

Chapter - IV

**ANALYSIS & INTERPRETATION
OF DATA**

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4.0.0 INTRODUCTION :

The statistical analysis of the data collected was done with view to determine the relationship between the ⁱⁿdependent variable (The programme prepared by the researcher).

Analysis particularly in case of survey and experimental data, involves estimating the value of unknown parameters of population and testing of hypothesis by drawing inferences analysis may therefore be categorised as descriptive analysis and inferential analysis (C.R Kothari, 160).

4.1.0 The data gathered was analysed in two stages :

1) Descriptive analysis and 2) Infernal analysis

Keeping the objectives of the study in mind the data analysis and interpretation in made. This chapter explained the objectives achieved with reference to the data collected analysed and interpreted.

According to each objective the data was analysed and tabulated and is presented with their interpretation in this chapter.

Descriptive analysis is largely the study of distribution of one variable. This study provides us with profiles of companies work groups persons and other subjects on any of a multiple of characteristics. This sort of analysis may be in respect of one a variable or in respect of two variables. In this context we work out various measures that shows the size analysis of a distributions a long with the study of measuring relationship between two or more variables.

4.1.1 Inferential analysis :

Inferential statistical analysis always involve the process of sampling and the selection of a small group that is assumed to be related to the population from which it is drawn. The small group is the population drawing conclusion about population based upon observation of sample is the process of inferential analysis (John Best and Khan 276).

In the present study the sample was drawn from Bhudarga Taluka (Dist. Kolhapur, Maharashtra). One college selected for experimental group and control group and programmes were prepared after collecting data. The result and conclusions are to made about the population (one year, B.Ed. students) so for this purpose inferential data analysis is used.

4.1.2 Formula used :

In this research used an experimental research design were the emphasis is on the development of programmes to improve English Newspaper reading ability the comparison of the two groups are done before and after the treatment to study the effectiveness of the programme. Hence the following statistical techniques are used.

1) Mean 2) S.D. 3) 'T' test

1) The mean (\bar{x}) of a distribution is commonly understood as the arithmetic average. It is computed by dividing the sum of all the scores by the number of scores. In formal form.

$$\bar{X} = \frac{\Sigma X}{N}$$

where, \bar{X} = mean

Σ = sum of

X = score in a distribution

N = number of scores

2) The variance (σ^2):

The sum of the squared deviations from the mean divided by N, is known as the variance. We have noted that the sum of the deviation is zero ($\sum X = 0$). The variance formula is.

$$\sigma^2 = \frac{\sum(X - \bar{X})^2}{N} \text{ OR } \frac{\sum X^2}{N}$$

Where x is a score expressed as its distance from the mean is called deviation score.

It's formula is $x = (X - M)$

3) The standard deviation (σ):

$$\sigma = \frac{\sum(X - \bar{X})^2}{N}$$

The square root of the variance is most frequently used as measures of spread of dispersion of scores in distribution. The formula is

$$S = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} \text{ or } \sqrt{\frac{\sum x^2}{n-1}}$$

and

$$S = \sqrt{\frac{N\sum X^2 - (\sum X)^2}{n(n-1)}}$$

$N^2 = n(n-1)$ an calculate S^2

The two formulas for sample standard deviation with the deviation and the raw score methods of computation, respectively are,

4) The T score (T) :

T score has been devised to avoid some confusion resulting from negative Z scores (below the mean) and also to eliminate decimal values.

Multiplying the Z score by 10 and adding 50 results in scale of positive whole number values.

$$T = 50 + 10 \frac{(X - \bar{X})}{\sigma} \text{ or } 50 + 10 Z$$

The Z score (sigma) :

In describing a score in a distribution, its deviation from the mean-expressed in standard deviation units is often more meaningful than the score itself. The unit of measurements is the standard deviation.

$$Z = \frac{X - \bar{X}}{\sigma} \text{ or } \frac{x}{\sigma}$$

Where

X = raw score

\bar{X} = mean

σ = standard deviation

x = $(X - \bar{X})$ score deviation from the mean.

4.2.0 Objectives No. 1 :

To study the reading ability of B.Ed. students in English Newspaper Reading.

The researcher took an interviews of five English method teachers in B.Ed. colleges and discussion with the four expert and experienced teacher investigated five major drawbacks in B.Ed. students i.e. understanding vocabulary, phrases, abbreviation and for understanding News True-False sentences and sentence meaning.

Researcher made lists of above mentioned items from two months English Newspaper. Researcher randomly selected 50 students from two B.Ed. colleges and examine them giving comprehension test of English news.

4.3.0 Objective No. 2 :

'To develop the programmes to improve English Newspaper Reading Ability.

The programmes were prepared to improve English Newspaper Reading Ability of B.Ed. students. The investigator took an interviews of method teachers in English and discussion with the experts and experienced teacher found out drawbacks of B.Ed. students in five aspects. The researcher considered all the remedies suggested by them but has selected by only the appropriate remedies in his programmes.

The researcher has come across one fact that there is no one to one relationship between score of 'E' group and score of 'C' group pre-test score. The percentage of marks, discussed with the experts and experienced teacher. Than proper time in the planning of the programmes were given so as to give proper treatment.

4.4.0 Objectives No. 3 :

To check the effectiveness of the programme.

For this hypothesis was framed and tested.

This being an experimental research carried out giving more stress on the development of the programmes to improve English Newspaper Reading Ability of B.Ed. students. The development of programme their administration and their effectiveness was given importance in the study.

Two groups from B.Ed. students were prepared. The experimental group given the treatment (i.e. researcher taught them).

