CHAPTER-III

METHODOLOGY

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3.1 INTRODUCTION

The rationale of the present study along with its objectives and hypothesis has been stated in chapter I. This chapter concerned with the methodology used to achieve the objectives of the study mentioned in chapter one sampling tool development has been done according to objective of the study. The present chapter is devoted to the description of design, sample, tolls used, procedure of data collection and statistical technique used for analyzing the data.

3.2 RESEARCH DESIGN

The present study was experimental in nature. Pre test, Post test equivalent group design was employed. The treatment in the study had levels namely ICT approach, and the traditional approach.

The group which received the treatment through ICT approach named as experiment group, the group which received the treatment of traditional method, designated as control group. Traditional method means reading textbook and communicating information through lecture to students in the classroom in the group. Questions are asked to the students and sometimes the dictates the notes. Generally the teacher in the class. After this experimental group was taught the five lesson of Social Science. Thought the ICT approach and the control group was taught the same concepts through traditional approach.

The whole procedure of the research design is shown in the table:

TABLE- 3.2   DESIGN OF THE STUDY

Characteristics	Control group	Experimental group
Early status'	Class VII achievement in Geography	Class VII achievement in Geography
Treatment	Traditional Approach of teaching	Constructivist Approach of teaching
Terminal status	Post test	Post test

3.3 SAMPLE

The representative proportion of the population is called sample. In present study the sampling is randomly. The sample of the study is drawn from one school that is Demonstration Multipurpose School, Bhopal. Size of the sample was 50 students. There was two sections of the class one group was design as Experimental group and another group was designed as control group. The description of the study is given in the table

Group	Boys	Girls	Total
Experimental group	14	11	25
Control group	15	10	25
Total	29	21	50

3.4 VARIABLES

There are following two types of variables.

1. Independent variable
2. Dependent variable

INDEPENDENT VARIABLES

The independent variables in the present study are the two different teaching approaches. i.e. **Traditional Approach** and ICT based Approach. The **Experimental group** was taught by ICT based Approach and the control group was taught by the **Traditional Approach.**

DEPENDENT VARIABLES

The Dependent Variables in the present study is Achievement in Social science.

3.5 TOOLS USED

The variables measured in this study were, Achievement in social science and reaction of the students towards ICT based approach. For measuring, achievements in social science were assessed with the tools developed by the investigator. Reactions of the students of

experiment group towards the ICT based approach were measured with the help of a Reaction Scale Developed by the investigator.

3.6 TOOLS CONSTRUCTION

In the present study, the variables related to which data collected were:
Achievement in Social Science and Reaction Scale towards ICT Approach. To select proper Tool for Research is the main mechanism of educational research. Tool should be standardized from subject experts. Test standardized from subject teacher researcher and expert faculty.

3.6.1 Social Science achievement test:

Achievement test in social science constructed keeping in view the objective of teaching social science and competencies of student. Achievement test were constructed keeping in you the understanding knowledge and skill based questions.

Step I: The achievement test consist of following components.
1. Our Changing Environment
2. Environment
3. Components of Environment
4. Ecosystem
5. Biotic and A biotic
6. Atmosphere
7. Components of Atmosphere
8. Air Pressure
9. Green house effect
10. Water Cycle

Step II: standardization before used test standardize from subject and supervisor-

3.6.2 Reaction Scale: The Reaction Scale was developed by the investigator for assessing the reactions of students exposed to the ICT based approach at the time of teaching. The student of experimental group were taught through the ICT based Approach. ICT based Approach requires specially designed lesson for its implementation in the classroom. So,

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the lesson were developed taking into consideration the syntax of the modal. Lesson were the integral part of the modal. Therefore, the reaction scale was constructed to access the reaction of the students. The reaction scale is consisted of 15 statements. Each statement have five point scale was given. The five point were, HS (Highly Satisfied), S (Satisfied), NS/UD (Not Sure/Undecided), NS (Not Satisfied/Highly Not Satisfied). Student were asked to read each statement carefully and put a tick mark on appropriate alternative amongst the given three alternatives which best describe by three Reaction. There was no time limit for its completion but students took approximately 35 minutes.

3.6.3 Test Try Out:

Before using test on actual research place test should be standardized and used on small sample as try out. If try out gains suggestion for first attempt, correlation mistakes of test, again it should use reconstruction of small sample as a second try out.

TABLE 3.6 TOOLS DESCRIPTIONS

S.NO.	SECTIONS	NO. OF QUESTIONS	MARKS
1	Tick the correct answer	10	10
2	Match the following	5	5
3	Fill in the blanks	10	10
4	True and false	10	10
5	Short answer question	5	5

3.7 PROCEDURE THE DATA COLLECTION

Data were collected with the help of tools describes in the preceding captions. The treatment i.e., teaching through ICT based Approach and the teaching through Traditional Approach was given to both the groups, respectively. The experimental group was taught through the ICT based approach and the control group was taught through in traditional approach.

In total 5 lessons were taught to both the groups followings the different approaches as mentioned. An achievement test was developed by the investigation and was administered

to the students of both the groups after teaching of five lessons. Reaction scale developed by the investigator was administered only the experimental group, after the completion of 5 lessons.

3.8 STATISTICAL TECHNIQUES USED

The statistical techniques used in present study for analyzing the data are given objectives as under.

1. For studying the effectiveness of the ICT based approach in terms of :-

a) Achievement in Social science, percentile, mean and standard deviation were used.

b) Reactions of the students towards the ICT based approach percentage was used.

2. For studying the effect of treatment and gender and their interaction on achievement in Social Science 2x2 factorial design ANCOVA of unequal cell size was used.

3) For studying the effect of treatment and gender and level of achievement in Social Science 2x2 factorial design ANCOVA of unequal cell size was used.