CHAPTER – IV

ANALYSIS AND

INTERPRETATION

OF DATA

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ANALYSIS OF DATA.

4.0.0 INTRODUCTION.

Analysis and Interpretation of data is an important step in the total procedure of research. It is a critical examination of the results. In the present study chapter 3 deals with the results obtained for the verification of the hypothesis and for developing this chapter objectives and hypothesis has been specified to interpret the results.

4.1.0 FIRST OBJECTIVE

The first objective of the study is as follows.

' To examine the effect of Advance organizer model on achievement of B.A.B.Ed student teachers in English for communication.'

The corresponding hypothesis is

4.1.1 HYPOTHESIS 1

There is no significant difference in the immediate attainment level of control group and experimental group while taught through traditional method and Advance organizer model.

Table 4.1

Means S.D. and t-value of achievement in post test

scores of student teachers taught through AOM and T M.

Treatment	N	Means	S.D.	t-value		Calculated t-value	
				0.01 level	0.05	0.01	0.05
AOM	30	24.68	0.07	2.66	2.0	6.04	6.14 S
T M	30	14.05	0.04				

S = Significant.

To test the hypothesis the researcher has applied

Fishers 't'-formula.

$$t = \frac{m1 - m2}{\sqrt{\left[\dfrac{\Sigma X^2 1 + \Sigma X^2 2}{N1 + N2 - 2}\right]\left[\dfrac{N1 + N2}{N1\ N2}\right]}}$$

1. Guilford ' Fundamental statistics in psychology and Education, V[th] Edition, MC GRAW-HILL Tokio, page no 160.

2. Kochergaonkar sucheta (2000). 'Use of stastical in research YCMOU.

The t value 2.66 at 0.01 level and 2.00 at 0.05 level

and calculated table value 6.04 at 0.01 level and 6.14 at

0.05 level shows that there is significant difference between the achievement scores while taught through Advance organizer model and Traditional method. Therefore the hypothesis there is no significant difference in the immediate attainment level of control group and experimental group is rejected. It means the Advance organizer model has found more significant than traditional method.

4.1.2 SECOND OBJECTIVE.

To compare the achievement of student teachers taught through traditional method and Advance organizer model.

The corresponding subhypothesis is -

There is no significance difference in the post test achievement scores of student teachers taught through traditional method and Advance organizer model.

Table 4.2

Frequency distribution of post test scores of Experimental subjects.

C.I.	Tallies	F	d^1	f d^1	F d^2
39-41	I	1	5	5	25
36-38	II	2	4	8	32
33-35	IIII	4	3	12	36
30-32	II	2	2	4	8
27-29	I	1	1	1	1
24-26	IHI I	6	0	0	0
21-23	IIII	4	-1	-4	4
18-20	III	3	-2	-6	12
15-17	IHI I	6	-3	-18	54
12-14	I	1	-4	-4	16

$$\begin{array}{cc} +30 & \Sigma fd^2 \\ -32 & =188 \\ \Sigma fd = -2 & \end{array}$$

$$M = \frac{Am + \Sigma fd}{N} \; X \, i$$

$$= 25 + \frac{-2}{30} \; X3$$

$$=25 + \frac{-6}{30}$$

$$= 25 - 0.02$$

$$= 24.8.$$

$$\text{S.D.} = i \times \sqrt{\frac{\Sigma fd^2}{N} - \left[\frac{\Sigma fd}{N}\right]^2}$$

$$= 3 \times \sqrt{\frac{188}{30} - \left[\frac{-2}{30}\right]^2}$$

$$= 3 \times \sqrt{6.2667 - (4/900)}$$

$$= 3 \times \sqrt{6.2667 - 0.00444}$$

$$= 3 \times \sqrt{6.2623}$$

$$= 3 \times 2.5025$$

$$\text{S.D} = 7.507$$

Table 4.3

Frequency distribution of post test scores of control subjects.

C.I.	Tallies	frequency	d^1	$f d^1$	$F d^2$
27-29	I	1	5	5	25
24-26	I	1	4	4	16
21-23	I	1	3	3	9
18-20	ℍℍ	5	2	10	20
15-17	ℍℍ	5	1	5	5
12-14	ℍℍ III	8	0	0	00
9-11	ℍℍ I	6	-1	-6	6
6-8	II	2	-2	-4	8
3-7		0	-3	0	0
0-2	I	1	-4	-4	16
				$\Sigma fd=13$	
		N-30			$\Sigma fd^2=105$

$$m = A.m + \frac{\Sigma fd^1}{N} Xi$$

$$= 13 + \frac{13}{30} X3$$

$$= 13 + \frac{39}{30}$$

$$= 13 + 1.3$$

$$= 14.3$$

$$S.D. = i\sqrt{\dfrac{\Sigma fd^{1\,2}}{N} - \left[\dfrac{\Sigma fd}{N}\right]^2}$$

$$= 3 \times \sqrt{\dfrac{105}{30} - \left[\dfrac{13}{30}\right]^2}$$

$$= 3 \times \sqrt{3.5 - \dfrac{169}{900}}$$

$$= 3 \times \sqrt{3.5 - 0.1878}$$

$$= 3 \times \sqrt{3.3122}$$

$$= 3 \times \sqrt{1.819945}$$

$$= 5.4598$$

$$S.D. = 5.46$$

Table 4.4

Means and S.D's of post test scores of student teachers taught through Advance organizer model and Traditional Method.

