METHODOLOGY
Chapter-III

METHODOLOGY

Research is a scientific process of discovering new knowledge. In the words of John W. Best - "The secret of our cultural development has been research, pushing back the areas of ignorance by discovering new truths, which in turn lead to better ways of doing things and better products." There is no alternative to truth and only research can get one nearer truth. Research methodology is the procedure, which is designed and adopted in solving a research problem. According to Lokesh Koul, "Methodology of educational research describes the various steps of the plan of attack to be adopted in solving a research problem...." Methods of research, according to Good, Barr and Douglas E. Scates, may be classified from many points of view: the fields in which they are applied such as education, history, philosophy, psychology, biology; Place of application- field or laboratory; application-pure or applied research, data gathering devices and tools employed, nature of data collected, control of factors and controlled and uncontrolled experimentation. Research methods when classified in the above manners give rise to a comprehensive list with much of overlapping among different methods. Yet despite this lack of clear-cut distinction among the methods, most authors agree on three basic categories-- historical, experimental and descriptive or normative survey method.

The selection of a method with a specific design depends upon the nature of the problem and upon the kind of data that the problem entails. However the method selected should be in cohesion with specific
principles and adequate enough to lead to a reliable generalization. However, in any specific study, it is a common practice to use one of the above methods, though two or more methods also can be applied effectively in combinations in certain research situation. A researcher must have a thorough understanding of all research methods with particular reference to their strengths, limitations, applicability and appropriateness.

Research has proved to be an essential and powerful tool in leading towards progress. The success of any research mainly depends upon the kind of methodology and procedure followed in the stepwise execution of the study. A well-organized and sound methodology directs the investigator to the desired target.

Here in this context, keeping in mind the nature of the study on the subject "An appraisal of library facilities and their utilization in the secondary schools of Kamrup district" and the hypothesis drawn, it is felt that the descriptive or normative survey method of research will be the most appropriate method. So, it is used in this study after consulting all available literature and discussion with experts.

DESCRIPTIVE METHOD:

Descriptive research studies are designed to obtain pertinent and precise information concerning the current status of phenomena and, whenever possible, to draw valid general conclusions from the facts discovered. They are restricted not only to fact finding but may often in the formulation of important principles of knowledge and solution of significant problems concerning local, state, national and international issues. Descriptive studies are more than just a collection of data; they involve measurement, classification, analysis, comparison and
interpretation. They collect and provide three types of information: (1) of what exists with respect to variables or conditions in a situation; (2) of what we want by identifying standards or norms with which to compare the present conditions or what experts consider to be desirable, and (3) of how to achieve goals by exploring possible ways and means on the basis of the experience of others or the opinions of experts.

Descriptive studies investigate phenomena in their natural setting. Their purpose are both immediate and long range. They constitute a primitive type of research and do not aspire to develop an organised body of scientific laws. Such studies, however, provide information useful to the solution of local problems and at times provide data to form the basis of research of a more fundamental nature.

The descriptive research method has undoubtedly been the most popular and most widely used research method in education. It helps to explain educational phenomena in terms of the conditions or relationships that exist, opinions that are held by the students, teachers, parents and experts, processes that are going on, effects that are evident or trends that are developing. Because of the apparent ease and directness of this method, a researcher can gather information in terms of the individual's opinion about some issue, by a simple questionnaire. At times, descriptive survey is the only means through which opinions, attitudes, suggestions for improvement of educational practices and instruction, and other data can be obtained.

**TYPES OF DESCRIPTIVE RESEARCH:**

For the sake of convenience descriptive studies may be classified in the following three categories:
1) Survey studies
2) Interrelationship studies
3) Developmental studies

Survey studies:

Survey is the most commonly used descriptive method in educational research. Survey studies are conducted to collect detail descriptions of existing phenomena with the intent of employing data to justify current conditions and practices or to make more intelligent plans for improving them. Their objective is not only to analyze, interpret and report the status of an institution, group, or area in order to guide practice in the immediate future, but also to determine the adequacy of status by comparing it with established standards. Some surveys are confined to gather all three types of information: (1) data concerning existing status, (2) comparison of existing status with the established status and standards, and (3) means of improving the existing status, while others are limited to one or two of these types.

Survey studies may take different forms depending upon the scope, nature and purpose of the problem under investigation. They may be broad or narrow in scope. Some surveys encompass several countries, state or regions, or may be limited to one country, region, state, district, city, school system or some other unit. Survey data may be collected from every unit of a population or from a representative sample. In the present study, survey studies were conducted to collect the data from a representative sample of 45 secondary schools of Kamrup district of Assam.

