CHAPTER 3

METHODOLOGY

3.0. INTRODUCTION

The present chapter has been devoted to methodology and design which was followed by the investigator to conduct this study. The research methodology includes research design and statistical design. The logic behind these designs used by the researcher must be relevant to his study.

In this present chapter, the methods and materials used for collecting and analyzing the data are explained under the following headings:

3.1. Research Design
3.2. Population and the sample
3.3. Variables used for the study
3.4. Tools used for data collection
3.5. Methods for developing and administering the tools
3.6. Data collection procedure
3.7. Collection of Secondary Data
3.8. Statistical support

3.1. RESEARCH DESIGN

Because of its nature and characteristics, the present research study falls under Descriptive Survey Method. The main objective of the study was to examine the relationship of academic performance with institutional facilities and career expectations of the Mishing students. This objective is mainly concerned with the present state of the Mishing students. Hence, this research study was brought under
Descriptive research. Descriptive survey method is concerned with conditions or relationships that exist, practices that prevail, beliefs, point of view or attitudes that are held, processes that are going on, effects that are being lifted or trends that are developing.

This method was considered appropriate for this research work, because no readymade data which are required for examining different objectives under study, such as school data, academic performance of Mishing students in H.S.L.C. examination conducted by SEBA, their career expectations, institutional facilities for Mishing students etc. are available. This resulted in no alternatives to the investigator but to visit sampled schools for collecting data. This method is used to obtain pertinent and precise information relating to secondary stage Mishing students of Assam and to draw valid general conclusions from the facts discovered.

3.2. POPULATION AND THE SAMPLE

Population or universe in its precise explanation is the totality or whole quality where as sample is a smaller representation of the whole or totality. It is the population or the universe from where we get the sample, and it is the sample or particular inferences from where logical conclusion i.e. generalization is made.

In a research study, it is essential that it should be clearly defined as to what is the population or universe of study e.g. what is to be covered in a particular study. In the present study, all the 10th standard Mishing tribe students i.e. 1252 students enrolled in the sessions 2010-2011 and 2011-2012 in the sampled provincialized secondary schools of the sampled two districts, namely Lakhimpur and Jorhat of Assam, are the population for the investigation.

3.2.a. SAMPLING METHOD

Both purposive technique and simple stratified random technique have been used in the present study. There is no official information about the enrolment of
Mishing students appeared in H.S.L.C. Examination for the sessions 2010-2011 and 2011-2012 and it is inconvenient for the investigator to find out the total enrolment of Mishing students studying in Class X for these particular sessions in the sample districts. Hence, the above mentioned sampling techniques were employed for this research investigation.

3.2.b. SELECTION OF SCHOOLS

The sample for this study is taken from the provincialized secondary schools from two districts, namely, Lakhimpur and Jorhat where majority of Mishing people are found. List of provincialized secondary schools in these two districts are shown in the table no. 3.1.

**Table No. 3.1: List of Provincialized secondary schools in Lakhimpur and Jorhat Districts**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>District</th>
<th>Number of Secondary Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lakhimpur</td>
<td>152</td>
</tr>
<tr>
<td>2.</td>
<td>Jorhat</td>
<td>177</td>
</tr>
</tbody>
</table>

*Source: Secondary Education Management Information System (SEMIS) 2010-11*

Table 3.1 shows the total numbers of schools available in two districts. Out of the total secondary schools, the investigator selected a sample of 50 secondary schools (25 from each district) purposively.

3.2.c. SAMPLE SIZE

For the present study 500 secondary school students studying in 10th standard were selected as the sample from the universe 1252 i.e. 40% of the universe is selected as sample of the present study. Out of this, 250 students were drawn from
Lakhimpur district and other 250 were drawn from Jorhat district. The number of the two sexes, both boys and girls, were kept equal in both these districts.

