CHAPTER III

METHODOLOGY

3.0. Introduction

Methodology has special place in research. Methodology refers to the systematic methods used in particular field of study by researchers or the investigators to reach their desired goal. Methodology deals with the detailed description of the methods, sample and tools which are employed by the investigator in the research study. Research is a systematic process of creation, evaluation, re-evaluation discovery and application for human welfare, social progress and achievement of excellent knowledge. As a very systematic process research follows a specific procedure to study the events and phenomena. Checking, re-checking, creation and generalization of achieved knowledge is possible through research. The prime necessity of the research is not only to follow all the steps of the research method or techniques but also to consider its methodology carefully. Methodology is also used in rather more specific sense, as almost a synonym for research design. “A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”. 1 In this sense it indicates the practical way in which the whole research had been organized.

Here, the data which are collected for the study are based on both primary and secondary sources. Descriptive survey method has used for the study.
3.1 Method of the study

Present study is descriptive survey in nature. The descriptive research method has undoubtedly been the most popular and most widely used method in education. It helps to explain educational phenomena in terms of condition as relationship that exist, opinions of the students, teachers, parents and experts. “Survey studies are conducted to collect detailed 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.”

According to the nature of the study descriptive survey method has been accepted as a relevant research method for the present study.

3.2 Population

A population is any group of individuals or objects that have one or more characteristics in common that are of interests to the researcher.

For the present study the population consists of the all women teachers working against permanent post in professional and general degree colleges of Nagaon District of Assam. The population is distributed in three sub-divisions, Kaliabor, Nagaon and Hojai.

Kaliabor sub-division which covers totally rural area. In this sub-division there are only two colleges. One is general college and other is B.Ed. College (professional college). In this sub-division the population is very small in number in comparison to other two sub-divisions.
Nagaon sub-division is the biggest one covering both urban and rural area. The total number of colleges is nineteen. Among them nine colleges are located in urban areas and ten colleges are located in rural areas. There are two types of colleges, three professional and sixteen general colleges.

Hojai Sub-division is covering maximum semi-urban areas. There are total eight colleges. Four colleges are located in urban areas and other four colleges are located in rural areas. Among these seven colleges are general college and other one is B.Ed. College (professional college).

The total number of women teachers working in these twenty nine colleges is 298 which is the population of the study.

3.3 Sample of the study

In behavioural science research including education, each and every unit of the specified group is not possible to be observed. Hence, some units have been selected from the specified group under the area of investigations. These selected units are known as sample in technical term. A sample is a smaller proportion of a population selected for observation and analysis.4

Purposive sampling method has been used as a procedure of sampling for the present study. In this sampling procedure the total population taken as sample of the study. Purposive sampling is a non-probability sampling that is selected based on characteristics of a population and the objectives of the study.
As the population of the present study is small, the total population i.e. 298 women teachers who are working in 29 colleges (professional and general) of Nagaon district has been selected as the sample of the study.

To measure competency of women teachers as sample 30% population has been taken. To select 30% sample the random sampling procedure was used.

3.4 Tools

The following tools have been used for data collection –

- Self constructed Information Schedule to determine the professional development of women teachers.
- Self constructed Information Schedule to seek information regarding facilities available and constraint faced by the women teachers in higher education.
3.5 Details of the Tools

1. **Information Schedule**: At first the Primary data were collected through Information Schedule. In the preparation of the schedule and attempt was made to have as many structured questions as possible. In the study self constructed information schedule was used. The total schedule has been divided in three parts viz. –

   i. Personal academic background of the respondents and Professional profile focusing the professional growth of the respondents.
   
   ii. Facilities available for the professional development of the respondents.
   
   iii. Constraints face by the respondents in their professional development.

   The part wise distribution of questions in the information schedule was as follows-

   (i) Personal academic profile and Professional development of respondents 23 items,
   
   (ii). Facilities available for professional development 10 items, 
   
   (iii). Constraint faced by respondents total 15 statements covering three types of constraints- (a) Institutional constraints , (b) Family Constraints, (c) Personal Constraints. There are five statements in each constraints response by agree or disagree.

   The questions have been framed on each aspect of the study in logical sequence.

   The total information was collected during the period of six months.
2. General Teaching Competency Scale: (GTCS)

There are 21 items related to 21 teaching skills which encompass the entire teaching-learning process in the classroom. They are related to five major aspects of classroom teaching, namely planning, presentation, closing, evaluation, and managerial.