COLLECTION OF DATA:

Data collection is an essential and important part of the research
process. On the basis of the collected data, the researcher can identify as valid, verify as correct, or reject as untenable his/her tentatively framed inferences, hypotheses or generalizations. In order to collect the required data for a research problem, the researcher has to sample the population concerned, since it is not possible to encompass the entire population. The researcher may have to devise appropriate tools for measuring the attributes concerned and to administer them.

**SAMPLING:**

Most of the educational phenomena consist of a large number of units. It would be impracticable, if not impossible, to test, to interview or to observe each unit of the population under controlled conditions in order to arrive at generally valid principles. Some populations are so large that their study would be expensive in terms of time, money, effort and manpower. In the words of W.G. Coachran- "The purpose of sampling theory is to make sampling more efficient. It attempts to develop methods of sampling selection and of estimation that provide at the lowest possible cost estimates that are precise enough for our purpose." Sampling is the process by which a relatively small number of individuals, objects or events is selected and analyzed to find out precise information about the whole. Sampling procedures provide generalization or the basis of a relatively small proportion of the population.

**SAMPLE:**

A sample is a small proportion of a population selected for observation and analysis. It is a collection consisting of a part or subject of the objects or individuals of population which is selected for the purpose of representing the population. By observing the characteristics of the
sample; one can make certain inferences about the characteristics of the population from which it is drawn.

In this study, 45 secondary schools of both Urban and Rural areas were selected from four different types of management i.e. provincials, private, Government and recognised schools as sample.

The sample is shown below in the table no-3.1

**Table - 3.1**

Table - 3.1 shows the distribution of the study sample

<table>
<thead>
<tr>
<th>Management</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provincialis school</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Private school</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Government school</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Recognised school</td>
<td>6</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>20</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

From the above mentioned schools of Kamrup District taken as a sample, a total of 400 students were selected from class VIII, IX and X on a random basis and they were given the Questionnaires to get the required data.

In the selection of the sample of the study, both purposive sampling and stratified random sampling techniques were used.

**STRATIFIED SAMPLING**:

Stratified random sampling is a refinement of simple random sampling since, in addition to randomness, stratification introduces
Secondary element of control as a means of increasing precision and representative ness. A stratified random sample is, in effect, a weighted combination of random sub-samples joined to give an over-all sample value. Since the random sample may by chance have an undue proportion of one type of unit in it, it is advisable to use stratified random sampling. The proportion is divided into smaller homogeneous groups or strata by some characteristic and from each of these smaller homogeneous groups draw at random a predetermined number of units.

**PURPOSIVE SAMPLING:**

Purposive sampling can be considered a form of stratified sampling in that the selection of the cases is governed by some criterion acting as a secondary control. Here the investigator selects a particular group or category from the population to constitute the sample because this category is considered to mirror the whole with reference to the characteristic in question. He purposively selects and also purposively leaves some members. He selects his units in such a way that the selected sample yields as quickly as possible the same averaged and proportions as the totality has with respect to characteristics to be studied.

In this study the purposive sampling was adopted only for the government schools because there were only five government schools in the whole of Kamrup district, and all of them were included in the study.

**SAMPLING AREA:**

The sample area of this research work included both urban and rural areas of Kamrup district of Assam. It covers an area of approx. 4345 sq. kms. On the Northern side it extends to the border of Nalbari and Darang district, on the Southern side its area is extended up to Meghalaya border,
on the Eastern side it extends up to the border of Marigaon district and on the Western side it extends up to Barpeta and Goalpara district.

**DATA GATHERING TOOLS:**

Tools of research refer to the devices by which relevant data are collected. Tools may be good in design but full success depends upon how they are operated i.e. technique of using the tool.

An investigator requires many data gathering tools or techniques which vary in their complexity, design, administration and interpretation. Each tool is appropriate for collection of certain type of evidence or information. The investigator selects from the available tools which will provide data he seeks for testing the hypotheses. In some situations, the investigator may find the existing research tools inadequate to serve his purpose. In such cases, he may modify the or construct his own tools.

