

### CHAPTER III

# *PLAN AND PROCEDURE*

- Research Design
- Sample Design
- Data gathering tools
- Description of data gathering tools
- Procedure
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Research has proved to be an essential and powerful tool in leading man towards progress. There would have been very little progress as we find it today, without systematic research.

The secret of our cultural development has been research pushing back the areas of ignorance by discovering new truth which in turn leads to better ways of doing things and better product.

Research is devoted to find the conditions under which a certain phenomenon occurs and those under which it does not occur. The term research consists of two words 'Re' and 'search' means to find out something new. Thus research is a process of which a person observes the phenomenon again and again. Collect the data and he draw some conclusions on the basis of data.

Research is oriented towards the discovery of relationship that exist among different phenomenon of the world. It is based on the fundamental assumption that invariant relationships exist between certain consequents can be expected to follow the introduction of given antecedent.

The purpose of research is progress and good life. Good education has been recognised as the basis of individual and social development. Therefore, the need of research in educational practices and policies is being realized increasingly. Educationalists are constantly searching for more effective methods of instruction. Efforts are being made to find out more satisfactory techniques of evaluation, richer learning materials, better

physical facilities, more efficient systems of administrative organizations and so on. This research is becoming more important due to the very rapid expansion and democratization of education during the last few decades.

### **Research Design of this study:**

The present research is being a descriptive research which includes survey and fact finding enquiries of different kinds. The major purpose of descriptive research is description of the State of affairs as it exists at present.

The descriptive research describes and interprets 'What is?' It is concerned with relations that exists opinions that are held processes that is going on, effect that are evident or trends that are developing.

Descriptive researches are designed to obtain pertinent and precise information concerning the current status and whenever possible draw general conclusions from the facts discovered. They may result in solution of significant problems concerning local, State, National, International issues. They are more than just a collection of data. They involve measurements, classification, analysis comparison and interpretation.

### **Selection of the sample for this study:**

The whole population of the student teachers studying in correspondence B.A.B.Ed. course i.e. B.A.B.Ed. I to B.A.B.Ed. IV were

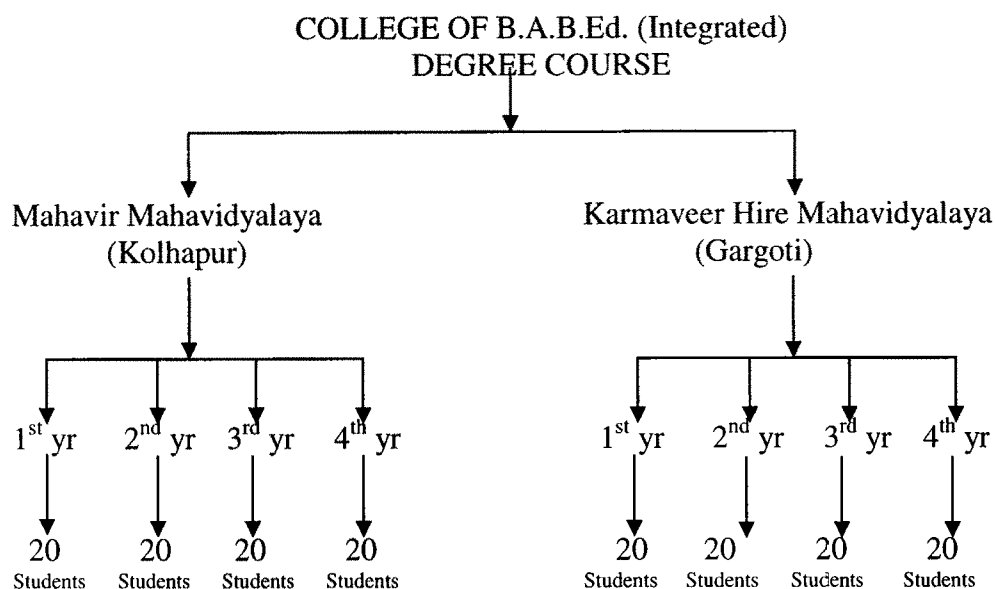
covered in the study. The total number of students is 640. The number of students selected for the study was 160.

