CHAPTER III

Research Methodology

3.1.0 Introduction

Research methodology is the science of studying how research is done scientifically. It is a methodological approach to addressing the research problem. It examines the various steps a researcher adopts to investigate a research problem and the logic behind them. It is important for the researcher to know both research methods and methodology. Researchers must understand the assumptions underlying diverse methodologies and the criteria used to determine whether certain techniques and procedures only apply to specific problems. Research design is essential for research studies since the success of any research is determined by its design. It also serves as a blueprint for the researcher as he/she proceeds forward with their research. The researcher must design the methodology for their research problem, which may range from problem to problem. Research methodology not only refers to research methods but also explains the logic behind the methods used in the research study. Further, the methodology includes research design, population, sample and sampling techniques, development and description of research tool, procedure for data collection, and a data analysis plan for deriving conclusions. As a result, this chapter discusses the research methodology adopted by the investigator, based on the objectives and hypotheses framed for the present study.

3.2.0 Method of the Study

Research method is an important part of research methodology. It refers the methods or techniques employed by the researcher to conduct his/her research operation. Hence, suitable research methods should be adopted by the researcher to fulfil the study's objectives and arrive at solutions to a research problem.

In the present study, the investigator used the **Descriptive Survey Method**. Descriptive survey method is conducted to collect detailed descriptions of existing phenomena to employ data to justify current conditions and practices or make more intelligent plans for improving them. It is concerned with the current state of affairs and the expiration of

those conditions. The descriptive survey method investigates, describes, analyses, and interprets the condition that exists at present. The methods of research utilized in descriptive research are survey methods of all kinds, including comparative and correlational methods (C.R. Kothari, 2009). The descriptive method is designed to obtain relevant and precise information concerning the present status of phenomena and to draw valid general conclusions from the facts discovered whenever possible. They are more than just fact-finding; they often result in the articulation of fundamental knowledge, and principles and finding solutions to significant problems concerning local, state, national, and international issues. Descriptive studies on the other hand, entail more than just data collection; they also include measurement, classification, analysis, comparison, and interpretation. In the present study, the investigator collected data and information from sample students of various colleges to understand the effect of independent variables on dependent variables, test the hypotheses framed, and draw conclusions. The present study,*"Effect of Parenting Style and Socio-Economic Status on Academic Achievement of Higher Secondary Students in Udalguri District, Assam"* clearly defined the problem and specific objectives focused on data collection and logical reporting of the findings. Therefore, the present study adopted the descriptive survey method for the purpose of research.

3.3.0 Population of the Study

A population in research refers to the total number of items in the study. It indicates the collection of a specified grouping of human beings or non-human entities, such as objects, educational institutions, and time units, salaries drawn by individuals or geographical areas. Population can be defined as the aggregate of all the elementary units that characterize the study units. Some statisticians call it the universe. The population is usually finite or infinite. A population having a fixed number of elements is called a finite population where it is possible to enumerate the totality. The symbol 'N' is commonly used to indicate how many elements exist in a finite population. A population is infinite if all of its elements cannot be observed.

In the present study, all the students enrolled in degree colleges of Udalguri district who have passed the higher secondary final examination in 2020 from government higher secondary schools and private junior colleges under AHSEC in Udalguri district signify

the study's population. Udalguri district has a total of 10 degree colleges (5 of which are private and 5 of which are government colleges). In the academic session, (2020-2021) the total number of students enrolled in these 10 degree colleges is 2567, with 800 from private colleges and 1767 students from government colleges.

The details of the population of the study have been presented in Table 3.1 and Table 3.2

Table 3.1 Details of the Total Population of the Study in Private Colleges

Serial no.	Name of the College	Students
1	Auxillium College	145
2	Bhergaon College	131
3	Dimakuchi College	124
4	Paneri College	215
5	Rowta Degree College	185
Total		**800**

