

## **CHAPTER - V**

### **ANALYSIS AND INTERPRETATION OF DATA**

#### **5.1. Introduction :**

The data collected from tests may have little meaning to the investigator until they have been arranged or classified in some systematic way. Statistics is a body of mathematical techniques or processes for gathering, organising, analysing and interpreting numerical data.

#### **5.2. Interpretation :**

After collecting and analysing the data, the researcher had to accomplish the task of drawing inferences followed by report writing. This has to be done very carefully, otherwise misleading conclusions may be drawn and the whole purpose of doing research may get vitiated. It is only through interpretation that the researcher can expose relations and processes that underline the findings.

Interpretation refers to the task of drawing inferences from the collected facts after an analytical study. In fact, it is a search for broader meaning of research findings. The task of interpretation has two major aspects viz. Firstly to establish continuity in research through linking the results of a given study with those of another and, Secondly the establishment of some explanatory concepts.

“In one sense, interpretation is concerned with relationships within the collected data, partially overlapping analysis. Interpretation also extends beyond the data of the study to include the results of other research theory and hypothesis.” Thus, interpretation is the device through which the factors that seem to explain what has been observed by the researcher during the course of the study can be better understood and it also provides a theoretical conception which can serve as a guide for further researches.

### **5.3. ANALYSIS OF DATA COLLECTED FROM STUDENT-TEACHERS PERTAINING TO ECCT :**

The present study involves analysis of the B.Ed. paper No. VII syllabus of Economics method and class IX, X and XI, XII Economics text-books for identifying the concepts of Economics reflected in them. Based on these concepts a Economics Clarity Test was prepared and administered to student-teachers of Economics of the academic year 2004-05 from the three Colleges of Education (Appendix No. ) affiliated to Shivaji University, Kolhapur, Maharashtra offering Economics as one of the methods of teaching.

#### **5.3.1. Types of Data Collected :**

The type of data collected after administration of the ECCT ready for analysis was,

- i) Achievement of student-teachers of Economics on ECCT with Economics as their first and second method.
- ii) Achievement of student-teachers with and without Economics subject on the ECCT - graduate and post graduate level wise.
- iii) Achievement of student-teachers of Economics on ECCT with Economics as their first and second method wise and sex - wise.

The data has been analysed into three levels of achievement on the ECCT wise. High with scores above 81 %. Medium with scores between 41 % and 80 % and Low with scores below 40 %.

The level of the scores have been fixed with the assumption that graduate and post graduates in the particular subject have to be familiar with all the concepts of that particular subject, and therefore, the need to undertake the following analysis.

#### 5.4. Analysis of data from graduated and post graduate student-teachers of Economics on Achievement in ECCT first and second method - wise.

Table No. 5.4. is an analysis of the achievement of student-teachers of Economics on the ECCT first and second method - wise.

#### Title of Table

**Table No : 5.4. Achievement of graduate and post graduate student-teachers of Economics subject on ECCT with Economics as their first and Second Methods.**

Sr. No.	Achievement Status	Scores	student-teachers with Economics as their first and second method		student-teachers with Economics as their first method		student-teachers Economics their second method	
		<b>Total :</b>	No : 30 = 100 %		No : 16 = 53 %		No : 14 = 47 %	
1.	High	above 81%	02	07%	02	13%	00	00 %
2.	Medium	41 - 80 %	20	66%	13	81%	07	50 %
3.	Low	below 40%	08	26%	01	06%	07	50 %

**Observation :** Table No. 5.4. shows the number and percentage scores on high, medium and low of the 30 student-teachers of Economics subjects with Economics as their first and second method at the B.Ed. course.

It is observed that only 7 % student-teachers have scored high on the ECCT where as the majority i.e. 47 have Economics as their second method. Comparing their scores it is found that majority i.e. 81 % with Economics as their first method are medium scores with 13 % in the high level and only 6 % in the low level. Where as those with

Economics as their second method none are at high level. 50 % are in the middle and 50 % in the low levels.