Table No. 3.2: Distribution of Sample

<table>
<thead>
<tr>
<th>Year</th>
<th>Lakhimpur District</th>
<th>Jorhat District</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>2010-2011</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>2011-2012</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>125</td>
</tr>
</tbody>
</table>

3.3. VARIABLES USED FOR THE STUDY

Any concept that can be expressed in quantitative value or qualitative value is called variable. The purpose of the study was to analyze the relationship of academic performance with institutional facilities and career expectations of Mishing students. Following variables are considered in this study.

   a. Academic Performance
   b. Institutional Facilities
   c. Career Expectation

The variables are diagrammatically shown as follows

Fig. 3.1: Variables of the Study
3.4. TOOLS USED FOR DATA COLLECTION

Particular design of each study possesses a blue print for the researcher. This design enables the investigator to test the hypothesis by reaching valid conclusions. It is mainly based on the purpose of the study, the types of variables to be manipulated and the conditions or factors under which it is conducted. The success of the design depends upon the tools which are used in data collection and results verification. The investigator draws the conclusions and generalizations on the basis of the collected data and this will be authentic and valid if the data are collected by making use of reliable and valid tools. Hence, keeping in view the main objectives of this study, the investigator used two types of tools:

a. Self Standardized Questionnaire for Students
b. Occupational Aspiration Scale developed by Dr. J. S. Grewal

With the help of above mentioned tools, precise and relevant information and data are collected. The self structured tool was developed by the investigator. Before developing it, a thorough study was done by the investigator by going through books, journals, magazines etc.

3.5. METHODS FOR DEVELOPING AND ADMINISTERING THE TOOLS

The present study required a fair variety of data. The data were obtained from primary as well as secondary sources. The following tools were developed and administered to collect data for the present study.

3.5.a. ACADEMIC PERFORMANCE BASED ON H.S.L.C. EXAMINATION RESULT

Percentage of marks of Mishing tribe students in H.S.L.C. examination for two previous years has been taken as academic performance scores. These marks
were collected from the office records of the secondary schools. The mean of
Academic performance of Mishing students was determined on the basis of range and
on the basis of that the class interval has been made.

**Table 3.3: Assignment of Category of Mishing Students regarding Academic
Performance**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>High</td>
<td>60 and above</td>
</tr>
<tr>
<td>2.</td>
<td>Average</td>
<td>29-59</td>
</tr>
<tr>
<td>3.</td>
<td>Low</td>
<td>Upto 28</td>
</tr>
</tbody>
</table>

3.5.b. QUESTIONNAIRE FOR STUDENTS

A Questionnaire was prepared for measuring the availability of Institutional
facilities for Mishing students in secondary schools. Questionnaire was designed in
such a manner that the respondents don’t find any problem in responding to the
questions and they were given scope for giving free and frank responses. Thus the
questionnaire was prepared and it was made reliable and valid on the basis of field
testing, opinions from the experts and guide.

According to the need of questionnaire for this study, several items concerning
institutional facilities were constructed. Before evolving the final form of the
questionnaire, the tool was given to experts and guide and on the basis of their
suggestions; modifications were made to evolve the final version of the questionnaire.
The tryout enabled the investigator to discover some deficiencies, omissions,
ambiguities and inadequacies in the items. Thus, on the basis of objective, the
questionnaire was prepared with a view to fulfill the demands of the study.

The questionnaire for students’ contains 28 statements. It has 14 positive and
14 negative statements. The questionnaire is divided into nine (09) aspects. Different
aspects and number of items in each aspect of this questionnaire is tabulated as follow.

Table No. 3.4: Different Aspects and Number of Items in each Aspect

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Aspects</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Classroom facilities</td>
<td>8</td>
</tr>
<tr>
<td>2.</td>
<td>Library facilities</td>
<td>7</td>
</tr>
<tr>
<td>3.</td>
<td>Computer and Internet facilities</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Laboratory facilities</td>
<td>2</td>
</tr>
<tr>
<td>5.</td>
<td>Transportation facilities</td>
<td>1</td>
</tr>
<tr>
<td>6.</td>
<td>Hostel facilities</td>
<td>1</td>
</tr>
<tr>
<td>7.</td>
<td>Students support facilities</td>
<td>2</td>
</tr>
<tr>
<td>8.</td>
<td>Teaching Learning Materials</td>
<td>2</td>
</tr>
<tr>
<td>9.</td>
<td>Health and Sanitation facilities</td>
<td>3</td>
</tr>
</tbody>
</table>

Total = 28

For determining the reliability of the questionnaire, split half reliability was employed. The scores of odd and even items were taken separately on a sample of 100 students. The product moment co-efficient of correlation was computed and the co-efficient was found to be 0.81.

