CHAPTER-III

RESEARCH METHODOLOGY

3.1 Introduction

Research Methodology is a systematic way to solve the research problem. The present study is regarding existing skill level, identification of training need and existing training practices for non teaching employees of selected Higher Educational Institutions of Assam and assessment of effectiveness of these training programmes. The method adopted to conduct the study, type of research and research design followed are discussed in this Chapter. The Chapter also contains data collection method, sample, sample size & sampling method, sources of data and statistical tools used for analysis of the data.

3.2: Research Design

Research design is the conceived plan and structure for investigation to obtain answers to research question. The research type adapted for this study is descriptive research with cross sectional design. Comparison of opinions expressed by different components of the study and sample are part of the study. Finally, to carry out the study in systematic manner a systematic procedure for collection and analysis of data is laid down.

Considering the objectives, the study about employees existing skill level and assessment of their training needs are described in Chapter IV. Information in respect of respondents participated in the study were collected from their respective Controlling Officers as the immediate Controlling Officers of the employees were better known in respect of the existing skill level and to assess training needs of the employees under
their control. In Chapter-V, the perception of respondents on existing training practices and effectiveness of training is described. Information in this respect were collected from participating respondents, who attended different training programmes organized by their respective Institutions.

3.3 Research Methodology

Research Methodology describes the way to study the research problem systematically. Considering the nature of the present study to face challenge of balancing both the qualitative and quantitative aspects in appropriate proportion case study method is found to be most advantageous. The method is seems to be most appropriate as it offers objective data and subjective opinions in such a manner that the findings are theoretically sound and practically applicable.

Accordingly, following Research Methodology is applied in this present study:

(i) Study of training practices existing in the selected higher educational institutions
(ii) Perception of immediate Controlling Officers on the existing training practices.
(iii) Feedback of employees attending training programmes nominated by their respective higher educational institutions and evaluation of training practices in terms of its effectiveness.
(iv) Visit to the selected higher educational institutions for the purpose of case study as stated above.
3.4 Sampling Design

Sampling design includes sampling unit, sample population, sampling method employed and the determination of sample size. The sampling unit referred to the places where the study was conducted. Following are the sampling units for this study:

i) Gauhati University, Guwahati

ii) Dibrugarh University, Dibrugarh

iii) Assam Agricultural University, Jorhat

iv) Indian Institute of Technology, Guwahati

v) Tezpur University, Tezpur

The population comprises of non teaching employees (Group B & C) of various level and functional areas from different Administrative Units of the selected Higher Educational Institutions under the study. Non teaching employees are categorized into three broad levels- Junior level, Middle level and Senior level. Junior level includes the employees in the Grade Pay of Rs 2,500 to Rs 3,300 (LDA & equivalent posts), Middle level includes the employees in the Grade Pay Rs 4,300 (UDA & equivalent posts) and the Senior level includes the employees in the Grade Pay of Rs 4,500 (Assistant Superintendent & equivalent posts).
Sample Size of the study is as given below

**Table: 3.1: Distribution of Sample Respondents in the Study Area**

**Employees’ existing Skill Level and assessment of their training needs**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Higher Educational Institution</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gauhati University</td>
<td>126</td>
</tr>
<tr>
<td>2</td>
<td>Dibrugarh University</td>
<td>85</td>
</tr>
<tr>
<td>3</td>
<td>Tezpur University</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>Assam Agricultural University</td>
<td>107</td>
</tr>
<tr>
<td>5</td>
<td>Indian Institute of Technology, Guwahati</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>466</strong></td>
</tr>
</tbody>
</table>

**Perception of employees and Effectiveness of existing Training Practices**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Higher Educational Institution</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gauhati University</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Dibrugarh University</td>
<td>38</td>
</tr>
<tr>
<td>3</td>
<td>Tezpur University</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>Assam Agricultural University</td>
<td>72</td>
</tr>
<tr>
<td>5</td>
<td>Indian Institute of Technology, Guwahati</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>223</strong></td>
</tr>
</tbody>
</table>

**Sample Method**: The majority of the population of the study is educated and qualified and they were highly cooperative and ready to spend less time to respond to the questionnaire. Convenience sampling method was utilized to select the respondents from each level of the administrative units. The Convenience sampling method gives
flexibility to approach; only those who are ready to spend time and respond to the questionnaire are selected.