In Maharashtra, there are only two correspondence B.A. B.Ed. college (Integrated four year B.A.B.Ed. course) One is Kolhapur another is at Gargoti. Both colleges were selected for the study. A total number of students selected for the study was 160. The random sampling method was used for the selection of the sample.

### **Survey Method:**

Descriptive researchers are mainly concerned with the survey method which gather data from a relatively large number of cases at a particular time. Also it includes surveys and fact finding enquiries of different kinds. The major purpose of descriptive research is description of the State of affairs as it exists at present. In social Science research we quite often use the terms 'Ex. Post facto research' for descriptive research studies. The main characteristic of this method is that the researcher has a no control over the variable, he can only report what has happened or what is happening. The methods of research utilised in descriptive research are survey methods of all kinds including comparative and correlational method.

### Selection of the sample:



In each class i.e. from 1<sup>st</sup> year to 4<sup>th</sup> year there are 80 students per class. 25% students from each class will be selected as a sample. The sample will be random one.

### Data Gathering Tools

For the purpose of the study data gathering tools that were prepared & used in consultation with expert keeping the objectives of the study in mind were.

### Description of Data Gathering Tools

In order to observe the mentioned objectives of the research, the researcher used the following tools for necessary data collection from the student teachers studying in integrated B.A.B.Ed degree course.

**Test I - TCW Test**

Verbal test of creative thinking (TCW) by Baqer Mehdi

Administration of the verbal test of creative thinking (TCW) for collage students is simple and straight forward. The Marathi TCW was developed to be self administered and may be given either individually or to large groups, both the general instructions for each activity printed on the test form the timing given for each activity should be strictly adhered to. The validity of the TCW tests upon the assumption that the individual has a clear understanding of the scale instructions which require student to report how most students feel of think at one time or another. The individual attention should be directed to the fact that they should read carefully all the instructions.

The test includes four subtest, namely consequences test, unusual uses test, similarity test and product improvement test.

**Consequences test:-**

The consequences test consists of three hypothetical situation.

1. What would happen if man could fly like birds?
2. What would happen if our schools had wheels?
3. What would happen if man does not have any need for food?

The subject is required to think as many consequences of these situations as he can, and write them under each situation in the space provided. The

situation being hypothetical, minimize the effect of experience and also provide the subject with an unlimited opportunity to make response. The time allowed for the three problems is 4 minutes each.

**Unusual uses test:-**

The test present the subject with the hams of three common objects apiece of stone, a wooden stick, and water and requires him to write as many novel, interesting and unusual uses of these object as he may think of.

This test measures the subject ability to retrieve items of information from his personal information in storage. The time allowed for the three tasks is 5 minutes each.

**New Relationships test:-**

This test presents the subject with three pairs of words apparently different tree and house, chair and ladder, air and water, and requires him to think and write as many novel relationships as possible between the two objects of each pair in the space provided. The test provides as opportunity for the free play of each pair of words in 5 minutes.

**Product improvement test:**

In this test the subject is asked to think of a simple wooden toy of a horse and suggest addition of new things to it to make if more interesting for the children to play. The time allowed is 6 minutes.

The total time required for administering the test is 48 minutes in addition to the time necessary for giving instructions, passing out test booklets to children and the collecting them back.

**Scoring:**

As there is no right wrong responses for the test, much care has to be exercised at the time of scoring. The scorer has to acquaint him self fully with the method of scoring and the use of scoring sheet.

**Scoring for fluency-**

In scoring for fluency, the scorer should go through the responses to the item in question carefully and strike off those which are irrelevant and/or have been repeated. He should then count the remaining number of responses and enter his number as the fluency. Score for the item in the appropriate box in the scoring sheet.

**Scoring for Flexibility:-**

In the scoring for flexibility the scorer should first acquaint himself with the categories of responses given for each item in the scoring guide. For convenience sales, he should note in bracket a gains each response the alphabet serial of the category to which it belongs. If he comes across a responses which has not been mentioned in the scoring guide. He should himself determine the category to which it would seem to belling. If the



response is such that it belongs to an entirely new category not considered in the scoring guide he should give it a new alphabet serial and note it down in bracket against the response in the question. The flexibility score will be the total number of different alphabet serials used. Thus if out of eight responses given by the taste to an item two have been given under category A, three have been given under category B, one has been given under category D then the flexibility score for this item will be four.