Treatment	N	Mean	S D
Advance organizer model post test	30	24.8	7.50
Traditional method post test	30	14.3	5.46

Table 4.5 indicates that there is significant difference between the means of post test scores taught through Advance organizer model and Traditional method. The AOM, post test mean (24.8) is greater than the post test mean of T M (14.3). Therefore the subhypotesis-There is no significant difference in the post test scores of student teachers taught through AOM and T M is rejected.

SUB HYPOTHESIS 1.2

There is no significance difference between pre test and post test achievement scores of student teachers while taught through Advance organizer model.

Table 4.5

Frequency distribution of pre test achievement score of Experiment subjects.

C.I.	Tallies	f	d	f d	F d²
30-32	I	1	4	4	16
27-29	III	3	3	9	27
24-26	III	3	2	6	12
21-23	II	2	1	2	02
18-20	ℍℕ III	8	0	0	00
15-17	III	4	-1	-4	4
12-14	II	2	-2	-4	8
9-11	ℍℕ	5	-3	-15	45
6-8	II	2	-4	-8	32
		N-30			Σfd²=146

Σfd= -10

$$M = Am + \frac{\Sigma fd}{N} \times 1$$

$$= 19 + \frac{10}{30} \times 3$$

$$= 19 + \frac{\cancel{30}\,1}{\cancel{30}}$$

$$= 20.$$

$$SD = i \times \sqrt{\frac{\Sigma fd^2}{N} - \left[\frac{\Sigma fd}{N}\right]^2}$$

$$= 3 \times \sqrt{\frac{146}{30} - \left[\frac{-10}{30}\right]^2}$$

$$= 3 \text{ X} \sqrt{4.8667 - \left[\frac{100}{900}\right]}$$

$$= 3 \text{ X} \sqrt{4.8667 - 011111}$$

$$= 3 \text{ X} \quad 4.7556$$

$$= 3 \text{ X} \quad 2.1807$$

SD = 6.5422

SD = 6.54

Table 4.6

Frequency distribution of post test achievement scores of Experimental Subjects.

C.I.	Tallies	f	d^1	$f d^1$	$F d^2$
39-41	I	1	5	5	25
36-38	II	2	4	8	32
33-35	IIII	4	3	12	36
30-32	II	2	2	4	8
27-29	I	1	1	1	1
24-26	IHLI	6	0	0	0
21-23	IIII	4	-1	-4	4
18-20	III	3	-2	-6	12
15-17	I	6	-3	-18	54
12-14	I	1	-4	-4	16
	N=30				Σfd^2=188

Σfd=-2

$$m = A.M + \frac{\Sigma fd}{N} \times I$$

$$= 25 + \frac{-2}{30} \times 3$$

$$= 25 + \frac{-6}{30}$$

$$= 25 - 0.2$$

$$= 24.8$$

$$SD = i \times \sqrt{\frac{\Sigma fd^2}{N} - \left(\frac{\Sigma fd}{N}\right)^2}$$

$$= 3 \times \sqrt{\frac{188}{30} - \left(\frac{-2}{30}\right)^2}$$

$$= 3 \times \sqrt{6.2667 - \left(\frac{4}{900}\right)}$$

$$= 3 \times \sqrt{6.2667 - 0.00444}$$

$$= 3 \times \sqrt{6.2623}$$

$$= 3 \times 2.5025$$

$$SD = 7.507$$

Table 4.7

Means and SD's of pre and post test achievement scores of student teachers taught through Advance organizer model.

Treatment	N	Mean	S D
Advance organizer model pre test	30	20	5.54
Advance organizer model post test	30	24.8	7.507

Table 4.8 indicates that the post test mean (24.8) is greater than the pre test mean (20). Thus the above stated subhypotesis is rejected.

4.1.3 THIRD OBJECTIVE.

To compare the post test achievement score of student teachers in the communication skills and Reading comprehension, while taught through Advance organizer model.

The corresponding Hypothesis is –

There is no significant difference between the post test achievement score of the student teachers in communication skills and Reading Comprehension while taught through Advance organizer model.

