CHAPTER-IV

METHODOLOGY

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4.1 INTRODUCTION

Research is the systematic and objective analysis and recording of controlled observations that may lead to the development of generalisation, principles and theories, resulting in prediction and possibly ultimate control of events.

In Social and Behavioural Sciences research is the demand of the day. The intricacy of the problem in these fields further necessitates purposeful and systematic research efforts. It is also essential to provide new directions to theories and practices.

Being a branch of Social and Behavioural Sciences in the field of educational research is increasingly focused on the methods applied for ensuring an objective assessment. Without a proper method, a study tends to be subjectively biased and loses its scientific character. In a relatively fast changing world, objective assessment alone can help in finding a solution to the problem studied. Hence, therefore is prime to any scientific study that involves a series of steps starting from framing and laying out the plan for drawing samples and summing up with analysis of data.

This chapter, however, describes the plan and procedure of the study regarding the methodology adopted with regard to sampling, design, selection tools, statistical techniques which can provide scientific analysis and can help in providing results in an appropriate way.

4.2 PLAN AND PROCEDURE OF THE STUDY

Research involves the quest for answers to unsolved problems. Pushing back the frontiers of ignorance is its goal and originality is the quality of good research project. It is a planned way of collecting facts to enrich the efforts of one’s mind.

Educational research involves the following methods, namely Historical Method, Descriptive or Normative Survey Method, Experimental Method, Case Study and Genetic Method.
The present study conducted under the Descriptive Survey Method attempts to describe and interpret what exists at present in the form of conditions, processes, trends, effects, attitudes, beliefs etc. It is concerned with the phenomena that are typical of the normal conditions. It investigates into the conditions of relationship that exists, practices that prevail, beliefs, point of view of attitudes that are held, processes that are going on, influences that are being felt and trends that are developing. It is an organised attempt to analyse, interpret and report the present status of a social institution, group or area.

The study is aimed at analysing the developmental trend of the Academic Staff College under the Gauhati University, knowing the efficiency of the organisation from the participants of the course, analysing the impact of the programme and obtaining opinions and suggestions from the Resource Persons, Course Coordinators and the Directors alongwith the participants for improving the status of the courses conducted by the College. An effort is being made to adopt a scientific approach to arrive at an objective assessment of the subject matter of the study.

4.3 OBJECTIVES OF THE STUDY

A. To analyse the developmental trend of the Academic Staff College with regard to:

1. Organisation
2. Admission procedure
3. Courses of study
4. Facilities at the study centre
5. Teaching learning process
6. Teaching and reference materials
7. Functions

8. Evaluation

B. To know the views of the participants with regard to

(a) Level of the programme
   (i) Organisation
   (ii) Admission procedure
   (iii) Standard of the course.

b. Quality of the programme
   (i) Quality of the course
   (ii) Relevance of the course content
   (iii) Extent of communication
   (iv) Extent of expertise of the Resource Persons
   (v) Instructional methods

c. Teaching and reference materials
   (i) Text and reference materials
   (ii) Reading materials
   (iii) Library facilities

d. Physical facilities
   (i) Food and lodging facilities
   (ii) Duration
e. Effectiveness of the programme

(i) Skill development

(ii) Extent of participation

(iii) Utility

(iv) Satisfaction

f. Impact of the Programme

(i) Motivation

(ii) Inspiration

(iii) Research

(iv) Professional development

(v) Exaltation of service over personal gains

(vi) Teacher student relationship

(vii) Career development

Participants' views on Higher Education

(i) Objectives of Higher Education

(ii) Constraints in the system of Higher Education

(iii) Remedies

To know the views of the Resource Persons, Course Coordinators and Directors on the performances of the College and to take suggestions from them to bring in necessary changes for improvement of the courses.
4.4 HYPOTHESES

In keeping with the objectives set forth, the investigator has drawn the following hypotheses.

(i) There is no relationship between participants' choices/preferences and level of the programme with regard to organisation, admission procedure and standard of the course.

(ii) There is no relationship between participants' choices/preferences and quality of the programme with regard to quality of the course content, extent of communication, expertise of the Resource Persons and instructional methods.

(iii) Participants' choices are independent of sufficiency of course materials supplied during the course (with regard to text and reference materials, reading materials and library facilities).

(iv) The Staff College is able to provide adequate physical facilities.

(v) There is no relationship between the options made by the participants and the effectiveness of the programme with regard to extent of participation and utility of the programme.

(vi) There is no relationship between the views of the participants and the impact of the programme with regard to motivation, inspiration, research, professional development, exaltation of service, personal gains, teacher-student relationship and career development.

4.5 SELECTION OF THE SAMPLE

In research, sampling is used to ascertain information in answering certain questions about a specific population. To take the entire population for the study is not feasible. A portion of population is chosen by adopting a method of selecting and rejection.
In the study special emphasis was given on the selection of sample that would represent the Universe or the population. The question arose as to whether all teachers doing Orientation and Refresher Courses in Gauhati University's Academic Staff College should be included or to select a few from a few colleges from either urban or semi urban areas or from both or from outside the State of Assam for the purpose of the study.

