CHAPTER III

RESEARCH METHODOLOGY

3.0   INTRODUCTION

Research methodology is the specific procedures or techniques used to identify, select, process, and analyse information about a topic.

The overall scheme of the research is called methodology which includes an outline of everything that the researcher has to follow from selection of the problem to its operational implications to the targeted group. Research design provides a framework for adequate tests and relations among variables. It also tells, in a sense, what observations to make, and how to analyse the quantitative representations of the observations. Research methodology also suggests the directions of observations and analysis. Methodology furthermore, tells what type of statistical analysis to use and outlines possible conclusions to be drawn from the statistical analysis. On the basis of literature reviewed and the study and understanding of existing gaps in knowledge, the conduct of the present study was planned and the methodology was adopted according to the objectives.

The first chapter defined the problem and concept, while the second reviewed the related literature. This chapter describes the complete methodology adopted to conduct this study to accomplish the objectives of the study.

In order to achieve the objectives and the stated corresponding hypotheses, the following plan of the study has been followed, the descriptive method of research has been popularly used in the research method in education. So that appropriate information can be gathered by the questionnaire or interview schedule. Although descriptive research involves measurement, classification, analysis, comparison and, interpretation. Hence, the methodology adopted to conduct this research is described in sections of this chapter, viz-

A) Research Design

B) Research Method

C) Population Selection of research method

D) Sampling Frame

E) Sample

F) Tool used

G) Description of tool used

H) Scoring

I) Instruction and administration

J) Qualitative Interpretation

K) Procedure of data collection

L) Statistical analysis

3.1 RESEARCH DESIGN

Research design of the present study has been drawn by the researcher at the planning stage of the present study and modified after the accomplishment of the study (at report writing stage). The present study of academic achievement in relation to self-efficacy among class XII students studying vocational subject. Selection of population and sample; selection or development of tools; and selection of appropriate and required statistical techniques followed by collection of data, scoring of data, entry of data for further analysis, applying statistics and lastly writing of report.

3.2 RESEARCH METHOD

Descriptive survey method follow for the present study of academic achievement in relation to self-efficacy among class XII students studying vocational subject.

3.3 POPULATION SELECTION OF RESEARCH METHOD

Population is a complete set of people with a specialized set of characteristics. In this research, researcher select the population of class XII students studying vocational subject from the school of Bhopal district.

3.4 SAMPLING FRAME

The sampling frame is the list from which units are drawn for the sample. Sampling helps to reduce expenditure and to save time and energy. It permits measurement of greater scope, greater precision, and accuracy. It also provides generalizations on the basis of a relatively small proportion of the population

3.5 SAMPLE

A sample is a small section of a population selected for analysis and observation. It is a collection consisting of a part or subset of the objects or individuals of the population which is selected for the express purpose of representing the population. By observing the characteristics of the sample, one can make certain inferences about the characteristics of the population from which it is drawn. A good sample must be a nearly representative of the entire population as possible and ideally, it must provide the whole of the information about the population from which it has been drawn. The present study consists of 60 students (30 boys and 30 girls) of class XII students studying vocational subject select from the school of Bhopal district.

Table: 3.5

Sample of the students

Class	No. of the students	
XII	Boys	30
	Girls	30
	Total	60

3.6 TOOL USED:

Data collection or research tools refer to the devices or instruments used to collect data, such as a paper questionnaire or computer-assisted interviewing system. They are used to measure a variable, or to collect the information needed to answer a research question. Various tools are used in educational research too. Selection of appropriate tools enables the researcher to accomplish the objectives in an effective manner; otherwise, it will deform the entire findings of the study. Generally, the selection of tools depends upon the objectives of the study and the

size and nature of the sample. Gathering specific information on a variety of topics and subtopics from a large number of samples which are available at one place is possible only with the help of appropriate tools. The researcher has used the following tools:

- Consumable booklet of SES-SANS(English version) developed by Dr. Arun Kumar Singh and Dr.Shruti Narain

- Manual for Self Efficacy Scale SES-SANS, Dr.Arun Kumar Singh and Dr.Shruti Narain

(National Psychological corporation Estd. 1971)

3.6.1 RELIABILITY: All reliability coefficient was significant at the 0.01 level. The test -retest reliability of this is 0.82 while the split-half reliability is 0.74 .

3.6.2 VALIDITY: Self-Efficacy Scale was validated against the General Percieved Self-Efficacy Scale developed originally in German by Jerusalem and Schwarzer and adapted by Sud (1981) in Hindi. The concurrent validity was found to be 0.92 which was significant.

3.7 DESCRIPTION OF TOOLS

Self-Efficacy Scale (SES-SANS) develop by Dr.Arun Kumar Singh and Dr .Shruti Narain (2014) was used to tool find out the level of Self-Efficacy of participants. This scale is applicable to use on individuals of 12 years of age and above. It consists of 4 dimensions namely –

• Self- confidence

• Efficacy expectation

• Positive attitude

• Outcome

Table: 3.7

Division of the items

SR NO.	Division of items	Series wise item	Total
1	Self-confidence	1,2,3,4,5	5
2	Efficacy expectation	6,7,8,9,10	5
3	Positive attitude	11,12,13,14,15	5
4	Outcome expectation	16,17,18,19,20	5

In this scale there are 5 items in each dimension, with 1 negative item and 4 positive items, making a total of 20 items . It is a Likert Scale having 5 response option where '5' stands for strongly agree and '1' for strongly disagree.

3.8 SCORING

The scoring of positive item of Self-Efficacy Scale was done by giving a score 5,4,3,2 or 1 for strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Table: 3.8.1

Scoring system

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Positive items	5	4	3	2	1
Negative items	1	2	3	4	5

Table 3.8.2

Scoring table

Positive items	Item no. 1,2,3,5,6,7,8,9,11,13,14,15,16,17 and 20
Negative items	Items no. 4,10,12 and 18

3.9 QUALITATIVE   INTERPRETATION

The obtained scores on Self-Efficacy Scale can also be qualitatively interpreted as under:

Table 3.9

Qualitative interpretation of scores of   Self-Efficacy Scale

Score	Interpretation
85 and above	High self-efficacy
74 to 84	Average self-efficacy
73 to less	Poor self-efficacy

3.10   PROCEDURE OF DATA COLLECTION

First of all, the researcher took the permission for data collection from her supervisor. An authority letter was taken from the Department of Education, Regional Institute of Education, Bhopal, for the purpose of data collection. The present study was conducted on students of Bhopal district. Researcher took permission to the school's Principal for collecting data. Then, researcher collected required data from the boy and girl students of class XII Students studying vocational subjects. After completing the questionnaire, they were thanked for their time and involvement. The data were collected by the researcher herself through the students. The questionnaires were then scored and the scores of self-efficacy were calculated.

3.11   STATISTICAL TECHNIQUES

The obtained data were analysed by applying various statistical techniques were used according to design of the study. Keeping in the view the objectives and corresponding hypothesis of the study, the statistical techniques –Mean, Standard Deviation and t value were calculated .At 0.5 level of significant take to find the hypothesis.

In this work **Correlation Method** was used to find the relationship between two variables, Self-efficacy and Academic Achievement.