CHAPTER – 3

RESEARCH METHODOLOGY

3. INTRODUCTION

The present chapter deals with the research methodology used for the research study on hand. It includes research design, population, sample and tools used for the study. This chapter also includes procedure for construction of tools and data collection.

3.1 RESEARCH DESIGN

The research is experimental in nature .It was a single group pre-test post-test design. Attempts were made by the researcher to prepare a task-based programme for environmental education and the same were tried out on a group of pre-service teachers.

3.2 RESEARCH TYPE

The present research is experimental in nature. This was single group pre-test post-test experimental design. The research was qualitative as well as quantitative in nature. That is, the data have been analyzed and interpreted statistically as well as in a descriptive manner.

3.3 POPULATION

The population is the scope of the study i.e. the unit where generalizations with respect to the findings of the study can be made. The population of the study comprised of pre-service teachers at S.P.University in the year 2013-14.

3.4 SAMPLE

Sample is the working unit of the research. It is a group of subjects that the researcher works and interacts with. Sample comprised of pre-service teachers of the B. Ed. Advanced course in the year 2013-2014 at the Waymade College of Education who have

offered environmental education as their method. The technique used in the present study was purposive sampling technique.

3.5 TOOLS

Tools help the researcher to interact with the subjects and get their responses. In the present study, the researcher used two major tools.

i. An achievement test for collecting the data (Pre-test and post-test) (Appendix 2 & 3)

ii. A reaction scale to find the reactions of the student- teachers about the course**.(**Appendix 4)

3.5.1 PROCEDURE FOR CONSTUCTION OF TOOLS

The procedure followed for preparing each tools is mentioned below.

Preparation of Pre-Test and Post-Test

The researcher constructed a pre-test and a post-test. It consisted of objective type of questions. The questions were based on the concept and understanding of environmental problems. The researcher made an attempt to understand the importance of the topic and the role in day to day life.

The researcher brainstormed and read course books, magazines related to environmental education and prepared a set of questions.

Preparation of Reaction Scale

The reaction scale was prepared by the researcher to know the reactions of the pre-service teachers towards the programme given by the researcher.

3.6 DATA COLLECTION PROCEDURE

Stage- 1: During the first stage the researcher read the textbooks, magazines, journals to deepen her own understanding of the issues pertaining to environmental education. Then she prepared the material related to the course to be tried out. As part of this, the

researcher prepared different tasks related to the course content. This was followed by construction of an achievement test and a reaction scale.

Stage-2: In the second stage, the researcher administered the pre test to understand the previous knowledge of the pre-service teachers.

Stage-3: Then the researcher conducted the experiment from 15th December to 22nd December.

Stage- 4: The researcher administered the post-test.

Stage-5: Then the researcher collected the responses of the pre-service teachers through a reaction scale.

Stage-6: The researcher analyzed the collected data using 't' test and 'chi' square and interpreted the result.

Stage- 7: The researcher prepared a report of the research work undertaken by her.

3.6.1 Details of the Programme on Environmental Education

Session no	Hours	Objectives	Content	TLMS	Session task
1 & 2	2hrs	1) To enable the student teachers to understand about the air pollution. 2) To enable the student teachers to identify the causes of air pollution.	1) Definition of air pollution. 2) Causes of air pollution. 3) Preventive measures to control air pollution. 4) Air pollution act.	Task sheets for air pollution	Jigsaw technique was used wherein pre-service teachers discussed among themselves and completed the task sheets
3 & 4	2hrs	1) To enable the student teachers to understand about the noise pollution. 2) To enable the student teachers to identify the causes and preventive measures for noise pollution.	1) Definition of noise pollution. 2) Causes of noise pollution. 3) Preventive measures to control noise pollution. 4) Noise pollution act.	Chart paper	Poster making – The pre-service teachers prepared a chart on the impact of noise pollution on living creatures. .

5 & 6	2hrs	1) To enable the student teachers to understand about the environment protection. 2) To enable the student teachers to acquire knowledge about the environment protection act.	1) Definition of environment pollution. 2) Causes of environment pollution. 3) Preventive measures to control environment pollution. 4) Environment pollution act.	Chart paper & task sheet for environment pollution.	Preparing consequence chart- The pre-service teachers prepared a consequence chart on the environment pollution.
7 & 8		1) To enable the student teachers to understand about the wildlife protection. 2) To enable the students to identify the importance of wild life conservation.	1) Wildlife conservation 2) Major threats to wild life. 3) Preventive measures to control wildlife. 4) Wildlife protection act.	Task sheet for wild life protection act.	Anecdotes- Pre-service teachers prepared anecdotes on the basis of given situation.

9 & 10	2hrs	1) To enable the student teachers to understand about water pollution. 2) To enable the student teachers to identify the causes of water pollution.	1) Water pollution 2) Causes of water pollution 3) Preventive measures for water pollution. 4) Water pollution act	Task sheet for water pollution	Task sheet were given to pre-service teachers wherein the students discussed and interpreted the picture and prepared a report.

3.7 CONCLUSION

The current chapter focused on the design and methodology of the research, tools employed for data collection, construction of tools and detailed description of programme. The next chapter comprises analysis and interpretation of data.