In order to draw the sample for the study, the investigator at the outset required information relating to the total number of teachers trained, both in the Orientation and Refresher Courses. For the purpose of the aforesaid information she visited the Academic Staff College established under the Gauhati University, requested the Director and with his help along with the help of the staff collected the list of the participants attending Orientation and Refresher courses from the first course onwards. Here it was found that since August 1988 the Academic Staff College has been able to accommodate more than 1000 teachers to participate in their programmes of Orientation upto the 30th course and 2660 participants in the Refresher Course upto the 77th course in different disciplines.

Simple random sampling method (lottery method) was adopted for the selection of the sample. The entire population in both the Orientation and Refresher courses was divided into two categories, namely male and female and sample was drawn by taking the proportionate percentage of trainees in accordance with its share in the Universe under study.

Decision was taken for the inclusion of at least 10% of the participants attending the Orientation Course ranging from first course to thirtieth course and 5% to 10% of the participants of the Refresher Courses in each discipline. As the number of participants attending the Commerce course was found to be much less compared to Arts and Science streams, the investigator decided to include 10% of the total population. In case of Orientation Programme year-wise, discipline-wise
sample study with reference to participants' age, sex and marital status was taken and for Refresher Course sampling was drawn faculty-wise with reference to participants' age, sex and experience.

Thereafter, the investigator shortlisted the participants to be included in the sample. In order to collect the aforesaid information she approached the participants residing within the state of Assam directly or through postal correspondence by delivering a self-constructed questionnaire. For the participants residing outside Assam, data was collected through postal correspondence. While collecting data, attention was given on responses from the participants attending more than one programme and participants who are on the verge of retirement in addition to the participants attending a single course. Personal interviews were also held to facilitate an objective evaluation of the inservice training programmes. Views and opinions were also obtained from 20 Resource Persons and 10 Course Coordinators for the purpose of the study. Further suggestions were also solicited from the Directors for improving the course.

Table 4.1 represents the size of the sample of participants of Orientation Programme.

<table>
<thead>
<tr>
<th>TABLE 4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Orientation Programme</strong></td>
</tr>
<tr>
<td>Total participants</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male Female - Ratio</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>25 — 30 Years</td>
</tr>
<tr>
<td>30 — 35 Years</td>
</tr>
<tr>
<td>35 — 40 Years</td>
</tr>
<tr>
<td>40 — 45 Years</td>
</tr>
<tr>
<td>45 — 50 Years</td>
</tr>
</tbody>
</table>
Table 4.2 represent size of the sample of participants of Refresher Course

TABLE 4.2

Refresher Course :

<table>
<thead>
<tr>
<th>Total Participants</th>
<th>: 184</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td>: 81</td>
</tr>
<tr>
<td>Science</td>
<td>: 83</td>
</tr>
<tr>
<td>Commerce</td>
<td>: 20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 — 30 Years</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>30 — 35 Years</td>
<td>10</td>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td>35 — 40 Years</td>
<td>25</td>
<td>27</td>
<td>52</td>
</tr>
<tr>
<td>40 — 45 Years</td>
<td>21</td>
<td>18</td>
<td>39</td>
</tr>
<tr>
<td>45 — 50 Years</td>
<td>17</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>50 — 55 Years</td>
<td>15</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>55 — 60 Years</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

4.6. TOOLS

After having made the choice for a suitable population size, the next crucial step was to go in for suitable tools of research to be applied on the sample population in order to achieve the objectives of the present study.

In educational research following tools are used

i. Tests and Inventories
ii. Questionnaire, Schedule and Check List
iii. Rating Scales, Score Cards
iv. Attitude Scales/Opinionnaire
v. Observation
vi. Interview
After making an indepth study of the merits and demerits of various tools of research and in the light of the need of the present study, decision was taken to make use of the following tools with reference to the objective of the study:

i. Questionnaire
ii. Interview

i. QUESTIONNAIRE

Questionnaire is a device consisting of a series of questions dealing with some topics sent or given to an individual or group of individuals with the object of obtaining data with regard to some problems under investigation. Barr et al. (1935, p. 65) defined questionnaire as a systematic compilation of questions that are administered to a sample of population from which information is desired.

It was decided to prepare three questionnaires for the study specially for the participants, Resource Persons and the Course Coordinators.

4.6.a Construction of the questionnaire

The investigator started preparing questionnaire after taking suggestions from the respected dignitaries, different books and related literature. Both closed and open form of questionnaire were prepared for the study. Because the closed form permits easier tabulation and interpretation without wastage of time and labour. From the point of view of respondents also closed questions save their time and labour, because they, in that case are not required to write answers to their own. The open questions are characterised by greater flexibility. However, decided to give as many responses as possible and add in some cases an extra category as "any other", "please specify" in order to provide for unanticipated responses. Besides some ranking questions were also added. Three questionnaires were prepared, one for the participants, one for the Resource Persons and one for the Course Coordinators. The questionnaire contained questions relating to personal details of the respondents. There were also questions relating to the relevant...
quality, teaching and reference materials, physical facilities, effectiveness and impact of the programme which revealed the different components having a direct bearing on the training programmes. By and large, the questions in the questionnaire covered all the relevant aspects of the study for collection of required data for the purpose of an objective oriented study. A distinction was maintained between effectiveness and impact of the programme. The questions relating to the effectiveness of the programme were designed primarily to find out how successful the programme was in terms of achievement of its purpose and those that were designed to study the impact of the programme were to understand the influence of the programme on the participants. Opinions were also taken on higher education.