**Findings :**

1. The majority i.e. 66 % student-teachers of Economics subjects have achieved medium scores of the ECCT. With only 7 % in the high level.

2. Comparing student-teachers of Economics having Economics as their first method with those having Economics as their second method, those with first method are found it be superior in their clarity of Economics concepts as compared to those with second method.

**Conclusion :**

1. Student-teachers of Economic with Economics as their second method at the B.Ed level have medium level of clarity of concepts in Economics.

2. Student-teachers of Economics with Economics as their first method are found to be superior in their clarity of Economics concepts as compared to those with Economics as their second method.

**5.5. Analysis of data from graduate and post graduate student-teachers of Economics on achievement in ECCT with Economics and Non-Economics.**

The data collected from 30 graduate and post graduate student-teachers of Economics with Economics and Non-Economics method at B.Ed. in the ECCT is analysed in Table No. 5.5.

## Title of Table

**Table No : 5.5: Analysis of graduate and post graduate student-teachers with Economics and Non-Economics subject based on achievement in ECCT first and second method wise :**

Sr. No.	Achievement Status	Scores	student-teachers graduate and post graduate having Economics subject		student-teachers graduate and post graduate having Economics subject		student-teachers graduate and post graduate having Non-Economic subject	
			No	%	No	%	No	%
		<b>Total :</b>	No : 30 = 100 %		No : 20 = 67 %		No : 10 = 33 %	
1.	High	above 81%	02	07 %	02	10 %	00	00 %
2.	Medium	41 - 80 %	20	66 %	18	90 %	07	50 %
3.	Low	below 40%	08	27 %	00	00 %	07	50 %

**Observation :**

Table No. 5.5. shows the number and percentage scores high, medium and low of the 30 graduate and post graduate student-teachers having Economics and Non-Economics subject as their first and second teaching method at the B.Ed. course.

It is observed that only 7 % have <sup>high</sup> scores with 27 % having scored low, Out of the 30 graduate and post graduate student-teachers 20 i.e. 67 % have Economics as their subject and 10 i.e. 33 % graduate and post graduate having Non-Economics teaching method. Comparing their scores it is found that majority i.e. 90 % graduate and post graduate having Economics subject have medium scores only 10 % have high level and 0 % i.e. none are in the low level. Where as of those student-teachers

having Non-Economic subject at graduate and post graduate level. 0 % i.e. no student-teachers are at the high level and 80 % are at the low level.

**Findings :**

1. The majority of student-teachers i.e. 67 % having Economics and Non-Economics subject have achieved medium scores on the ECCT with only 7 % in the high level and 27 % in the low level.

2. Comparing graduate and post graduate student-teachers having Economics and Non-Economics subject as their first and second method it has been found that the student-teachers of Economics subject have superior concept clarity as compared to those graduate and post graduate student-teachers with Non-Economic subject.

**Conclusion :**

1. Graduate and post graduate student-teachers of Economics with Economics as their method at the B.Ed. level have medium level clarity of concepts in Economics.

2. Graduate and post graduate student-teachers having Economics subject as their first or second method are found to be superior in their clarity of Economics concepts as compared to those graduate and post graduate student-teachers of Economics with Non-Economics subjects.

**5.6. Analysis of data from student-teachers of Economics with Economics as their first and second method based on their achievement on the ECCT sex-wise.**



## Title of Table

**Table No : 5.6. Analysis of student-teachers of Economics base on their achievement on ECCT - first and second method wise and sex-wise.**

Sr. No.	Achievement Status	Scores	All student teachers having Economics as their first and second method		Male student-teachers of Economics with Economics as first or second method		Female student-teachers of Economics with Economics as their first of second method	
			No	%	No	%	No	%
			No : 30 = 100 %		No : 16 = 53 %		No : 14 = 47 %	
1.	High	above 81%	02	07 %	00	00 %	02	07 %
2.	Medium	41 - 80 %	20	66 %	10	33 %	10	33 %
3.	Low	below 40%	08	27 %	06	20 %	02	07 %

**Observation :**

Table No. 5.6. shows the number and percentage scores in three levels high, medium and low level of 30 student-teachers of Economics with Economics as their first or second method at the B.Ed. course sex-wise.

