

CHAPTER-III

MATERIALS AND METHODS

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 her study.

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

- 3.1. Research Design
- 3.2. Universe or 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 objectives of the study were to examine the teaching input, teaching learning process, teaching learning outcomes and cost effective of government primary schools. These objectives are mainly concerned with the present state of the government primary schools in Kamrup Metro (Urban) District, Assam. Hence, this research study was brought under Descriptive research. Descriptive survey method is concerned with conditions or relationships that exit,

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 primary school data, teaching input, process and outcomes are available. This resulted in no other alternative to the investigator but to visit sampled schools for collecting data. This method is used to obtain pertinent and precise information relating to primary education of Assam and to draw valid general conclusions from the facts discovered.

3.2. UNIVERSE OR POPULATION AND THE SAMPLE

Universe or Population 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 universe or the population 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 government primary schools having classes I-V (535) of Kamrup Metropolitan District (Urban) of Assam was formed the universe or population of the study.

Table No.3.1: Total No. of Government primary schools in Kamrup Metro (Urban) District.

Name of the Blocks	Total No. of Govt. Primary Schools
Guwahati	313
Dimoria	222
Total:	535

(Source : Population: SSA-Kahilipara, 2010-11, Guwahati)

Table: 3.1 shows the total number of Govt. Primary schools available in the two blocks.

3.2.a. SAMPLING METHOD

Simple random sampling and purposive sampling technique has been used in present study. There is no official information about the management of primary schools and it is inconvenient for the investigator to find out the total management of government primary schools for these particular schools in the sample districts. Hence, the above mentioned sampling technique was employed for this research investigation.

3.2.b. SELECTION OF SCHOOLS

The sample for this study is taken from the Government primary schools from two blocks of Kamrup Metro (Urban), namely, Urban Guwahati and Dimoria blocks. The number of Government primary schools, the investigator has selected as sample primary schools in these two blocks are shown in the table no. 3.2.

Table: 3.2 The number of Government primary schools, the investigator selected as sample primary schools purposively.

Name of Block	Number of Sampled Schools
Guwahati	93 (30%)
Dimoria	67 (30%)
Total	160

3.2.c. SAMPLE SIZE

For the present study 160 primary schools were selected as the sample from the universe 535 i.e. 30% of the universe is selected as sample of the present study. Out of this, 93 primary schools were drawn from Urban Guwahati block and other 67 were drawn from Dimoria block.

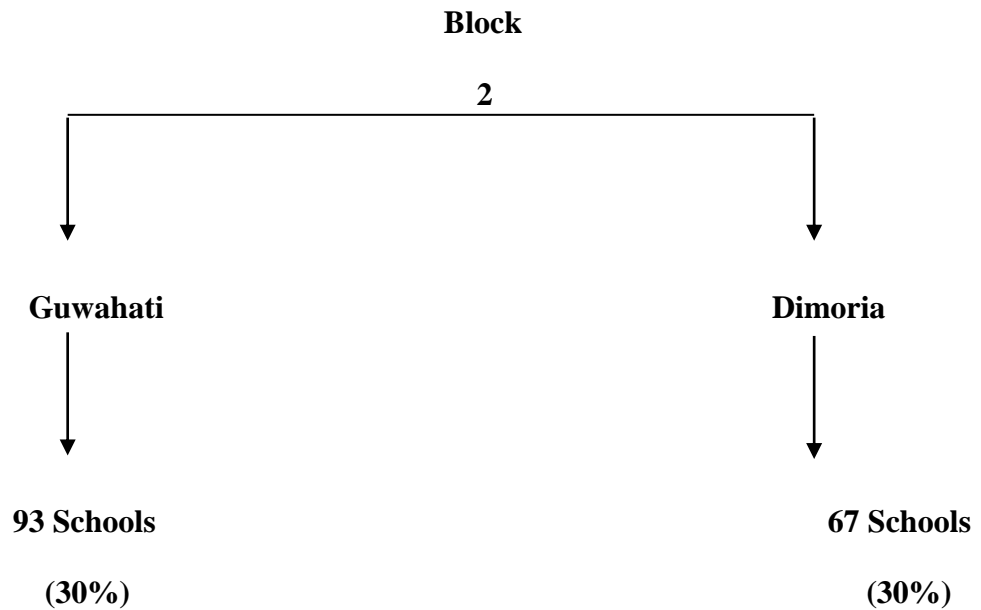


Fig: 3.2 Sample framing

3.3. VARIABLES USED FOR THE STUDY

Any concept that can be expressed in quantitative value or qualitative is called variable. The purpose of the study was to analyse the relationship of teaching input, teaching learning process, teaching learning outcomes and effective unit cost of primary schools. Following variables are considered in this study.