Following are the training programmes organized by the University/Institute during the period of Study:

<table>
<thead>
<tr>
<th>Name of the Institute</th>
<th>Title of the Training Programme</th>
<th>Topic Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event</td>
<td>Topics</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| A two day in-house training programme for Technical staff of the Institute. | - What is management? Basic concepts  
- Conduct Rules/Dos and Dons  
- How to work in team/Team building  
- Leave Rules –general principles.  
- Right to Information Act-Salient features  
- Motivation  
- Emotional Quotient  
- GFR 2005-Procurement of goods and services (canons of financial property, tendering etc).  
- New Pension scheme.|
| Dibrugarh University | - Two day Computer & IT Training for Office Management.  
- One day Training on MIS Leave Module.  
- One day Training Programme on Document Flow Management Module in MIS. |
| Gauhati University | - 5 days Non Teaching Staff Training  
Programme organized by UGC-ASC, GU  
- Professional Development Programme of Non-Academic Staff, Organised by UGC-ASC, GU.  
- Short Term Course for Academic Administrators, Organised by the UGC-Academic Staff College, GU |

| Tezpur University | - One day Workshop cum Training on Noting and Drafting, Maintenance of Office Records/Files and Maintenance of departments for all Ministerial Staff from LDC s up to the level of Assistants including secretarial staff i.e. Stenographer Gr-II & Gr-III.  
- Training Programme on Professional Skill Development for Non-Teaching (Technical |
Staff-Gr A, B & C).

| Assam Agricultural University | - Training programme on NPS.  
- Training programme on Office Management for non teaching employees. |

3.5: Method of data collection

Both the primary and secondary data were collected for the purpose of the study. The primary data were collected with the help of questionnaire designed for the purpose and also through personal interview. The secondary data were collected from books, journals, magazines and articles related to the study.

Based on the objectives of the study two questionnaires were developed to study Employees’ existing skill level, assessment of their training needs and Perception of employees on training practices & measurement of effectiveness of training respectively. Before collecting data pilot study was undertaken and the respondents participated in the pilot study were asked to fill the questionnaire and express their
opinion. Based on the pilot study some questions were modified and arranged as per importance. Taking into consideration of findings from the selected sample respondents, necessary modifications and changes were incorporated in the questionnaire after pilot study. The respondents included in the pilot study were not included as samples for the final study.

Information in respect of respondents participated in the study regarding ‘Employees existing skill level and assessment of their Training Need’ were collected from their respective Controlling Officers, as the immediate Controlling Officers of the employees were better known in respect of the existing skill level and to assess training need of employees under their control. Information pertaining to the ‘Study on perception of employees on training practices and measurement of Effectiveness of Training’ were collected from participating respondents, who attended different training programmes organized by their respective University/Institution. To make respondents more comfortable with managerial terms and jargons used in the questionnaire, the researcher interacted with the respondents and explained the terminology used in the questionnaire during his visit to the selected higher educational institutions. Further, questionnaires were made more understandable to respondents by modification or alteration as required from the experiences of researcher and feedback received during pre-testing. The researcher also contacted frequently with the respondents during the course of data collection process, for clarification of doubt of respondents on questionnaire, if any.
3.6: Reliability Test

To know the reliability of questionnaire, the researcher conducted the reliability test of the questionnaire. The Chronbach’s alpha was statistically reliable for all the variables used in the study. The reliability statistics of all the dimensions of the questionnaire is presented in Chapter V, which is given below:

3.7 Statistical Tools used for the analysis

The data gathered were analysed with the help of statistical tools. The computer package Statistical Package for Social Sciences (SPSS) version 20.0 was utilized to analyse the data. The questionnaire was therefore designed to suit the compatibility of the computer software package.

The data collected was checked for its validity and reliability and statistical tools used for the analysis were simple percentage method, Two way tables, Chi-square analysis, Correlation analysis and Regression analysis.

3.7.1 Simple percentage method

Simple percentage method was used to present the profile of the respondents involved in the study.

3.7.2 Chi-Square test

Chi-square test was used as a test of independence to explain whether or not two attributes are associated. The Chi-square test is not a measure of the degree of relationship or the form of relationship between two attributes, but is simply a technique of judging the significance of such association or relationship between two attributes. This means Chi-square test does not indicate the strength or direction of relationship.
Thus, the Chi-square test facilitates to express independent of attributes. The researcher used the Chi-square test to know the significance of association between the respondents of higher educational institutions with the parameters under study. Significance of association implied that respondents from different Higher Educational Institutions have difference pertaining to the parameters under study.

### 3.7.3 Correlation analysis

Correlation analysis studies the joint variation of two or more variables for determining the amount of correlation between two or more variables. It explained how the change of one variable causes changes in other variables. The correlation computes the Pearson’s correlation coefficient with corresponding significant levels. Correlation in this study is used to assess the relationships of selected parameters pertaining to the existing skill level of employees of selected higher educational institutions. An attempt has been made in the study to understand the relationships of selected parameters pertaining to the existing skill level of respondents in order to draw conclusion from the study.

### 3.7.4 Regression analysis

Multiple Regression analysis is used in this study to measure the relationship between dependent variable and independent variables. The relationship between one dependent variable and more than one independent variable is known as multiple regressions. The Regression analysis is used in this study to measure the effect of independent variables on the dependent variable. Regression analysis is used to test the Null Hypothesis formulated in order to understand the impact of one criterion upon the other criterion of Krikpatrick training evaluation model used in the study.
3.8 Period of the research

The duration of research is in between 2014 to 2016. Primary data for the study was collected through a structured questionnaire in the years 2015 & 2016. Secondary data was collected from the different publications, reports, websites, magazines, journals, newspapers and other published sources.