#### **Scoring for originality-**

As has been said above, originality scoring is done on the basis of statistical uncommonness of responses. The more uncommon the response, the higher the originality weight. The weights for originality scoring have been determined on the weights for originality scoring have been determined on the basis of the following scheme. If a response has been given by 1% to 99% of the tastes, then the responses will get an originality weight of 5; if a response has been given by 1% to 1.99% of the tastes, then the response will get an originality weight of 4; if a responses has been given by 2% to 2.99% of the tastes, then the response will get an originality weight of 3; if a response has been given by 3% to 3.99% if the tastes. Then the response will get an originality weight of 2; and if response has been given by 4% to 4.99% of the tastes, then the response will get an originality weight of 1

responses given by 5% or more of the tasters will get originality weight of zero.

Fluency, Flexibility and originality obtained by the taste on difficult activities, the composite creativity scores should be entered after converting the raw scores in to standard scores. This is necessary because the standard deviations of the three scores sometimes markedly vary and if raw scores are added up then the ranking will be greatly affected.

## **Test II TGI Test:**

Test of General Intelligence for college students (TGI) by Dr. S. K. Pal and Dr. K. S. Misra.

Administration of the TGI for college students is simple & straight forward. The Marathi TGI was developed to be self administered and may be given either individually or to large groups, complete instructions are printed on the test form. Time limit for every test is of 4 minutes and it must be adhered to strictly. The validity of the TGI rests upon the assumption that the individual has a clear understanding of the scale instructions which require students to report how most students feel or think at one time or another. The individual attention should be directed to the fact that they should read carefully all the instructions.

**Scoring:**

Answer key should be placed on the answer sheet correct answers should be marked by putting the Five mark Number of tick marks for every subtest should be counted and then these sub scores should be added together to get a composite score.

**III Final Examination results from college records**

To assess the students teacher's academic achievement in the college Final examination marks are considered as most important measures which judge the overall competence of the student teachers. It shows exact performance of children in different subjects. Hence, final examination marks formed the data to study the academic achievement of the sample.

**Achievement Test Marks**

Achievement test attempts to measure what an individual has learned and reveal his or her present level of performance. Most tests used in schools are achievement tests. They are particularly helpful in determining individual or group status in academic learning. Achievement test scores are used in placing, advancing or retaining students at particular grade level they are used in diagnosing strengths and weakness.

The percentage obtained in the final examination by student teachers were also used as data for academic achievement.

## Assessment of Educational Performance

### Final examinations marks.

The percentage of marks obtained by student teachers (girls and boys) in final examination were considered on the basis of percentages obtained in the college subject, grade were given as per the norms of university, Kolhapur (Maharashtra) as follows.

Grade	Percentage of Marks
Distinction	75+
First Class	60+
Second Class	45+
Pass Class	Below 45

### Statistical Tools and Techniques used

#### 1. Mean

Mean is also known as “The average”. the “Arithmetic mean” is the Popular usage in statistical methods for measuring central tendency. Arithmetic mean or  $\bar{X}$ , is the quotient obtained by dividing the sum of the values  $X$  by the number of value  $N$ .

Symbolically, the formula for the calculation of mean is:

$$\bar{X} = \frac{\sum m}{n}$$

Where,

- $\bar{X}$  Stand for Mean
- $\sum m$  Summation of values
- $n$  Number of items

## 2. Correlation

Statistical methods are used to measure and compare intelligence, money, income, height, etc. in the field of education. It is very common experience that when data pertaining to some field of inquiry are arranged in a systematic manner, there appears to be a type of relationship between the different group of data. This relationship is called as correlation. The degree of correlation is expressed in figures ranging from +1 and 0 to -1.

Symbolically the formula for calculation of correlation is:

$$\text{Coefficient of correlation} = \frac{\Sigma xy}{N\sigma_1 \sigma_2}$$

Where,

- Coefficient of correlation
- N No. of pairs of observation