

CHAPTER – IV
METHODS AND PROCEDURES

4.0 INTRODUCTION:

Research has been classically defined as “The systematic and objective analysis and recording of controlled observations that may lead to the development of generalizations, principles or theories, resulting in prediction and possibly ultimate control of events” (Best and Kahn, 1998, P. 18).

4.01 RESEARCH METHODS:

Crawford defines research as “a systematic and refined technique of thinking, employing specialized tools, instruments and procedures in order to obtain a more adequate solution of a problem than would be possible under ordinary means. It starts with a problem, collects data or facts, analyses them critically and reaches decision based on the actual evidence”

Research Methodology can be defined as a systematic way of solving a research problem. It is a science of studying how research is done scientifically. The researcher studies the various steps that are adopted in his/her research problem and also the logic for carrying out the project in the particular method chosen by him/her. Although there are various research procedures followed by researchers of different areas of study, all researchers follow the three basic elements such as observation, description and analysis of what has happened under a particular condition or situation.

Educational Research can be broadly classified into three broad categories and all studies related to education fall under one method or a combination of three methods. These three methods are –

- a) Descriptive Method.
 - b) Experimental Method
 - c) Historical Method
- a) Descriptive Method:

Descriptive Research “describes and interprets what is. It is concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident, or trends that are developing. It is primarily concerned with the present, although it often considers past events and current conditions.” Best and Kahn (2005). This method is mostly used by researchers in educational research. The major

purpose of ‘Descriptive method’ is to tell what is, i.e description of the state of affairs as it exists at present. The researchers using this method can only report what has happened or what is happening, they have no control over the variables. They attempt to discover and study the causes even if they have no control over the variables. After studying the condition or events through investigation by using different methods regarding the particular phenomenon under study, they try to draw valid conclusions out of it. Therefore this method helps in formulation of important principle of knowledge and also helps in solving many important problems at the local, state, national and international level.

Descriptive research can be further classified into three sub-categories:

- (i) Survey studies
- (ii) Developmental studies
- (iii) Inter-relationship studies.

(i) Survey studies:

A survey method involves systematic collection, analysis, interpretation and reporting of pertinent facts concerning the particular institution/institutions, enterprise/enterprises and a population and different aspects of it thereof.

Characteristics of a good Survey Technique include the following –

- Good Questioning techniques.
- Use of complete sentences.
- A limited set of opinions in the questioning.
- Interesting.
- Worded without ambiguity.
- The option “I do know” used carefully.

Again ‘Survey Method’ is an involvement of a number of steps. These are – Planning, sampling, Construction of the data-gathering instrument, Executing and Processing.

(ii) Developmental Studies:

Developmental studies are used for studying, investigating the different phases, characteristics of children of different age groups and the relationship between physical and mental changes along with their growth and development. It is very important to have a reliable information about what children are like at various ages, how they vary from each other although of the same age group and how they grow and develop. It is very much important to have a knowledge of physiological, intellectual and emotional growth for numerous practical as well as theoretical aspects. Developmental studies is also known as genetic studies.

(iii) Inter-relationship Studies:

Inter relationship studies endeavor to discover relationships between various facts of the existing phenomenon. They try to trace relationship among the facts obtained to gain a deeper insight into the situation.

b) Experimental Method:

Experimental method is an empirical research method used to examine a hypothesized causal relationship between independent and dependent variables. This method provides for much control and therefore establishes a systematic and logical association between manipulated introduction factors and observed effects. In this method, the researcher deliberately manipulates or varies at least one variable to determine the effects of that variation, (Wiserna & Jurs, 2009).

c) Historical Method:

Historical Research can be described as the application of scientific method of enquiry to historical problems. Historical method describes what was. This is mainly concerned with investigating, recording and interpreting the past events as a means of seeing the present in perspective. The researcher seeks to test the authenticity of the reports or observation made by others. To sum up, Historical Method of Research can be termed as “The systematic collection and objective evaluation of data related to past occurrences to determine causes, effects or trends of those events that may help explain present events and anticipates future events.” In the context of education, historical research deals with educational “Matters” of the past.