Participants offered suggestions for improving the course. Interviews were also taken from some of them.

Self constructed questionnaire were also offered to the Resource Persons and the Course Coordinators for obtaining opinions on the performance of the Academic Staff College and suggestions were taken from them to bring in necessary changes for improvement of the course.

4.6.b Administration of the questionnaire

After the construction, the next important step was to administer the tool on the sample. The Gauhati University Academic Staff College started functioning from August 1988. For collection of data the investigator consulted College-wise University-wise list of respondents and went to most of the Colleges/Departments of Gauhati University personally for the purpose. With cooperation of the Principals of the colleges/Head of the departments easy consultation was possible individually or in groups with them. About 10% of the respondents furnished data on the spot of circulation. It was not possible on the part of the majority of the teachers to furnish data on the spot. As a result, they kept the questionnaire with them with an assurance to return as early as possible. Some of the respondents who could
not be contacted on the first day of visit, questionnaires were served through the Heads concerned and they were personally contacted afterwards. Renewal visits were made to the institutions concerned and sometimes visits were also made to the residence of the respondents. Sometimes they were reminded through messengers. Some of them had to be supplied with copies of the questionnaire twice or thrice as they lost their copies. Some came personally to return the questionnaire while few others refused.

Further progress of the study could be made by making personal visits to the departments/residence of the Resource Persons and Course Coordinators who were associated with the programmes conducted by the Academic Staff College and handed over the questionnaire with a request to extend necessary help for the study.

**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. For purposes of research, it may be used as a tool for gathering data required by the researcher to test hypothesis or solve the problems of historical survey or clinical type of research.

In order to be effective, the investigator first had to plan for obtaining the required information. She had to prepare appropriate questions to extract desired data. A situation was created in which the setting was most conducive to the flow of information. Questions were asked in a way that would help in achieving the objectives of the study. She tried to record legibly the exact words of the respondents at the time they were spoken. The recorded responses were read over again and again for complete and objective analysis at a later stage. Interpretation of the interviews were made later on.
4.7 DATA COLLECTION

Generally, for any study one has to depend on official documents and other published works to garner information. But for the present study the information available from the published works was not adequate. As such to achieve the objectives of the study the investigator had to obtain first hand information which was possible to glean by personal contacts with people involved in the programme. Primarily it was survey work through which proper information could be collected.

4.7.a Primary data collection

The study was primarily based on the information offered by the participants of the Orientation and Refresher Courses in the questionnaire prepared for them. Resource Persons and Course Coordinators also helped in the process of data collection.

4.7.b Secondary data collection

The information on Academic Staff College and specially on Gauhati University Academic Staff College were received from secondary data which were provided by Gauhati University Academic Staff College. Information obtained through related articles, literature, books and annual reports were also taken in consideration.

4.8 TREATMENT OF DATA

In order to give proper treatment to the collected data both quantitative and qualitative approach have been adopted.

4.8.a Quantitative approach

It is a set of numerical observations obtained as a result of counting, measuring some characteristics. In the present study quantitative approach has been given to the data by the process of tabulation, computation of percentage, application of chisquare method and graphical representation of the data obtained.
4.8.b Qualitative approach

Qualitative approach embraces a sequence of observation in which each observation belongs to one of several. But here exists many aspects which cannot be analysed in numerical terms.

An effort has been made to draw a brief sketch of systematic completion of the present research work. On that ground special emphasis has been given to highlight the uses of tools and techniques that have been amply made use of.

4.9. PILOT STUDY

Prior to the finalisation of the questionnaire a pilot study was conducted with 75 participants of the Orientation Course and 15 participants of the Refresher Course. Views of 7 Resource Persons and 3 Course Coordinators were also taken. Responses of all the dignitaries were carefully recorded and analysed and interpretation of which were made later on.

The study aimed at analysing the developmental trend of the Academic Staff College established under the Gauhati University and knowing the views of the participants, Resource Persons and Course Co-ordinators on the performances of the said College.

45.33 and 52.00 percentage of participants in Orientation course rated the quality of the courses as above average and average respectively while in case of Refresher Course 50% rated as above average and 50% as average. On utilisation the course highest rating was found on average which is 50.58 and 66.66 percentage in both Orientation and Refresher Courses respectively. Affirmative responses were also offered by Resource Persons and Course Coordinators on the programmes of the course.

The pilot study was found to be very useful in conducting the final study. Based on it the questions could be modified and a final questionnaire was prepared. Besides it helped in the sample selection, process of administration, ordering, presentation, and giving proper treatment to the statistical data.