It is observed that only 7 % student-teachers have scored high on the ECCT where as the majority i.e. 66 % have medium scores and 27 % have low level scores.

Out of the 30 student-teachers 16 are male student-teachers i.e. 53 % and 14 are female student-teachers i.e. 47 %.

Comparing the scores of student-teachers it is found that 33 % male student-

teachers have scored in medium level where as 20 % have scored on the Economic clarity test on low level. No male student-teachers have scored high on the ECCT whereas 33 % female student-teachers have scored medium level. On the ECCT and 7 % have scored at high and low levels respectively.

**Conclusion :**

Comparing male and female student-teachers it is found that though 33 % male and female student-teachers have scored medium level on the ECCT. 7 % female student-teachers have scored high whereas no male student-teachers is found to have scored high on the ECCT.

Since 20 % male student-teachers have scored low on the ECCT with only 7 % female student-teachers in this level, it can be concluded that female student-teachers have better clarity of concepts in Economics as compared to male student-teachers.

**5.7. Analysis of student-teachers on clarity of concepts from 12 branches of Economics :**

The 12 Branches of of Economics along with the concepts selected from them for the ECCT are as following.



**Title of Table**

**Table No : 5.7. Analysis of student-teachers on clarity of concepts from branches of Economics :**

<b>Sr.No.</b>	<b>Branches of Economics</b>	<b>Concept</b>	<b>Concept No.</b>
1.	Development Economics	Economic Problem Caitalism Socialism Mixed economy Private Sector Public Sector Co-operative Sector Economic Sector (Primary, Secondary and Tirtary)	08
2.	Needed Economics	Poverty	01
3.	Population Economics	Populations Consumers protection Unemployment Agriculture Green Revolution	05
4.	Banking Economics	Bank	01
5.	Macro Economics	Trade	01
6.	Planned Economics	Planning	01
7.	Industrial Economics	Industry	01

Sr.No.	Branches of Economics	Concept	Concept No.
8.	Transport Economics	Transport	01
9.	Micro Economics	Utility Marginal Utility Demand Demand Elasticity Supply Supply Elasticity	06
10.	Business Economics	Production Production Function	02
11.	Labour Economics	Perfect Competition Monopoly Monopolistic - Competition Land Rent Labour Wages Capital Interest Enterprenuer Profit National Income	12
12.	Stastical Economics	Statistics	01