- a). Teaching input
- b). Teaching Learning Process
- c). Teaching Learning outcomes
- d). Effective cost unit

The variables are diagrammatically shown as follows

1	INPUT	2	PROCESS	3	OUTCOMES	4	EFFECTIVE COST	UNIT
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Fig.3.3: Variables of the Study

3.4. TOOLS USED FOR DATA COLLECTION

Particular design of each study possesses a blue print for the researcher. It is mainly based on the purpose of the study, the types of variables to be manipulated and the conditions or factor 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 generalisations 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 three types of tools:

- a) Self Structured questionnaire for Head master and Teachers
- b) Observation schedule for Head master and Teachers
- c) Interview schedule for Head master and Teachers

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 book, journals, magazines, web sites etc.

3.5. METHODS FOR DEVELOPING AND ADMINISTERING THE TOOLS

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

3.5.a. STRUCTURED QUESTIONNAIRE FOR HEAD MASTER AND TEACHERS

A Questionnaire was prepared for measuring the infrastructures, man-powers, curricular and co-curricular activities, evaluations (formative and summative), RTE, Act etc. 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, re-testing and opinions from the experts and guide.

According to the need of questionnaire for this study, several items concerning the infrastructures, man-powers, curricular and co-curricular activities, evaluations (formative and summative), drop out etc. 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 objectives, the questionnaire was prepared with a view to fulfil the demands of the study.

The questionnaire for Head Master and Teachers contain 52 statements. The questionnaire is divided into seven (08) aspects. Different aspects and number of item in each aspects of this questionnaire is tabulated as follow.

Table No. 3.3: Different Aspects and Number of items in each Aspect (Questionnaire)

SL. No.	Aspects	No. of items
1.	Infrastructures	10
2.	Man-powers	3
3.	Classroom teaching	3
4.	Co-curricular activities	3
5.	Techniques of evaluations	4
6.	Supervision and inspection	2
7.	Drop - out	4
8.	RTE, Act	11
		Total = 52

3.5 b. STRUCTURED OBSERVATION SCHEDULE FOR HEAD MASTERS AND TEACHERS

The information relating to each of the items given in the questionnaire was confirmed through direct observation to ensure that the information is reliable and valid. The same item given in the questionnaire was used as structured observation.

According to the need of observation schedule for this study, several items concerning the infrastructures, man-powers, curricular and co-curricular activities, evaluations (formative and summative), drop out etc. 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 objectives, the observation schedule was prepared with a view to fulfil the demands of the study.

The observation schedule for Head Master and Teachers contain 27 statements. It is divided into seven (06) aspects. Different aspects and number of item in each aspects of this observation schedule is tabulated as follow.

Table No. 3.4: Different Aspects and Number of items in each Aspect (observation)

SL. No.	Aspects	No.of Items
1.	Infrastructures	13
2.	Man-powers	3
3.	Classroom teaching	3
4.	Co-curricular activities	3
5.	Techniques of evaluations	3
6	Supervision and inspection	2
		Total = 27

3.5 c. STRUCTURED INTERVIEW FOR HEAD MASTERS AND TEACHERS

The investigator used the structured interview, where ever necessary, relating to the items in the questionnaire included.

According to the need of questionnaire for this study, several items concerning the curricular and co-curricular activities, evaluations (formative and summative), drop out etc. 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 objectives, the questionnaire was prepared with a view to fulfil the demands of the study.

The questionnaire for Head Master and Teachers contain 13 statements. The questionnaire is divided into seven (04) aspects. Different aspects and number of item in each aspects of this questionnaire is tabulated as follow.

Table No. 3.5: Different Aspects and Number of items in each Aspect (Interview)

SL. No.	Aspects	No. of items
1.	Classroom teaching	3
2.	Co-curricular activities	3
3.	Techniques of evaluations	3
4.	Drop - out	4
		Total = 13

3.6. DATA COLLECTION

1) **Primary data** – Field study in schools for empirical data.

2) **Secondary data** - 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.Handique Library, Gauhati University, Assam.
- State Central Library ,Guwahati, Assam.

- Omeo Kumar Das Institute of Social Change and Development , Guwahati, Assam.
- Directorate of Census Operation, Government of Assam , Guwahati, Assam.
- North East Hill University Central Library, Shillong , Meghalaya.
- District Library , Guwahati, Assam.
- SCERT Library, Guwahati, Assam.
- Libraries of some Provincialized Colleges , Guwahati, Assam.
- Sarva Siksa Abhiyan , Kahilipara.
- Maulana Azad Central Library, University of Science & Technology , Meghalaya.
- Manipur University Library, Imphal , Manipur.
- Libraries of some Provincialized Colleges , Imphal , Manipur.
- District Library ,Imphal, Manipur.

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 material and information's by the source of internet and different educational websites.

3.7. STATISTICAL SUPPORT

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

- i. Simple Percentage
- ii. Bar charts and pie diagrams