For scoring the questionnaire, a manual scoring key is done conveniently. Responses range from Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. The responses are given a weightage of 5, 4, 3, 2 and 1 respectively for the positive statements and the reverse i.e. 1, 2, 3, 4 and 5 respectively for the negative statements. The total score is the summation of each item checked. Agreement for the positive statements indicates excellent institutional facilities while agreement for the negative statement indicates poor institutional facilities. The minimum score obtained can be 28 and the maximum can be 140, other scores ranging in between these limits. The mean of Institutional Facilities of Mishing students was determined on the basis of range and on the basis of that the class interval has made.
Table No. 3.5: Different Categories and Range of Scores of the Questionnaire

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>High</td>
<td>95-140</td>
</tr>
<tr>
<td>2.</td>
<td>Average</td>
<td>58-94</td>
</tr>
<tr>
<td>3.</td>
<td>Low</td>
<td>Up to 57</td>
</tr>
</tbody>
</table>

A copy of the Questionnaire for Students and Constructing Procedure of the Questionnaire are given in Appendix A and B respectively.

3.5.c. OCCUPATIONAL ASPIRATION SCALE

Career expectation of Mishing students was measured with the help of Occupational Aspiration Scale. Occupational Aspiration Scale was developed by Dr. J. S. Grewal. Earlier, Level of Occupational Aspiration Scale was developed by Haller and Miller in the year 1967 for measuring the occupational aspirations of the youth. The present scale consisted of 80 occupational titles taken from the *Dictionary of Occupational Titles of India*. The final draft of the present scale was administered on 200 persons and were asked to rate each occupation on a five-point scale ranging from an occupation of ‘excellent’ to ‘poor’ standing. 80 occupational titles were arranged in mixed order in eight multiple choice items in the format given below in Table No. 3.6.
Table No. 3.6: Combination of Expression Levels and Goal-Periods for each of the Four Question Wordings

<table>
<thead>
<tr>
<th>Expression Levels</th>
<th>Goal-Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Short Range (S) (a)</strong></td>
</tr>
<tr>
<td>Idealistic (I)</td>
<td>Of the jobs listed in this question, which one would you choose if you were free to choose any of them you wished when your schooling is over? (2 and 4)</td>
</tr>
<tr>
<td>Realistic (R)</td>
<td>Of the jobs listed in this question, which is the best one you are really sure you can get when your schooling is over? (1 and 3)</td>
</tr>
</tbody>
</table>

(a) Initial Career Point  (b) Mature Career Point

The Occupational Aspiration Scale can be administered in a group. Written instructions are given in the beginning of the test period. These instructions and the first item are shown below:

**Instructions:** This set of questions concerns your interest in different kinds of jobs. There are eight questions. Each one asks you to choose one job out of ten presented. Read each item carefully. They are all different. Answer each one of the best you can. Do not omit any.

**Question 1:** Of the jobs listed in this question, which is the best one you are really sure you can get when your schooling is over?

1.1 ..... Lawyer  
1.2 ..... Agriculture Inspector  
1.3 ..... Doctor  
1.4 ..... Primary School Teacher
1.5 ..... Diplomat in Foreign Service 1.6 ..... Barber

1.7 ..... Psychologist 1.8 ..... Motor Mechanic

1.9 ..... Traveling Salesman 1.10 ..... Postman

It should also be mentioned that there is no right or wrong answer in the tool and there is no time limit. Half an hour is sufficient for administration of this test.

**SCORING PROCEDURE:**

Scoring procedure of all the eight items is same. There are ten alternatives of occupational titles for each question. Only one alternative occupational title may be checked. The scores for each alternative are as follows:

**Table No. 3.7: Scores for Alternative Occupational Title**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>7</td>
<td>4</td>
<td>8</td>
<td>2</td>
<td>9</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

All the responses are scored with the help of above mentioned scoring procedure. In this scale, each item alternative a weight ranging 0 to 9 having maximum of 72 and minimum 0 scores. The scale was translated into the Assamese language with the help of a professional translator for the easy understanding by the students. According to scale the respondents were grouped into three categories.

**Table No. 3.8: Assignment of the category of the students regarding Career Expectation**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Class Interval</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>55-72</td>
<td>High</td>
</tr>
<tr>
<td>2</td>
<td>29-54</td>
<td>Average</td>
</tr>
<tr>
<td>3</td>
<td>0-28</td>
<td>Below Average</td>
</tr>
</tbody>
</table>
RELIABILITY OF THE SCALE:

For determining the reliability of Occupational Aspiration Scale, test-retest reliability was employed and it was found to be 0.84.¹

VALIDITY OF THE SCALE:

The validity of the scale was assessed by finding the co-efficient of correlation and it was found to be 0.75. The Occupational Aspiration Scale has been validated against Haller and Miller Occupational Aspiration Scale. A copy of the occupational aspiration scale and manual of the scale are given in Appendix C and D respectively.