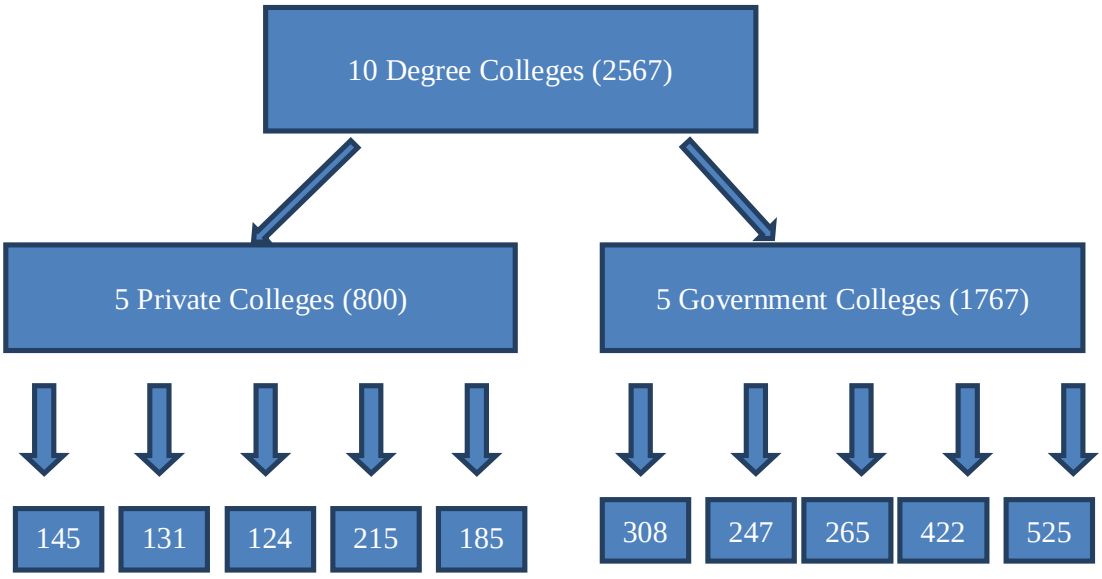
(Source: Collected from the office of the respective colleges, 2021)

Table 3.2 Details of the Total Population of the Study in Government Colleges

Serial no.	Name of the College	Students
1	Kalaguru Bishnu Rabha Degree College	308
2	Khoirabari College	247
3	Mazbat College	265
4	Tangla College	422
5	Udalguri College	525
Total		**1767**

(Source: Collected from the office of the respective colleges, 2021)

Figure 3.1 Diagrammatic Representation of the Population of the Study



(Source: Designed by the Investigator)

3.4.0 Sample and Sampling Technique of the Study

A sample is a smaller representation of the population selected for observation and analysis. It is a collection consisting of a part of the population chosen specifically to reflect the entire population. By examining the characteristics of a sample one might draw inferences about the characteristics of the population from which it is drawn.

Sampling is the process of selecting a sample from the population or universe. It helps to reduce cost, save time and energy, permit measurement of greater scope, and produce greater precision and accuracy. Sampling procedures provide generalizations based on a relatively small proportion of the population. The accuracy of the research study results depends on the accurate sample selection procedure. Hence, careful planning is required for selecting a sample.

In the present study, the investigator has used a census **sampling technique** for selecting the degree colleges and a **proportionate stratified random sampling technique** for drawing the students. A sample of 770 students, consisting of 240 students from private colleges and 530 students from government colleges, was drawn,

i.e., by taking 30% from private and government colleges from the total population of 2567 students using the **proportionate stratified random sampling method**. The sample has been stratified based on the type of the institution.

The distribution of the sample of the study is shown in Table 3.3 and Table 3.4

Table 3.3 Distribution of the Total Sample of the Study from Private Colleges

Serial no.	Name of the College	Students
1	Auxillium College	45
2	Bhergaon College	40
3	Dimakuchi College	40
4	Paneri College	60
5	Rowta Degree College	55
Total		**240**

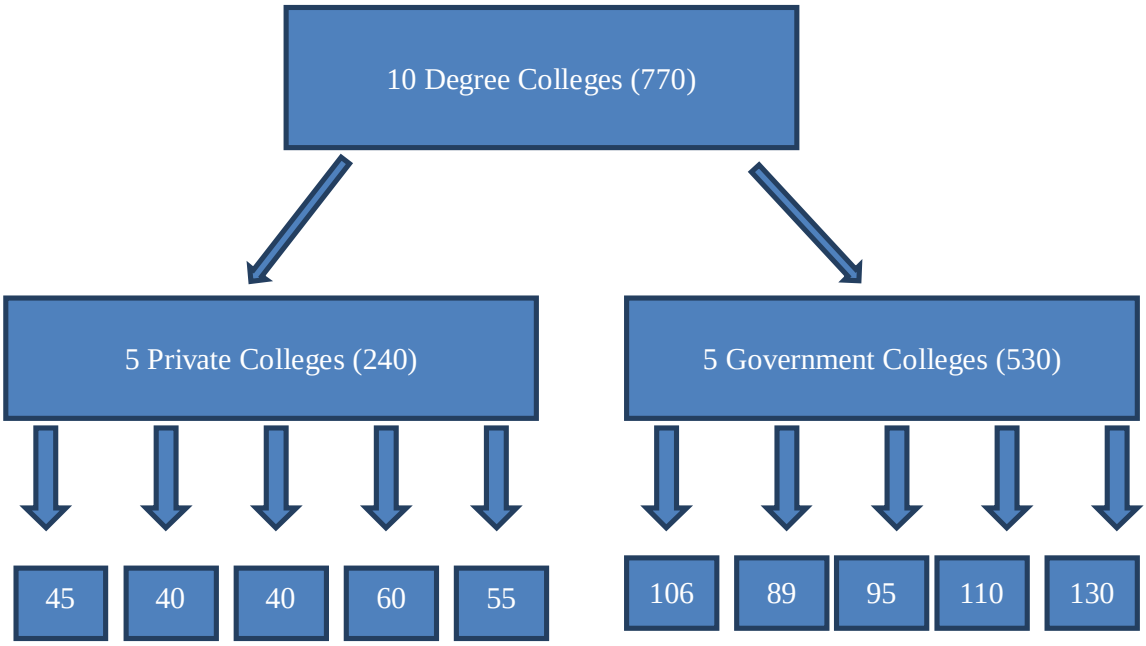
(Source: Collected from the office of the respective colleges, 2021)

