr>
<td>To ascertain the status of implementation of the curriculum and instructional materials in the Secondary Teacher Education Institutes of Assam and West Bengal with regard to the physical facilities academic calendar and time table, teachers’ qualifications, professional training, teacher experience and class load etc.</td>
<td>College information, Teachers’ information, Interview schedule, website, books, journals.</td>
<td>Qualitative</td>
</tr>
<tr>
<td>To study the assessment procedure followed in the institutions and by the teachers for measuring the achievements of the student teacher.</td>
<td>College information, Teachers’ information, Interview schedule.</td>
<td>Quantitative</td>
</tr>
<tr>
<td>To study the problems faced by the institutions and the teacher educators in implementing the curriculum as recommended by the NCTE.</td>
<td>College information, Problem check list, website, books, journals.</td>
<td>Quantitative &amp; Qualitative</td>
</tr>
</tbody>
</table>
3.3 Survey:

The present study conducted by the investigator is the comparative analysis of secondary teacher education curriculum in W.B. and Assam. The present study is a survey study aimed for collecting detailed descriptions of existing phenomena with an intention of employing data to justify the current conditions and practices. This study is responsible for determining the overall effectiveness of the secondary teacher education curriculum and would made suggestions for improvement if it is necessary. This is a comprehensive survey study with an aim to look into the process and progress of secondary teacher education programme related to NCTE prescribed curricula and curricula prescribed by Universities of W.B. and Assam. Regarding its constituents namely physical facilities, curriculum prevailed, time table, source of teaching, problem related to the achievement of qualitative improvement, evaluation procedure etc. Further, the significance of the investigation lies in the fact that more than 224 studies have been conducted on teacher education in India, out of which more than 50 studies have been conducted on secondary teacher education in the country but hardly any study has been carried out on the secondary teacher education in West Bengal and Assam. Not even a single study has been carried out on secondary teacher education curriculum in West Bengal and Assam.

In order to study the secondary teacher education curriculum in W.B. & Assam, the investigator used to collect the exact lists of the population. At the time of investigation, the investigator personally
collected the data and used for collection of the random sample. 13% colleges from West Bengal and 16% colleges from Assam were taken in the sample.

3.4 Construction of tools:

In any research the investigator requires many data-gathering tools or techniques. Each tool is appropriate for the collection of certain type of evidence or information. In case, non-availability or readymade tools, the investigator has to prepare tools which will be suited her purpose.

For studying the STEC in Assam & W.B., the investigator made use of the following tools and techniques:

A. College Information Schedule blank.

B. Questionnaire for Teachers for the Secondary Teacher Education Colleges. The expert opinion will also be collected through interview schedule.

C. Problems for the teachers will be developed by the investigator.

3.4.1 College Information Schedule:

In teacher education programme the NCTE has prescribed norms which must be followed in the Teachers’ Training Colleges, So general information of various colleges are very important. General information from 8 colleges of W.B. and 8 colleges of Assam are collected by the researcher from the Teachers Training College. The authorities were requested to provide information’s relating to the following components of the blank.
(1) Establishment.
(2) Year of NCTE recognition and University affiliation.
(3) Management.
(4) Type of institution.
(5) Strength of trainees.
(6) Name of the course and duration.
(7) Working day.
(8) Category wise student strength (2010 – 2011)
(9) Percentage of trainees since last 3 years
(10) Qualification and relaxation for admission in the course.
(11) Selecting trainees
(12) Admission Procedure
(13) Qualification of the trainees (2010 – 2011)
(14) Residential status of the trainees (2010 – 2011)
(15) Teaching staff
(16) Non-teaching staffs
(17) Method wise faculty position
(18) Teaching method
(19) Practice teaching
(20) Supervision of Practice Teaching
(21) Extra curriculum / co-curricular activities
(22) Evaluation system
(23) Infra structure
(24) Library
(25) Teaching Aids
(26) Science laboratories and special subjects’ room.
3.4.2 Questionnaires for teacher educators:

In teacher education programme the role of the teacher is more important. The teachers in the teachers’ training institute have a special role to play because he or she evolves the strategy for the transaction procedure of teaching and learning. Successful teaching depends upon the effectiveness of the teacher. That is why the NCTE has prescribed some norms to be followed in the Teachers’ Training Colleges by the teachers. Such as their academic qualification, professional qualification, experience, teaching load, teaching methods, evaluation etc.