4.02 Method of Research Followed:

Descriptive cum- Normative survey method was applied to the present study. This method is considered as the most widely used research method in education. The word ‘Survey; implies gathering of data regarding the present or current prevailing situations. ‘Survey’ describes what is. It can be defined as, ‘social scientific investigation that studies large and small population by selecting and studying sample chosen from population to discover the relative incidence, distribution and inter relations of sociological and psychological variables’.

Therefore the present study titled “A Study on Private Higher Educational Institutions affiliated to Gauhati University upto 2017 of Kamrup (m) District” needed descriptive or normative survey method in its execution as it was aimed to have a fair idea on these Private Higher Educational Institutions of Kamrup (m) District affiliated to Gauhati University regarding **(1) Facilitates given to employees and students by the institutions. (2) Job oriented facilities provided by the Institution. (3) Satisfaction level of Teachers. (4) Perception of students before and after taking admission in these private Institutions. (5) Relationship between Academic Achievement and Demographic Variables of students.** The researcher aimed at arriving at a conclusion by attempting to select a sample that will adequately represent the population.

4.03 Population of the Study:

The population of the present study comprised of all the Private Higher Educational Institutions of Kamrup (M) District of Assam which are affiliated to Gauhati University upto the year 2017. All the faculty members and students working and studying in these Private Higher Educational Institutions were considered as total population of the study. There were twenty four number of colleges which were given permission/Affiliation for imparting professional/vocational Education sponsored by Registered Society/Trust within the jurisdiction of Gauhati University till 2016-17.

4.04 Sample of the study:

The researcher had selected twelve colleges out of these twenty four as sample for conducting the study titled “A Study on Private Higher Educational Institutions affiliated to Gauhati University upto 2017 of Kamrup (m) District” – The institutions selected for

conducting the study were purposefully taken from a variety of courses so that the end result would be well pervasive.

The table no. 4.1 given below shows the total population i.e. the student strength and faculty strength of the twelve institutions taken as sample.

Table No. 4.1

Student strength and Faculty strength of the twelve Institutions taken as sample

Name of the Institution	Number of Students	Number of Faculty Members
1. Abhiruchi Institute of Physical Education (B.P. Edu)	102	14
2. Asian Institute of Management & Technology (B.Sc. + B.C.A. + B.B.A. + M.Com + Bio Technology + Microbiology)	485	22
3. Pragyotish B.Ed. College, Pachariya, Kamrup (B.Ed)	200	22
4. Purbanchal Educational Welfare Society's College of Physiotherapy and Medical Sciences, (B.P.T)	171	20
5. Pune Institute of Business Management (B.B.A + B. Com)	50	10
6. Swadeshi College of Commerce (B.Com)	578	15
7. North East College for Hearing Impaired (B.A.) (Only college in North East)	52	12
8. N.E.F. Law College (L.L.B.)	1643	35
9. Scholars Institute of Technology & Management (B.E + M.B.A.)	320	18
10. Province College (B.Com)	750	28
11. Gauhati Institute of Fashion Technology B.Sc. in Interior Design + Diploma in Interior Design)	50	08
12. College of Aeronautical Engineering (B.Sc. in Aeronautics)	48	08
	4449	212

4.05 Population size:

1. Number of Institutions – 12
2. Number of Students – 4449
3. Number of Faculty members - 212

4.06 Selection of the Students and Faculty Sample Size:

For the study, 365 students were taken from a total of 4449 students studying in the twelve institutions selected by the researcher with due consultation of the supervisor. And the number of faculty members taken as sample size were 115 teachers out of 212 teachers. The sample size had been determined by using the Cochran Formula. The Cochran Formula for finite population determines the sample size. According to this formula, the more the number of population, the less is the sample size and vice versa.

$$\text{Cochran Formula} = \frac{\frac{Z^2 - p(1-p)}{e^2}}{1 + \frac{Z^2 - p(1-p)}{e^2 N}}$$

Here, $Z^2 = 1.96$

$e =$ Error term 5%

$p =$ Probability 5%

$N =$ Total population

The researcher had visited the twelve institutions taken up for the study several times and met the targeted number of students based on the availability of the students taken as sample. The Simple Random Sampling method was used during the time of data collection through administration of questionnaires.