**According to Branches of Economics on the Basis of 40 Concepts Clarity Test Scores Table :**

Sr. No.	Teaching Method	Development Eco.	Needed Eco.	Population Eco	Banking Eco.	Macro Eco.	Planned Eco.	Industrial Eco.	Transport Eco.	Micro Eco.	Business Eco.	Labour Eco.	Statistical Eco.	Total
1		10	6	9	9	4	1	2	3	6	1	12	0	58
2		9	2	3	3	2	1	1	0	4	0	8	3	35
3		9	4	7	7	2	1	3	2	5	0	13	2	52
4		11	5	13	13	4	2	3	4	11	4	21	1	83
5		9	0	7	7	4	0	2	2	5	0	6	2	89
6		12	4	5	5	8	2	1	4	10	0	10	2	57
7		9	3	7	7	4	2	3	1	8	2	14	2	58
8		8	3	9	9	4	4	1	3	9	1	17	1	64
9		9	3	7	7	2	1	2	3	10	2	12	1	55
10		7	3	7	7	4	1	2	6	9	1	15	0	57
11		7	2	2	2	8	0	1	4	7	0	8	0	35
12		8	3	10	10	4	2	2	4	8	2	10	0	62
13		12	4	11	11	3	1	2	4	9	3	20	1	73
14		11	4	11	11	3	2	2	5	8	1	19	2	71
15		8	4	10	10	2	0	2	2	10	1	7	1	49
16		9	1	1	1	1	0	3	1	7	1	3	1	28
17		11	4	7	7	3	1	2	4	3	0	9	2	48
18		9	4	7	7	2	0	3	0	2	2	3	1	36
19		12	4	10	10	4	0	3	0	8	0	16	1	65
20		6	1	12	12	3	2	2	1	4	2	7	0	43
21		12	5	12	12	2	2	2	4	10	2	9	1	64
22		10	1	7	7	2	1	2	4	4	0	3	0	35
23		9	1	8	8	2	0	0	3	1	0	1	0	35
24		10	2	7	7	3	1	1	2	7	0	9	1	47
25		9	1	3	3	1	0	1	3	2	0	4	0	25
26		9	5	10	10	2	1	2	6	5	0	13	2	57
27		12	4	12	12	4	2	3	4	11	4	20	2	82
28		10	5	9	9	4	0	4	6	8	0	16	1	66
29		10	2	8	8	2	2	1	3	8	3	17	1	60
30		8	3	10	10	2	2	2	4	8	2	16	3	62
Total		285	93	241	241	85	34	60	98	207	34	344	34	1591
% Per Branch		63%	52%	43%	63%	47%	28%	50%	55%	38%	28%	41%	19%	44%

Table No. 5.7 shows the student-teachers of Economics clarity of the concepts from the 12 branches of Economics.

1. Above 81 % = None of the branch.
2. Between 61-81 % = Development Economics and Banking Economics (2 branch)
3. Between 41-60 % = Population Economics, Macro Economics, Industrial Economics, Transport Economics, Needed Economics (5 branches).
4. Below 40% = Planned Economics, Macro Economics, Business Economics, Labour Economics and Statistical Economics ( 5 branches).

From Table No. 5.7 it can be seen that none of the 30 student-teachers of economics under study have above 81 % clarity, in concepts from the 12 branches of Economics. In the two branches namely Development Economics and Banking Economics student-teachers have 61-80 % clarity. Where as in the 5 branches namely Population Economics, Macro Economics, Industrial Economics, Transport Economics and Needed Economics, they are found to have only 41-60 % clarity.

The 5 branches of Economics namely Planned Economics, Micro Economics, Business Economics, Labour Economics and Economics are found not to be understood by student-teachers, themselves especially No. 12 which is chiefly statistics.

**Table No : 5.8. Analysis of data collected from experts in Economics  
Pertaining to ECCT :**

In order to establish the content reliability of the ECCT three experts in the subject Economics ( Appendix No. ) were given the ECCT. Analysis of their reactions to the ECCT on,

1. Concept Identified
2. Language Used in ECCT
3. Examples Incorporated
4. Strategies Identified

**Table No. 5.8 : Analysis of Experts Reaction to ECCT.**

Sr. No.	Experts Name	Concept Identified (1)			Language Used In ECCT. (2)			Examples ID Corporated (3)			Strategy Identified (4)			
		Appropriate	Sufficient	In Sufficient	Appropriate	Sufficient	In Sufficient	Appropriate	Sufficient	In Sufficient	Appropriate	Sufficient	In Sufficient	
1.	Shri. Bhanumate C. N.	✓			✓			✓				✓		
2.	Shri. Garade P. N.	✓			✓			✓				✓		
3.	Shri. Koli S. P.					✓			✓			✓		

From table No. 5.8. experts on Economics have reflected have on the quality of ECCT.

Of the three experts have responded favourable saying that the concepts identified were appropriate. However one expert has suggested that the number of concept should be increased.

The language used in ECCT was found to be appropriate by all the 3 experts. The examples incorporated and strategies identified for the various concepts were also reported as being appropriate. Therefore the ECCT is found to be a useful package for student-teachers of Economics.

#### **Conclusion :**

In the Chapter No. V. Analysis and Interpretation of the data is presented. In the next chapter No. VI, Summary, Conclusions, Recommendation and topics for further research are presented.

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