The items are such that they are centered around teacher classroom behavior in relation to pupil behavior. It is a 7-point rating scale measuring the use of the skill by the teacher in the classroom corresponding to each item ranging from ‘1’, for ‘Not at all’ to ‘7’ for very much. 5

Table B

Distribution of items in Different Classification of teaching skills

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Category</th>
<th>Serial wise Item No</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Planning (Pre-instructional)</td>
<td>1,2,3,4</td>
<td>4</td>
</tr>
<tr>
<td>II</td>
<td>Presentation (Instructional)</td>
<td>5,6,7,8,9,10,11,12,13,14,15,</td>
<td>11</td>
</tr>
<tr>
<td>III</td>
<td>Closing</td>
<td>16,17</td>
<td>2</td>
</tr>
<tr>
<td>IV</td>
<td>Evaluation</td>
<td>18,19</td>
<td>2</td>
</tr>
<tr>
<td>V</td>
<td>Managerial</td>
<td>20,21</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td>21</td>
</tr>
</tbody>
</table>

Procedure for Use

The GTC scale is generally used for measuring teaching competency of a teacher individually by a reliable observer or a group of reliable observers making direct observations of his classroom behavior for the entire teaching period.

As the teacher teaches, the observer sits at the black for observation. At the end of the teaching period, he gives his rating on the GTC scale against all the items. To
facilitate this process, he may either mark frequencies or write verbal descriptions against each item which help him in giving rating more objectively.

**Scoring Procedure**

The sum of the rating against all the 21 items constitutes the score on General Teaching Competency (GTC score) of the teaching being observed. The maximum score possible is 147 and the minimum is 21.

*These ratings are – 1 score for Not at all, 2 score for low, 3 score for Below Average, 4 score for Average, 5 score for Above Average, 6 score for High and 7 score for Very Much* in the use of classroom skill by the teacher.  

**Table C**

<table>
<thead>
<tr>
<th>Scoring Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
</tr>
<tr>
<td>Score</td>
</tr>
</tbody>
</table>

**Reliability of the Scale**

Since this is an observation tool the more appropriate type of reliability is the inter-observer reliability. This scale has been used for doctoral research (Joshi, 1977:passi, 1977) and the reported inter-observer reliability coefficients range from 0.85 to 0.91. Inter observer reliability can be better established when the observers train themselves for using the GTC scale.
Table D

Norms for Interpretation of Teaching Competency Level

For Full Scale & Teaching Competency Level

For Full Scale & Each Teaching Skill

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Range of Z-score</th>
<th>Grade</th>
<th>Teaching Competency &amp; skill Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>+2.01 and above</td>
<td>A</td>
<td>Superior</td>
</tr>
<tr>
<td>2.</td>
<td>+1.26 to + 2.00</td>
<td>B</td>
<td>High</td>
</tr>
<tr>
<td>3.</td>
<td>+0.51 to + 1.25</td>
<td>C</td>
<td>Above Average</td>
</tr>
<tr>
<td>4.</td>
<td>-0.50 to +0.50</td>
<td>D</td>
<td>Average/Moderate</td>
</tr>
<tr>
<td>5.</td>
<td>-0.51 to -1.25</td>
<td>E</td>
<td>Below Average</td>
</tr>
<tr>
<td>6.</td>
<td>-1.26 to -2.00</td>
<td>F</td>
<td>Low</td>
</tr>
<tr>
<td>7.</td>
<td>-2.01 and below</td>
<td>G</td>
<td>Inferior</td>
</tr>
</tbody>
</table>

Collection of Secondary Data

This research study is mainly based on primary source of data, but secondary sources are also used to verify information collected and enrich the knowledge acquired from primary sources of data the investigator has visited various institutions and libraries located in different part of the country. The Institutions and libraries are -

- K.K. Handique Library, Gauhati University, Assam.
- Omeo Kumar Das Institute of Social Change and Development, Guwahati, Assam.
- Department of Women’s Studies, Gauhati University, Assam, Library.
- Library of NCERT, New Delhi.
- Library of ICSSR, New Delhi.
• Libraries of some colleges of Nagaon District of Assam.
• Office of the principal of all the colleges in Nagaon District.
• Director of Public Instruction. Assam.

Apart from this secondary data has been collected from various books, research journals, Ph. D thesis, M. Phil. and M.Ed. Dissertation, Government reports census reports related to the problems. The investigator had also collected different materials and information by the source of internet and educational websites.

3.6 Statistical Techniques:

The data were classified and tabulated according to the requirements of the objectives of study and the research questions. Following statistical techniques have been used in interpreting and analyzing the collected data-

1. Simple percentage calculation.
2. Graphical representation basically-
   i)  Bar diagram
   ii)  Pie-diagram
   iii) Line graph, etc.
3  ‘t’ test
4. Z score
5  ANOVA

These appropriate techniques have been used according to the requirement of the study.
References


4. Ibid


6. Ibid, p.9

7. Ibid, p.10

8. Ibid, p.11

9. Ibid, p.17