CHAPTER-III

METHODOLOGY

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3.0.0 INTRODUCTION

The purpose of the educational research cannot be completed without detailed design of investigation. Research methodology involves a systematic procedure which starts from identification of the problem to analysing the data obtained.

This chapter concerned with the overall approach to the problem. This chapter is concerned with the details of the techniques adapted in the study.

Chapter will be proceeding as follows:

- Research method
- Variables
- Sampling
- Population
- Sample
- Tools & technique
- Procedure of the data collection
- Statistical technique

3.1.0   RESEARCH METHOD

Descriptive survey method was employed for the present study. Descriptive research is designed to obtain pertinent and precise information concerning the current status of phenomena. As the method is concerned with surveying, describing and investigating the existing phenomena or issue, relationship and conclusion that exist through the analysis of various relationships enabled the researcher to compare.

3.2.0 VARIABLES

In this study, followings variables, such as, knowledge of ICT, Gender, Teaching Aptitude, Attitude towards ICT, Learning Styles and type of institutions were studied. Mainly, the knowledge of ICT of prospective

teachers was studied considering the factors like, Gender, Teaching aptitude, Attitude towards ICT, Learning styles and type of institutions. Intelligence was considered as the covariate.

3.3.0 POPULATION

Prospective teachers of the session 2013-2014 were the population for the present study.

3.4.0 SAMPLE

Random sampling technique was employed for the study. PGBT, Bhopal and Regional Institute of Education (RIE), Bhopal was selected, randomly for this study. Although, both the institutes run B.Ed. course, but the structure and the contents of the course was different. The intake of PGBT, Bhopal was, also, different from the intake of RIE, Bhopal. The students of B.Sc.B.Ed. , B.A.B.Ed. and B.Ed. of RIE, Bhopal were considered for the study whereas, only, the B.Ed. students of PGBT, Bhopal were considered for the present investigation. The thread of commonality among them was the B.Ed. Both the institutes prepare the teachers for the country. The study aimed to investigate the knowledge of ICT of the prospective teachers.

Sample size for present study is 140 prospective teachers. Distribution of the sample is as follows:

Table – 3.1: Institution-wise, Class-wise and Gender-wise Distribution of Sample

INSTITUTIONS	CLASSES	GIRLS	BOYS	TOTAL
RIE, BHOPAL	B.Sc.B.Ed.	33	10	43
	B.A. B.Ed.	20	11	31
	B.Ed.	16	00	16
PGBT, BHOPAL	B.Ed.	23	27	50
TOTAL		92	48	140

Total 140 prospective teachers of session 2013-2014 were taken as sample for the study.

3.5.0 TOOLS

Research tools used for the data collection largely influences the nature of findings. Keeping the importance of tool in research, for the study researcher used five tools out of which 1 was self-constructed by the researcher and 4 were standardized tools. Following tools were used in the present study.

3.5.1 TEACHING APTITUDE TEST

Teaching aptitude test was developed by Gakhar and Rajnish (1978) is for the B.Ed. trainees having relativity coefficient 0.76 and validity coefficient 0.68.Test consists of 35 questions carrying 1 mark each. There is no time limit for this test. Researcher has used this test for measuring the teaching aptitude of prospective teachers.

3.5.2 INTELLIGENCE TEST

Intelligence test was developed by Ojha and Ray Choudhary (1982) was used to measure the intelligence of the prospective teachers. It is a verbal intelligence test. Test consisted of 112 items in the test and the time limit is 40 minutes. It has reliability value ranging from 0.64 to 0.91.Validity of the test ranging from 0.310 to 0.574.The test is divided into 8 parts.

Table–3.2: Description of Parts of the Intelligence Test

Sl. No.	DESCRIPTION OF PARTS	NO. OF QUESTIONS
1.	Classification	15
2.	Analogies	15
3.	Synonyms	20
4.	Number test	12
5.	Completion test	9
6.	Paragraph test	10
7.	Best reason	10
8.	Simple reason	
	Part-1	10
	Part-2	7
	TOTAL	112

3.5.3 STYLE OF LEARNING AND THINKING

SOLAT was developed by Venkatraman with reliability coefficient for the right hemisphere function was found to be 0.89 and for the left hemisphere 0.65.The coefficient for the integrated part was 0.71 and validity coefficient between the 2 tests was 0.82 for the right hemisphere part and 0.621 for the left hemisphere part and 0.678 for the integrated part.

3.5.4 ATTITUDE TOWARDS ICT

This scale was developed by Ziba Nikkhah Far for her Ph.D. research. This scale was standardized by her in doctorate research. This scale is self-reporting scale consisting of 43 items out of which 31 items are positive and 12 items are negative. This scale is a 4 point Likert Scale having reliability coefficient 0.604 (International Journal of Teacher Education, Vol. 2, July, 2013, ISSN: 2319-4642)

3.5.5 KNOWLEDGE OF ICT

To test the knowledge of ICT among prospective teachers, researcher herself constructed a test which consists of 50 items carrying 1 mark each. This test was cross validated by the ICT experts and questions were based on the syllabus for B.Ed. The number and marks of the table 3.3, below.

Table – 3.3: Types of Questions in the Knowledge of ICT Test

S.NO.	TYPE OF QUESTIONS	NO.OF QUESTION	TOTAL MARKS
1	MCQ	32	32
2	Abbreviations	7	7
3	Commands	6	6
4	Very short answer type	5	5
TOTAL		50	50

3.6.0 PROCEDURE OF DATA COLLECTION

(a) The researcher visited PGBT, Bhopal and RIE, Bhopal in order to obtain the required data.

(b) In both the colleges an interaction through questionnaire was carried out to procure the required data from the prospective teachers.

3.7.0 STATISTICAL TECHNIQUES USED FOR ANALYSIS

The statistical technique used in the present study for analysing the data is given as:

(a) For studying the knowledge of ICT, descriptive statistics (mean, SD, percentile, variance) was used.

(b) To study the influence of teaching aptitude, attitude towards ICT and their interaction on knowledge of ICT was analysed by 2 X 2 factorial design ANCOVA of unequal size was used.

(c) For rest of the objectives similar statistics was used for the analysis.