Table 3.4 Distribution of the Total Sample of the Study from Government Colleges

Serial no.	Name of the College	Students
1	Kalaguru Bishnu Rabha Degree College	106
2	Khoirabari College	89
3	Mazbat College	95
4	Tangla College	110
5	Udalguri College	130
Total		**530**

(Source: Collected from the office of the respective colleges, 2021)

Figure 3.2 Diagrammatic Representation of the Distribution of the Sample



(Source: Designed by the Investigator)

3.5.0 Tools Used for Data Collection

The selection of a suitable tool is significant for the success of research work. The selection of tools is mainly based on the objectives, the types of variables to be manipulated, and the conditions or factors under which it is been conducted. Keeping in mind the objectives of the present study the investigator has used the following types of tools:

i. Socio-economic Status Scale developed by Sunil Kumar Upadhyay and Alka Saxena (2008).
ii. Parenting Style Scale developed by Madhu Gupta and Dimple Mehtani (2017).
iii. Academic Achievement was taken from the marks obtained by the students in Higher Secondary Final Examination (2020).

A detailed description of the tools used in the study is provided as follows:

3.5.1 Socio-economic Status Scale

The Upadhyay-Saxena Socio-economic Status Scale was developed by Sunil Kumar Upadhyay and Alka Saxena, Department of Teacher Education, D.B.S. (P.G) College, Kamrup in 2008. The scale was developed to measure the socio-economic status of students belonging to both rural and urban areas. The scale is divided into five parts consisting of a total of 31 items. The five different parts of the scale are- (a) Personal Information, (b) Family, (c) Education, (d) Income, and (e) Others (Cultural and Material possessions). All the items included in the scale were carefully selected considering the socio-economic needs, and cultural and material symbols affecting an individual's socio-economic status.

Validity and Reliability of the Scale

The scale validity was computed by correlating with the SESS of Shah (1986) and its validity is 0.78. The reliability of the scale is 0.83.

Administration and Scoring

The scale is simple to administer, and there is no time constraint for completion. However, the students may take 20-25 minutes to complete the scale. The scoring of the responses is done using the scoring key provided in the manual. Further, the scoring of the test items is distinctive. The scoring pattern varies for each of the scale's five components, as well as each of the 31 items. The scale is inclusive and does not distinguish between rural and urban, male and female students. One can achieve a maximum score of 101 and a minimum score of 13. The scale consists of 5 sections, i.e., A, B, C, D, and E. The maximum score on the scale for Section (A) Personal Information is 7 and the least is 2. Section (B) Family, has a maximum score of 8 and a minimum of 4. Section (C) Education, has a maximum score of 34 and a minimum score of 2, while, section (D) Income, has a maximum score of 21 and a minimum score of 2, and Section (E) Others (Cultural and Material possessions), has the maximum score of 31 and a minimum score of 3.

Table 3.5 Scoring Table of Socio-economic Status Scale

	Raw Score			Total	Socio-economic Status
Page	**2**	**3**	**4**		
Score					
Total					

Table 3.6 Item Nos. Falling under Different Areas of Socio-economic Status Scale

Serial no.	Area	Item Nos.	Total No of Items
1	Personal Information	(A) 1,2	2
2	Family	(B) 1,2,3,4	4
3	Education	(C) 1,2,3,4,5,6,7,8,9,10	10
4	Income	(D) 1,2,3,4	4
5	Others	(E) 1,2,3,4,5,6,7,8,9,10,11	11

Description of Five Different Areas of Socio-economic Status Scale

- **Personal Information:** This section includes information regarding the category student (sample) belongs to and also the domicile and duration of stay at their residence.
- **Family:** This section includes information of the family such as if it is a joint or single family, whether the mother and father are still alive, and whether the student (sample) has siblings.

- **Education:** This category is concerned with the educational qualifications of the individual's parents and siblings. The sort of institutions the student (sample) is enrolled in, whether public or private and the medium of instruction.
- **Income:** This section focuses on the student (sample) family income, their source of livelihood, and the family's estimated monthly income.
- **Others:** This category concentrates on other types of information, such as family's cultural and material possessions.