Table 4.8

Students	Gain score		Percentage %		% in round figure	
	C.S	R.C.	C.S.	R.C.	C.S.	R.C.
1	16.5	15.5	55	77.5	55	77
2	12	12	40	60	40	60
3	17	14	56.66	70	57	70
4	14	11	46.66	57.5	47	57
5	09	09	30	45	30	45
6	11	04	36.66	20	37	20
7	10	06	33.33	30	33	30
8	18	16	60	80	60	80
9	22	16	73.33	80	73	80
10	22	17	73.33	85	73	85
11	10	05	33.33	25	37	25
12	20	17	66.66	85	67	85
13	08	07	26.66	35	27	35
14	16	07	53.33	35	53	35
15	14	02	46.66	10	47	10
16	20	14	66.66	70	67	10
17	13	11	43.33	55	43	55
18	10	9.5	33.33	47.5	33	47
19	07	05	23.33	25	23	25
20	11.5	10.5	38.33	52.5	38	52
21	15	10	50	50	50	50
22	14	06	46.66	30	47	30
23	20	13	66.66	65	67	65
24	13	08	43.33	40	43	40
25	19	10	63.33	50	63	50
26	15.5	08	51.66	40	52	40
27	16.5	7.5	55	37.5	55	37
28	10	07	33.33	35.5	33	35
29	11.5	11.5	38.33	57.5	38	57
30	19	15	63.33	75	63	75

C.S.= Communication Skills

R.S.= Reading Comprehension

Table 4.9

Frequency distribution of post test scores in communication skills taugh through AOM.

C.I.	Tallies	frequency	d	f d	F d²
70-74	II	2	5	10	50
65-69	III	3	4	12	48
60-64	III	3	3	9	27
55-59	III	3	2	6	12
50-54	III	3	1	3	3
				40	
45-49	III	3	0	0	00
40-44	III	3	-1	-3	3
35-39	III	3	-2	-6	12
30-34	IIII	5	-3	-15	45
25-29	I	1	-4	-4	16
20-24	I	1	-5	-5	25
				-33	
		N-30		$\Sigma fd^1=7$	$\Sigma fd^2=241$

$$m = A.m + \frac{\Sigma fd}{N} \times i$$

$$= 47 + \frac{7}{30} \times \frac{5}{6}$$

$$= 47 + 7/6$$

=47+1.67

m=48.167

= 48.17

$$SD= i \sqrt{\frac{\Sigma fd^2}{N} - \left[\frac{\Sigma fd^2}{N}\right]^2}$$

$$SD=5 \times \sqrt{241 - (7/30)^2}$$

$$=5 \times \sqrt{8.033 - (0.2333)^2}$$

$$=5 \times \sqrt{8.033 - 0.05444}$$

$$=5 \times \sqrt{7.9786}$$

$$=5 \times 2.825$$

$$SD = 14.13.$$

Table 4.10

Frequency distribution of post test scores in Reading

Comprehension taught through AOM.

C.I.	Tallies	frequency	d	f d	F d²
90-99	–	–			
80-89	IIII	4	3	12	36
70-79	IIII	4	2	8	16
60-69	II	2	1	2	2
				22	
50-59	IIII II	6	0	00	00
40-49	IIII	4	-1	-4	4
30-39	IIII I	6	-2	-12	24
20-29	III	3	-3	-9	27
10-19	I	1	-4	-4	16
				-29	

N-30   Σfd = -7   Σfd²=121

m= Am + $\dfrac{\Sigma fd}{N}$ X i

=54.5 + (-7/30) X 10

=54.5 + (-7/3)

=54.5 – 2.33

m = 52.17

SD= i $\sqrt{(\Sigma fd^2/N) - (-7/30)^2}$

=10 X $\sqrt{(121/30) - (0.2333)^2}$

=10 X $\sqrt{3.9786}$

=10 X   1.9946

SD= 19.946

Table 4.11

Post test means and S.D. of C.S. and R.C. taught through Advance organizer model.

Content	N	Means	S D
Communication skills	30	48.17	14.3
Reading Comprehension	30	52.17	19.94

Table 4.12 indicates that the mean trend of reading comprehension (52.17) is greater than the mean trend of communication skill (48.17) it means the student teachers had exhibited better achievement in Reading comprehension as compared to communication skills.

4.4.0 INTERPRETATION OF DATA.

4.4.0.0 INTRODUCTION.

This chapter deals with the results obtained from the analysis of data. The researcher interpreted the analyzed data pertaining hypothesis belonging to each objective.

4.4.1 FIRST OBJECTIVE.

To examine the effect of Advance organizer model on achievement of B.A.B.Ed. Student teachers in English for communication.

The null hypothesis there is no significant difference in the immediate attainment level of control group and experimental group while taught through traditional method and Advance organizer model has been rejected and it was found that there was significant difference in the attainment level of control group and experimental group.

4.4.2 SECOND OBJECTIVE.

To compare the achievement of student teachers taught through traditional method and advance organizer model.

The advance organizer model was found comparatively effective than traditional method of teaching.

4.4.3 THIRD OBJECTIVE.

To compare the post test achievement scores of student teachers in communication skills and reading comprehension, while taught through advance organizer model.

The subhypothesis, there is no significant difference between the post test achievement scores of student teachers in communication skills and reading comprehension, taught through advance organizer model has been rejected. The significant difference was found between the achievement scores of student teachers in communication skills and reading comprehension.

The achievement scores in reading comprehension found better as compared to communication skills.