4.07 Tools and Techniques used for the Present Study:

The researcher had applied two techniques to undertake the study. They were: Interviewing and Questionnaire. These two methods were applied so that the objectives of the study could be fulfilled.

Interviewing: This tool helps us to gain a greater understanding of the issues. It involves talking to concerned people in the field of study in order to discuss their knowledge, experience and understanding of the issue taken up. While choosing people to interview we have to make sure that their views and opinions are likely to represent those of others in the field of study area. We should take care not to interview only the powerful but also to interview those whose views are not usually heard. Most important thing we should adhere to is use of open ended questions such as:

1. What are the main problems you face in your area of work?
2. What are the main pressures that you face in your place of work?
3. What are the measures that could be taken up to improve the situation?

These were the three questions the researcher had posed to faculties, staff, non teaching staff, ancillary agencies, outsourced staff and many people related to the twelve institutions visited many times during the entire course of study as a part of the field study undertaken by the researcher.

4.08 Questionnaire:

Questionnaire is a tool or device consisting of a series of questions dealing with varied aspects of the field under study. Baar, et al. defined questionnaire 'as a systematic compilation of questions that are administered to a sample of population from which information is desired'. A lot of care has to be taken while preparing a questionnaire so that it motivates the respondents to communicate the required information. This method is very important and very helpful for collection of the required data.

The second technique used for the study was administering questionnaire. Three sets of questionnaires had been developed by the researcher with due consultations with the supervisor for conducting the study. The first one was developed for the Institution Heads of the twelve sample institutions under study. The second questionnaire was

administered to the Faculty members and the third set comprised of the students Questionnaire.

4.09 Procedure of Construction of Questionnaire:

Construction of the questionnaire is a very important aspect of effective research to conduct a qualitative study. The process to construct an adequate questionnaire involves a number of interrelated steps.

- a) Construction of the first draft includes planning and writing items. Three sets of questionnaires were developed for the students, faculty members and the twelve institutions taken up for the study.
- b) Construction of the final draft: To check the suitability of the questionnaire, a try-out of the questionnaire was undertaken on a sample of 50 students and 25 faculty members of the twelve private institutions taken up for the study.

After this some minor changes were made on the basis of the experience gained through this procedure like editing and proper scrutiny of the language, spellings, space for responses etc. The final draft of the questionnaire was finally prepared after this.

- c) Validity of the questionnaire: After the preparation of the final draft of the three questionnaires its validation was carried out by sending them to experts. The suggestions given by the experts were incorporated accordingly. Finally after incorporating all the changes suggested by experts, pilot testing and ascertaining the reliability were undertaken. This finally led to a definite version of the questionnaires for the students, faculty members and the twelve institutions of Higher Learning taken up for the study.

4.10 Procedure of Data Collection:

As stated earlier, the Normative Survey method was adopted for the study. The researcher after taking necessary permission from the Heads of the Institutions concerned had collected the data herself. For collection of data, the researcher had to make several visits to each of the twelve institutions under study. The questionnaires were distributed among the students and faculty members in excess of the required sample of 365 students

and 115 faculty members so as to ensure that the researcher would be able to gather the information as per the requirement of the sample size.

Collection of data is a strenuous and tiresome experience although it is of primary necessity in carrying out a research. The researcher had gathered a vast experience in the process. Certain institutions out rightly rejected to positively respond to the researcher even after persuading them to respond. Even after several attempts to prevail upon the authorities that the data collected through the questionnaires would be used purely for research purpose, they denied permission to do the same. The researcher had to pay several visits to the respective institutions for different purposes like persuasion, permission from the Heads of the Institutions, handing over the questionnaires, collection of the same etc. Lots of problems had to be faced in collecting the data required for the study.

4.11 Statistical Techniques used for Analysis of Data:

Different statistical techniques were used to analyse the collected data through the 3 sets of questionnaires. These were; Frequency, Percentage, Descriptive Statistics, done through SPSS.