Table 3.7 Interpretation of the Scores of Socio-economic Status

Scores	Category
75% or above	High
Between 62% to 74%	Above Average
Between 49% to 61%	Average
Between 36% to 48%	Below Average
35% or below	Low

3.5.2 Parenting Style Scale

The Parenting Style Scale was developed by Prof. Madhu Gupta former Head of the Department of Education, Maharshi Dayanand University, Rohtak (Haryana), and Ms. Dimple Mehtani, Research Scholar, Department of Education Maharshi Dayanand University, Rohtak (Haryana) in the year 2017. The scale was designed to assess the perceived parenting style of senior secondary school students. The scale is developed to measure four types of parenting styles: **Democratic, Autocratic, Permissive,** and **Uninvolved.** The scale consists of a total of 44 items.

Table 3.8 Distribution of Items Based on Different Parenting Styles

Serial no.	Parenting Styles	Item Nos.	Total No of Items	Range of Scores
I	Democratic	1,5,8,12,16,20,24,28,32,36,40,44	12	0-48
II	Autocratic	2,6,9,13,17,21,25,29,33,37,41	11	0-44
III	Permissive	4,7,10,14,18,22,26,30,34,38,42	11	0-44
IV	Uninvolved	3,11,15,19,23,27,31,35,39,43	10	0-40
Total			**44**	**0-176**

Validity and Reliability of the Scale

The scale's test-retest reliability is 0.911, while its split-half reliability is 0.795. The coefficient of correlation value for various parenting styles ranges from 0.508 to 0.819, indicating high construct validity.

Administration and Scoring

The scale is easy to administer and takes 25-30 minutes to complete the test items. The responses to each item are expressed as one of the following five options: **Always, Often, Sometimes, Rarely,** and **Never.** The items are scored as **4, 3, 2, 1 and 0** respectively.

Table 3.9 Scoring Pattern of Items of Parenting Style Scale

Serial no.	Responses	Score
1	Always	4
2	Often	3
3	Sometimes	2
4	Rarely	1
5	Never	0

Table 3.10 Scoring Table of Parenting Style Scale

Serial no.	Parenting Style	Raw Score	Grade	Level of Parenting Style
I	Democratic			
II	Autocratic			
III	Permissive			
IV	Uninvolved			

3.5.3 Academic Achievement of Higher Secondary Students

For assessing the academic achievement of higher secondary students, the investigator collected the marks obtained by students in their higher secondary final examination, in 2020.

Table 3.11 Interpretation of the Scores of Academic Achievement

Range of Scores	Interpretation
60% and Above	High Achievers
45%to 59%	Average Achievers
Below 45%	Low Achievers

3.6.0 Procedure for Data Collection

The current investigation is based on both **Primary and Secondary** sources of data. The study employed one dependent variable, viz. Academic Achievement and two independent variables viz. Parenting Style and Socio-economic Status. According to

these variables data was collected by administering – Parenting Style Scale and Socio-economic Status Scale.

To collect primary data, the investigator first compiled a list of degree colleges in the Udalguri district. The overall number of degree colleges was 10, and all are affiliated with Bodoland University (As per the official record of Bodoland University). The sample of students was drawn from degree colleges studying in 1st semester. Due to the COVID-19 pandemic, the data could not be collected from higher secondary schools and junior colleges in the year 2020. As a result, the investigator had to wait for the situation to be normal. At the time of data collection, the sample students were already enrolled in various degree colleges in Udalguri district.

The investigator visited every degree college in the district after obtaining written permission from the concerned authorities. Students were instructed to read and respond to each item solely based on how the item applies to his or her feelings about the world of work. However, the investigator first established a connection with the students by briefly self-introducing and explaining the purpose and objectives of the study. They were also assured that their responses and statements would be kept strictly confidential and would be used for research purposes. After establishing rapport the investigator verbally explained the purpose of the study, the tools were administered to them, and they were instructed to complete the questionnaire and return it on the specified day.

The secondary data were collected by visiting different institutional libraries and the Department of Inspector of Schools of Udalguri district. Regarding the students' academic achievement, the higher secondary final year results were obtained directly from the students and the respective college offices. The investigator has also collected secondary data from various research journals, books, Ph.D. theses published/unpublished, M.Phil. dissertations published/unpublished, magazines, census reports, government reports, and from different educational websites.

3.7.0 Statistical Techniques Used

The collected data were tabulated and analysed to realize some inferences by applying suitable statistical techniques. To achieve the study's objectives, the investigator used the following statistical methods. They are-

- Percentage
- Coefficient of Correlation (Pearson's Product Moment Method).
- Pie diagram
- Bar diagram
- Scattered diagram