3.6. DATA COLLECTION PROCEDURE

The investigator went personally to each sampled school of Lakhimpur and Jorhat districts of Assam for collection of data. The investigator collected the required data with the help of various information schedules, questionnaire and standardized tool from the heads of the educational institutions and students during his visit to sampled schools and its catchment area. The collection of data from the respondents was very difficult. To start with, formal permission from the heads of the educational institutions under study was taken by the investigator to administer the tools to the Mishing students of class X. At the very outset, the students were requested to participate heartily and sincerely in responding to all the tools with their own ideas and knowledge. Again the investigator visited the homes of some sampled students for collection of over all data and information. The investigator had to visit each sampled school at least 5/6 times to collect necessary information from the students. Regarding collection of data for academic performance of Mishing students in H.S.L.C examination conducted by SEBA, the investigator collected the marks obtained by the sampled students from their respective school records for analysis. And at the time of data collection, a good rapport was established with the Head...
Masters/ Head Mistresses/ Principals and student respondents to get free and best responses.

3.7. 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 source. For the purpose of secondary source of data, the investigator has visited various institutions located in different parts of our country. The researcher has visited different libraries and institutions to collect materials for the purpose of research investigations. These institutions and libraries are:

- K. K. Handiqui Library, Gauhati University, Assam.
- State Central Library, Guwahati, Assam.
- Omeo Kumar Das Institute of Social Change and Development, Guwahati, Assam.
- Assam Institute of Research for Tribals and Scheduled Castes, Government of Assam, Guwahati, Assam.
- Directorate of Census Operation, Government of Assam, Guwahati, Assam.
- North East Hill University Central Library, Shillong, Meghalaya.
- Board of Secondary Education, Guwahati, Assam.
- SCERT Library, Guwahati, Assam.
- Libraries of some Provincialized colleges of Assam.

The information from secondary source has been collected from various books, research journals, Ph. D Theses, M. Phil and M. Ed Dissertations, Government reports, Census reports, Daily Newspapers, magazines and other statistical records related to the research problem. In addition, the investigator had also collected different materials and information’s by the source of internet and different educational websites.
3.8. STATISTICAL SUPPORT

Keeping in view the objectives of the study and on account of the administration of tools, the collected data were analyzed with appropriate statistical techniques. For quantitative analysis of the present study, various statistical techniques were used. These techniques are found to be reliable in analyzing the data.

Collected data were sorted and arranged according to their characteristics. Simple tabulation was done to categorize the data so that they could be easily understood.

Graphical representations are also done to represent the data pictorially, so that they could be easily understood. The graphical representation that basically used are-

i) Bar graph,

ii) Pie Diagram.

Collected data were tabulated and analyzed to realize certain inferences. These inferences were drawn by applying some statistical techniques. Statistical techniques that basically used in this study were-

i) Simple frequency percentage,

ii) Mean,

iii) Standard deviation,

iv) ‘t’ test, and

v) Co-efficient of correlation.

3.9. CHAPTER SUMMARY

Methodology is the blue print or the planning part of the work to be done by the investigator. The present research work falls under descriptive survey method. All the 10th standard Mishing tribe students enrolled in the sessions 2010-2011 and 2011-
2012 in the sampled provincialized secondary schools of the two districts, namely Lakhimpur and Jorhat of Assam, are the population for the investigation. Both purposive technique and simple stratified random technique have been used in the present study. Out of the total secondary schools, the investigator selected a sample of 50 secondary schools (25 from each district) purposively. From these schools, 500 secondary school students studying in 10\textsuperscript{th} standard were selected as the sample. Out of this, 250 students were drawn from Lakhimpur district and other 250 were drawn from Jorhat district. The number of the two sexes, both boys and girls, were kept equal in both these districts. To collect relevant information marks of Mishing students in H.S.L.C. Examination (for Academic Performance), Questionnaire for Institutional facilities and Occupational Aspiration Scale were used. Collected data were analyzed by adopting proper and appropriate statistical techniques to testify the objectives of the study.
REFERENCES