In the present study investigator prepare a questionnaire keeping in view that it collects the reliable and useful information. The questionnaire for the teacher educators of STE colleges contains the following information in its components.

1. Sex.
2. Teaching experience.
3. Qualification.
4. Teaching hour.
5. Curriculum development.
6. Practice teaching.
7. Teaching method.
8. Teaching learning procedure.
10. Evaluation Technique etc.
3.4.3 Problem check list:

This is another tool used for the present study is the problem check list. It is a type of questioner sub-divided into six problems. The respondents had to response by checking (✓) tick mark against each statement, in any one of three alternatives namely always, sometimes and not at all.

The checklist was administered to 103 secondary teacher educators in West Bengal and Assam. The problem checklist contains the following six problems.

1. Problems related to physical facilities.
2. Problems related to time table.
3. Problems related to syllabus.
4. Problems related to source of teaching
5. Problems related to the Achievement of qualitative improvement and

Each of the above problems contains five items. The respondents were ask to give their opinion against each item and assured them to keep their individual choices strictly confidential.

3.4.4 Sample of the study:

A sample is a representative of the entire population as possible and ideally it must provide the whole of the information about the population from which the sample has been drawn. The population is properly defined so that there is no ambiguity as to whether a given unit
belongs to the population. If a population is not properly defined, an
investigator does not know what units to consider when selecting the
sample. In order to select a sample from a given population it also
necessary to have a complete, accurate and up-to-date list of all the units
in the population, such a list known as sampling frame. Hence, the
representative units which formed the sample of a particular study and
inference can be made for the whole population. So, the investigator
needs to prepare a plan for framing the sample.

A stratified random sampling technique was adopted to deduce the
human sample for the study which was considering the following strata i.
e. State; University to which Secondary Teachers’ Education colleges are
affiliated; General information of Teacher educators, their experience,
subject background and Proformas from NCTE and University. So far
non-human sample (curricula) is concerned an absolute sampling
technique is to be adopted incorporating NCTE prescribed curricula and
Curricula prescribed by universities.

There are 63 secondary teacher education colleges in W.B. & 50
secondary teacher education colleges in Assam under various
Universities in both the states. Eight colleges and of their teacher
educators from West Bengal and eight colleges and of their teacher
educators from Assam constitute the sample of the study.
The colleges in West Bengal are –

1. Vidyasagar Teachers’ Training College, Vidyasagar University.
2. David Hare Training College, Calcutta University.
3. B. Ed department Uluberia College, Calcutta University
5. Shimurali Sachinanda colleges of Education, Kalyani University.
6. B. Ed department, Kalyani University.
7. B. Ed department, Rabindra Bharati University.
8. Govt. Teachers’ Training College, North Bengal University.

The colleges in Assam are –

1. Dr. Sashibhusan College of Education, Assam University.
2. Dr. Shyamaprasad College of Education, Assam University.
3. Vivekananda College of Education, Assam University.
4. Diphu College of Education, Assam University.
5. Kokrajhar B. Ed College, Gouhati University
8. Chayduar Shikshan Mahavidyalaya, Dibrugarh University.

Thus, the sample constitutes Secondary Teacher Education Curriculum followed by Ten Universities in West Bengal and Assam and 16 Secondary Teacher Education Colleges from both the state and also 103 teacher educators from those sampled colleges.

Population for the present study incorporates.

1. Curricula for B. Ed as prescribed by NCTE.
2. Curricula for B. Ed as prescribed by the Universities in the states of Assam and West Bengal.
3. Human components associated with Secondary Teacher Education colleges viz.  
(a) Teacher educators. 
(b) Persons involved in implementation of Secondary Teacher Education Programmes. 
(c) Proformas of NCTE, associated with monitoring Secondary Teacher Education Programmes.

3.4.5 Data Collection:

After having the completion of selected sample and preparation of data gathering tools, the next step is to proceed for collecting data. Both qualitative and quantitative data were collected by the investigator. As stated earlier the sample for the study included 16 Secondary Teacher Education Institutions in Assam and W.B. The investigator had to visit personally to all the 16 colleges. The investigator managed to meet the principals of the respective colleges and conducted an interview for filling up the information blank during the visit. The teachers’ information and problem checklist were also distributed to teacher educators of the colleges as the investigator visited and asked to submit the fill in forms next week. The investigator made possible to collect teachers’ information and problem checklist from 55 teachers from West Bengal and 48 teachers from Assam.