

CHAPTER III

METHODOLOGY

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3.0 INTRODUCTION

This section deals with the presentation of all the methods implemented to gather data and how the actual research work has been done. In this chapter, the steps of methodology such as selection of the sample, variable of the study, design of the study, administration of the tool, and statistical techniques used for analysis have been discussed. Based on research findings, certain generalization can be made which will provide insights towards the study *Attitude of pre-service trainee teachers towards 5E model of creating learning situation: Achievability and Challenges*. This chapter deals with the methodology to achieve the objectives of the study mentioned in the previous chapter. Keeping in view the nature of the objectives of the study, the appropriate sample was selected and tools were developed or adopted.

This chapter deals with

1. Research Design
2. Sample
3. Tools
4. Collection of data
5. Statistics used

3.1 Research design

The present study is both qualitative as well as quantitative, a mixed method in nature. Purposive sampling was used for selection of pre-service trainee teachers of B.Sc. B.Ed and two year B.Ed. The pre-service trainee teachers' attitudes are scored and categorized into positive, negative or neutral, the relationship between the attitude on 5E model and the pre-service trainee teachers' narratives on achievability and challenges that they have encountered during their internship is established.

3.2 Variables of the study

3.2.1 Independent Variable

The one variable i.e. attitude on 5E model was seen as independent variable which may influence the pre-service trainee teachers narratives on achievability and challenges

while creating learning situation. Hence, the independent variable is the attitude of pre-service teacher's towards 5E model.

3.2.2 Dependent Variable

The dependent variables are achievability and challenges that were explored through the narratives proposed by the participants that will be formed into themes and coded quantitatively. Thus, the proposed study attempts to establish the relationship between attitude on 5E model and achievability and challenges that pre-servicetrainee teachers perceived during their course of internship in teaching.

3.3 Sample

During Internship in teaching, 5 E Model is used as a teaching learning approach which is peculiar to RIE Bhopal. As the internship for pre-service trainee teachers takes place during 2nd year for B. Ed. and during 7th Semester for B. Sc. B. Ed. the entire classes mentioned above have been taken as a sample which amounts to 60 participants, specifically the pre service trainee teachers with a specialization in Biology and Chemistry.

3.4 Tools

A self-constructed scale was used to study the attitude of pre-service trainee teachers on 5E model in accordance with Likert scale (i.e. five-point scale). In order to understand the achievability and challenges, interview schedule was developed.

Attitude scale

A scale was prepared to study the attitude of pre-service trainee teachers towards 5E model of creating learning situations and influence of attitude of pre-service trainee teachers on preparing and implementing learning situations through 5E Model. It consisted of 21 test items and instructions directing the pre-service trainee teachers to tick the box in option of starting from strongly agree to strongly disagree. The same is given in appendix no. A.

Interviews

In-depth interviews were conducted with the participants to understand their attitude on achievability of creating and implementing 5E Model learning situation and challenges that they had encountered in the process. There were 45 planned and open-ended questions based on the components of 5E model. The same is given in appendix no. B.

3.5 Administration of the tool

The researcher personally met with the participants of B. Sc. B. Ed. and two year B. Ed. for conducting the study and established rapport with them.

Attitude scale

This tool was administered in the very beginning of data collection so the researcher has the idea about participants' attitude towards 5E model of constructivism. Prior to the administration of the tool, the participants were explained about the test items, which they supposed to answer. The significance of the tool and the necessary instructions were made clear to them.

In-depth interviews

After having the idea about participants attitude towards 5E model of constructivism in-depth interviews were conducted. They were given sufficient time ranging from forty-five minutes to one hour to answer to the queries of the researcher. The answers to the questions were recorded in an audio recorder to be used for further analysis.

3.6 STATISTICAL TECHNIQUE USED

Present study is a mixed type of research; therefore, simple statistics such as Mean and Standard Deviation were used. The statistical techniques used in the study for analyzing the data are given as follows:

1. For studying the attitude of pre-service trainee teachers towards 5E model of constructivism, data were analyzed by computing mean and standard deviation respectively.
2. For studying the achievability and challenges that pre-service trainee teachers encountered while preparing and implementing learning situations through 5E Model, were analyzed by taking in-depth open-ended interviews.