For collection of data, the following tools were adopted in this study-

- **Questionnaire**
- **Interview**

**Questionnaire:**

A Questionnaire is a device consisting of series of questions dealing with some topic(s) sent or given to an individual or a group of individuals, with the objective of obtaining data on some problems under investigation. Goode and Hall say that in general the word ‘Questionnaire’ refers to a device for securing answers to a series of questions by using a form, which the respondent fills in himself. Barret al defines Questionnaire as a systematic compilation of questions that are administered to a sample of population from which information is desired. Questionnaire is a popular
means of collecting all kinds of data in research. It is widely used in educational research to obtain information about certain conditions and practices, and to inquire into opinions and attitudes of an individual or a group. A Questionnaire is either administered personally to a group of individuals or it is mailed to them to save a great deal of time and money in travel. In the former situation, the person administering the tools has an opportunity to establish rapport with the respondents, to explain the purpose of the study to the respondents, and to explain the meaning of questions to the respondents that may not be clear to them.

In the latter situation, the mailed Questionnaire is probably both the most used and most abused data-gathering research tool. It is mostly used when the individuals from whom we desire information cannot always be contacted personally without the expenditure of great deal of time and money in travel. The range of administration of a mailed Questionnaire may be national or international. A mailed Questionnaire is mostly criticized because of an unfavourable reaction which it generates among the respondents to answer questions from strangers on a subject in which respondents are least interested. Best calls it "as the lazy man's way of gaining information". He is of the opinion that the unfavourable reaction among the respondents is intensified when the Questionnaire is long, the subject trivial in importance, the question items vaguely worded, and the form poorly organised. As a result of this, a small proportion of mailed Questionnaires are returned and, therefore, the data obtained are of low validity. J.W. Best cautions that a mailed Questionnaire may be used with a group of respondents who have a genuine interest in the problem under investigation, who know the sender, or who have some common bond of
In this study the researcher has prepared two sets of Questionnaires, one for the authority or library in charge and another one for the students.

Before preparing the Questionnaires a number of books and journals were consulted to decide the type of questions to be incorporated to elicit responses on selected variables of both facilities and utilisation of the school library. The investigator himself visited schools, interacted with authorities, students and library in charges and got sufficient insights regarding the library facilities and their utilisation in schools.

After getting various informations, the investigator had detail consultations with experts, particularly librarians, teachers, academicians and other individuals working in the field. On the basis of the discussions the Questionnaires were prepared. Initially a pilot study was taken up and the Questionnaires were applied on a small sample. The situational contexts, language and format were thereafter finalised on the basis of the responses received.

The Questionnaires were administered in the schools and the investigator collected the necessary informations from Head of the institutions, librarian and students of the respective secondary schools.

**Interview:**

The Interview is a process of communication or interaction in which the subject or interviewee gives the needed information verbally in a face-to-face situation. It is a two-way method, which permits an exchange of ideas and information. For a skillful interviewer, the interview is certainly superior to any other data-gathering devices. After the interviewer gains rapport, or establishes a friendly relationship with the subject,
certain types of confidential information may be obtained that an individual might be reluctant to put in writing. It is unique in that it involves the collection of data through direct verbal interaction between the interviewee and the interviewer. It requires the actual physical proximity of two or more persons and generally requires that all the normal channels of communication be open to them. As a research technique, the interview is a conversation carried out with the definite purpose of obtaining certain information by means for the spoken word.

The interviewer can explain the purpose of his investigation, and can explain more clearly just what information he wants. If the subject misinterprets the question, the interviewer may follow it with a clarifying question. At the same time, he may evaluate the sincerity and insight of the interviewee. It is also possible to seek the sample information in several ways, thus providing a check for the truthfulness of the responses.

According to Goode, the reliability of the data obtained through interview is affected by the following factors:

1) Many interviewees desire to make good impression, particularly in answer to questions concerning generally accepted standard of behaviour.

2) Many interviewees try to refrain from giving highly personal information, revelation of which might appear damaging to them.

3) The interviewer’s attitude of confidence in and a sense of respect for the interviewee may dilute the information received.

4) Content and form of questions, procedures set for interview, physical setting, recording mode and casual distractions at the time of interviewing also affect the result.
This Interview technique, which is known to be an important tool for gathering relevant information in a research project, was used in the present investigation to obtain adequate information during evaluation of the sample study. Interview was conducted mainly with the Head of the institution, librarian or teacher-librarian of the schools and also with the students/teacher whenever it was thought to be necessary to gather more information of the sample study.

**STATISTICAL TECHNIQUES USED:**

The collected data were sorted down and classified in the tabular form for simplicity in drawing conclusions. For analyzing and interpreting the data, percentage and graphical representation were applied. (Refer Chapter-iv)