

CHAPTER 3
RESEARCH DESIGN OF THE
STUDY

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3.1: Introduction

Research design set up framework for the methodology and procedure to be followed by a researcher in order to achieve the objectives of the study. It is the first step which is planned before the research commenced and executed at the time of actual research work.

“Design of the study is a way to systematically investigate the research problem. It bites various steps in the conduct of the research in a systematic and logical way. It provides details regarding what, where, when, how much, and which means of enquiry were concerned in the study” (Best and Kahn, 1997).

According to Kerlinger (1964), “Research Design is the plan, the structure and the strategy of investigation conceived so as to obtain answers to research questions and to control variance. It includes an outline of everything the investigator will do from writing the hypotheses and their operational implications to the final analysis of data. Research designs are invented to enable the researcher to answer research questions as validly, objectively, accurately and economically as possible. Any research plan is deliberately and specifically conceived and executed to bring empirical evidence to bear on research problems”.

Teachers Attitude towards E-learning depends upon the knowledge, values, physical characteristics and environmental influences. Lack of awareness of personal characteristics, knowledge and limited experience combined to produce negative attitude and less interest. Knowledge of information and communication technology is only one of the requirements for positive attitude towards E-learning. Now a day's online learning is playing a major role in delivering the knowledge at all levels whether primary, secondary, vocational or higher education. The main purpose of this study is to knowing the attitude of secondary school teachers towards E-learning.

3.2 Methodology

The purpose of any research methodology is to provide a maximum amount of information relevant to the problem under investigation at a minimum cost. In fact, methodology is the pre-requisite of any research. Although, there are several methods of conducting a research but the selection of research method depends on the nature of the research problem after the analysis of the nature of the study and having a detailed review of the related literature, the researcher ascertained that the Survey method is most suitable for the present study whose nature is descriptive.

The descriptive method of research has been employed for the study as this method is concerned with survey. The Descriptive survey research method was adopted primarily due to the fact that it is one of the most commonly used means of investigation that attempts to describe and interpret what exists in the present phenomena in terms of practices, beliefs, attitude, conditions, processes, trends or relationships.

According to Agarwal, Y.D. (2008), “Descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. This type of research method is not simply collecting and tabulating facts but includes proper analyses, interpretation, comparisons, identification of trends and relationships.”

3.2.1. Population

According to Lindquist (1953), “A population may be defined as any identifiable group of individuals or as any collection or aggregate of comparable measures. Population may be either finite or infinite, either real or hypothetical. A finite population is one, all members of which may be counted. An infinite population is one of unlimited size. For example, all possible weights of eight-year-old children in this

country would constitute an infinite population. While the actual weights of the eight year old children now living in this country would constitute a finite population”.

According to Gay (1990), “Population is the group of interest to the researcher, the group to which he or she would like the results of the study to be Generalizable. The defined population has at least one characteristic that differentiates it from the other groups”. The population represent the entire group of units. Population is the set of all experimental units from which a sample is to be drawn.

The population is used for the study comprised all the teachers of government as well as private secondary school in Bhopal city.

3.2.2. Sample

According to Kaul, (1984), “Sampling is the process by which a relatively small number of individual or measures of individuals, objects or events is selected and analysed in order to find out something about the entire population from which it was selected”.

The representative proportion of the population is called a **sample**. A researcher select a sample of units from the sampling frame, the process of such selection is called **sampling**. In order to serve a useful purpose, sampling should be unbiased or representative. Random sampling technique was used for this study. Total 60 teachers of different school were selected for the study in which both male and female teachers were selected:-

Table:3.1 Shows Total number of Male and Female present in the study

S.no	Gender	Number of Teachers
1	Male	N=25
2	Female	N=35

Table:3.2 shows total number of government and private school teachers

Types of School	Government School	Private School
No of teachers	N=30	N=30

3.2.3. Delimitation of the study

- This study is restricted to the secondary schools of Bhopal district.
- This study is delimited to teachers of secondary school.
- This study is delimited to 60 teachers of secondary school.
- This study is restricted to four schools of Bhopal district.

3.2.4. Objectives of the study

- (i) To study the attitude of secondary school teachers towards E-learning.
- (ii) To study the attitude of male and female secondary school teacher towards E-learning.
- (iii) To study the attitude of government and private secondary school teacher towards E-learning.

3.2.5. Research Question For objective (i) :

What is the attitude of the secondary school teachers towards E-learning?

3.2.6. Hypothesis of the study

Ho1: There is no significant difference in attitude between male and female secondary school teachers towards e-learning.

Ho2: There is no significant difference in attitude between Government and private secondary school teachers towards E-learning.

3.2.7. Tools and Technique

For collection of data the researcher may choose different type of devices as per the requirement of the study, these devices is called 'Tools' or 'Instruments'. These tools may be standardised or self- developed tools. The researcher has to select tools and technique of data collection, carefully judiciously.

Researcher might make use of standardised readymade tools or may develop his/her own tools, insuring that the tools developed are reliable and valid, so that the data obtained through these tools also reliable and valid.

Tools of data collection are instruments like rating scale, checklist, questionnaire, attitude scale etc. Whereas, the **techniques** of data collection are the process, through which the data are obtained.

3.2.8. Construction of the Tools:

The tool was prepared, and statements were constructed by the investigator for knowing the attitude of the teachers towards E-learning for the secondary level. In the present study Attitude scale towards E-learning was used for this study. The researcher used self-developed tools for the study.

Quantitative as well as qualitative methods were used to collect data. Attitude scale was divided in two sections, Section - I requested for the background information of the teachers and section - II was the attitude towards E-learning consists of 20 statements out of which 12 are positive statements (favourably worded) and 8 are negative statements (unfavourably worded). Each rated on three – point Likert scale.

In which for positive statements 3 = Agree, 2 = Neutral and 1 = Disagree And the scoring is reversed for negative statements (unfavourably worded) which is 1 = Agree, 2 = Neutral and 3 = Disagree.

3.2.9. Techniques used:

The data were analyzed by statistical techniques mean and standard deviation (SD) which is testing the null hypothesis by t- test

3.2.10. Procedure of data collection:

In the process of data collection the investigator first sought permission from principals of respective schools. Then distributed the likart scale which is attitude towards E-learning individually to the respondents (Teachers). Person to person contacts were made and each individual was separately asked to understand the instruction carefully, and if necessary by asking the investigator in case he/she felt difficulty in answering the written material. A diary was maintained for noting the names of teachers and their schools. Teachers were generally contacted during their working hours in the school.