After the treatment (i.e. administration of the programmes) Post-test was given to both the experimental and control group. The score of post-test were collected.

The score of pre-test and post-test of the experimental and control group were given statistical treatment to find the effectiveness of the programmes.

Following are the tables of showing the scores of the pre-test and post-test of the experimental and control groups hypothesis formulated and tested for the objective No.3.

4.5.0 Distribution of the sample for the purpose of testing the hypothesis :

Two groups are formed one group was selected for experimental another group retained as control group. Both groups contained 32 students. Having equal scores in the pre-test. Thus in all the experiment was carried out on 64 students. Table No. 1 shows the distribution of sample.

Table No. 1

4.1 Distribution of the sample of B. Ed. students for experimental and control group

Standard	No of students	
	Experimental group	Control group
B.Ed.	32	32

Observation and Interpretation :

Table No.1 shows the distribution of the sample of students who responded who responded to the experiment out of 64 students 32 were selected for experimental group and control group respectively.

Table No. 2**4.2 Pre-test scores of B. Ed. students for experimental and control group**

Standard	Experimental group		Control Group	
	Mean	S.D.	Mean	S.D.
B.Ed.	17.625	1.35424806	18.1875	2.11301769

Observation and Interpretation :

Table No.2 shows the pre-test scores of both groups. The mean of the experimental group of B.Ed. is 17.625 which is nearer to the mean of the control group i.e. 18.1875.

The S.D. of the experimental group and the control group is also which are 1.35424806 and 2.11301769.

Thus two group are formed for experimental.

Table No. 3**4.3 Scores of pre-test and post-test of B.Ed. students**

Experimental Group			Control Group		
	Mean	S.D.		Mean	S.D.
Pre-test	17.625	1.3543	Pre-test	18.75	2.11301769
Post-test	38.563	2.645016	Post-test	19.09375	2.18459628

Observation and Interpretation :

Table No.3 show the effectiveness of the programmes prepared by the researcher. Table No. 2 shows the mean of B.Ed. students experimental group in the pre-test is nearer to that control group. Which is nearer the mean score of the experimental group is 17.625 and that of the control group is 18.1875.

In the post-test the mean score of the experimental group is 38.5625 and of the control groups is 19.09375.

The S.D. of the pre-test of experimental group is 1.35424806 which is similar to that of the control group is 2.11301769.

In the post-test the S.D. of the experimental group has become 2.645016, in comparison with the S.D. of the control group which is 2.18459628.

Table No. 2 shows that the mean of experimental group in the pre-test is 17.625 which is nearer to that of the control group, which is also 18.1875.

The mean scores of the post-test show the change the mean score of the experimental group has become 38.563 in the post-test and the mean score of the control group in the post-test is 19.09375.

In the post-test the S.D. of the experimental group is 2.645016 and the S.D. of the control group is 2.18459628.

The increase in the mean scores of the experimental group shows the effectiveness of the programme. The experimental groups have improved themselves under the influence of the programme. The same fact is revealed by the change in the S.D. of the experimental group.

Table No. 4

4.4 Control group : Scores of pre-test and post-test.

Standard	Pre-test		Post-test	
	Mean	S.D.	Mean	S.D.
B.Ed.	18.1875	2.11301769	19.09375	2.18459628

Observation and Interpretation :

Table No. 4 shows the scores of the pre-test and the post-test of control group.

The mean of pre-test of control groups is 18.1875 which is changed to 19.09375 and S.D. of the same group is changed from

2.11301769 to 2.18459628. Both the mean and S.D. of the group show that there is no significant change in the pre-test and post-test scores of the control group.

Table No. 5

4.5 Experimental groups : Scores of pre-test and post-test

Standard	Pre-test		Post-test	
B.Ed.	Mean	S.D.	Mean	S.D.
	17.625	1.35424806	38.5625	2.645016

Observation and Interpretation :

Table No. 5 shows the scores of the pre-test and post-test of the experimental group.

The students of the experimental group have also improved themselves under the influence of the programme. It is evident from the mean scores of the post-test which is raised from 17.625 of the pre-test to 38.5625.

The S.D. of experimental group changed from 1.35424806 to 2.645016 shows the effectiveness of the programme.

The mean of pre-test of experimental group has raised from 17.625 to 38.5625 in the post-test. Also the standard deviation (S.D.) has changed from 1.3542806 in the past to 2.645016 in the post-test.

Both the mean and S.D. of the pre-test and post-test shows that the students have improved themselves under the influence of the programme.

4.6.0 Testing of hypothesis :

4.6.1 Null hypothesis

'There is no significant difference between scores of the pre-test of the control group'.

Summary :

Computed value of 't' is 0.82987271 df are 31, the df 31 are not significant at 0.05 level that minimum required value is of 't' is 2.04 while 0.01 level it is 2.75. Since the obtained the value is less shorter than what is to be significant at 0.01 level.

Hence, it is calculated that there is no significant difference between pre-test and post-test in controlled group. Hence, hypothesis is accepted.

4.6.2 Null hypothesis No 1

'There is no significant difference in the achievement of the experimental group and control groups'.

Computed value of 't' is 15.6516467 and df are 62. Df 62 are significant at 0.05 level the minimum required value of 't' is 2.00 while 0.01 level it is 2.66. Since the obtained value is larger what is to be significant at 0.01 level. It is calculated that the experimental group is superior than the control group in the post test. So hypothesis No. 1 is rejected.

4.7 Results:

1. There is significant difference between the score of control group and the experimental group.
2. There is no significant difference in the pre test and post test of control group.