CHAPTER - 2

RESEARCH METHODOLOGY

- Concept
- Universe of study
- Research design
- Sampling method/size
- Source/Techniques
- Processing of data
  (a) Classification of data
  (b) Tabulation of data
  (c) Analysis and Interpretation of data
  (d) Presentation of data
Human being is the most intellectual, rational and inquisitive animal of the world. Due to his curious characteristics he is always a watchful caretaker and is always eager about the problems prevailing in the society and their remedies.

Furthermore he seeks explanation to the information concerning the problem, discovering new knowledge and to verify it, is itself a complex problem. The real knowledge about various aspects of problem, by suitable devices and techniques, could be attained so that facts on the basis of observation, experiments and verification of inherent processes of human behaviour could be obtained and discovered by relationship between action and reaction of the social phenomenon. For this one has to think which type of research method ought to be employed so that reliable, logical and factual information could be gathered.

Karlingar, F.N. (1964:4) revealed, “The developments of any certain subject depends upon its method of study nor on subject contents”\(^1\). Therefore Selzi Jahoda and Cook “divided study method of social science into Normative and Applied type. In general the normative method produce theoretical knowledge and the applied method provide utilitarian knowledge.”\(^2\)

Pearson further explains this situation in his words, “In Normative research original principal and rules are explored in reference to social lives, problems and phenomenon, which indicates what should be done by investigator, on the contrary in applied research treatment of problem is

\(^1\) Karlingar, F. N. (1964:4) : The Foundation Of Behavioral Research Renahart & Winstio Press Halt New York p-4
\(^2\) Jahoda, Seltiz, Deutch Cook (1950:35) Research Methods In Social Relations p-35
submitted through deep study of problem, in relation to human behaviour and applicable suggestions are given."  
Singh S. D. (1980=59) suggested, “In applied research for obtaining specific objectives, new knowledge is acquired” whereas Karlingar “divided research work in three categories –
1. Pure Fundamental Research, 2- Action research, (3) Applied research”.

As the human being is the highest composition of God, in the same way human society and various social phenomenon are the highest contribution of man. The human being is intellectual, full of curiosity and has thrust for knowledge, therefore, it is truly said that human being not only studies the nature but also studies himself. The study of earth, plants, wind, rivers and sea presents wonderful experiences, educate human being and fulfill his curiosities of the art and science, but the study of himself, his society, his behaviour or social events are very interesting, excessively wonderful and full of uniqueness in nature. This sort of study is not subjective by nature, but the truth can be attained only by observations, experiments and empirically based activities. In relation to social events, the observation of truth is social research. Research in all fields of human activities means continued search for knowledge and understanding. But, not all knowledge and understanding is scientific. “Scientific research is essentially made up to two elements- (i) Observation by which knowledge of certain facts is obtained through sense perception, (ii) Reasoning by which the meaning of these facts, their interrelation and their relation to the existing body of scientific knowledge are ascertained as far as the existing state of knowledge and investigator’s ability permit”.

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If both of these elements are available in investigation of social facts, then it is called social research. In this outlook social research is empirical method to solve any social problem, to verify any hypothesis, to seek cause of new problem and to correlate the cause and effect relationship with various new problems.

This empirical method ought to be such which fulfils the terms and conditions of science and with the help of it subject of research may be verified. In brief, for the sake of new knowledge systematic endeavors are called social research.

Now it is clear that social research according to regulation of science indicates about the human activities, which strengthen our knowledge pertaining to cause and affect any phenomenon. The more exploratory thing about social research is the method that is based on observation, classification and analysis of information. In this context, Mrs. Young said that, “We may define social research as a scientific undertaking which by means of logical and systematized methods, aims to discover new facts or old facts to analyse their sequences, inter relationship, casual explanations and the natural laws which govern them”7. Therefore Moser said that “Systematized investigation to gain new knowledge about social phenomenon and problems, we can call social research.”8

Social research is not a simple work that is why each individual cannot perform it. Merely bookish knowledge is not sufficient for it some other internal and external characteristics are essential because social research is concerned with social problems and social problems are abstract, changeable, complex and individual oriented, thus, their study is more difficult than that of natural sciences. It is unique to study the social problem, the study of human

7 Young. P. V. (1960): Scientific Social Survey & Research, Asia Publication House, Bombay, P-44.
by human, as the subject of this research studies, "Status-Role and Problem of Primary School teachers."

UNIVERSE OF THE STUDY:

An investigator should observe precautions in determining the scope of research study. "It demands great carefulness and knowledge. If scope of research study is made appropriately then absolute utilization of research methodologies can be done, therefore precaution is not merely necessary but compulsory in relation to determination of scope of research study according to social scientists".9

During research every researcher faces the problem of selecting research area. In context of research area researchers have different views, some says it should be small/limited while others say it should be wide and big, but in scientific view it should neither be too small nor too big and wide because (i) the time limitation for research work is two year and it has to be completed within the time (ii) if the area is wide researcher need more time and money and has to do more labour in order to collect data, that is why research area should neither be too small nor too big.

Among the towns of north India, Jhansi has remarkable place in Indian history, especially in the lore of its freedom struggle. It is associated with the illustrious and legendary figure of Maharani Laxmi Bai and Jhalkari Bai who fought valiantly against the British Empire in 1857 uprising and made a glorious place for themselves in the annals of country’s war of independence.

Under the British regime Jhansi developed itself as an administrative, railway and military centre. It is the administrative seat of the commissioner of Jhansi division. Jhansi is a major railway Junction on the north-south main trunk routes and Jhansi & Babina are military centres.

The complex is one of the largest in the country but the hinterland was and continues to be economically underdeveloped. Educationally it has remained neglected for a long time. Although in recent years it has tried to catch up with the progress in other parts of the country.

Jhansi district lies in the extreme southwest corner of U.P., between 25°10 and 25°70- north latitude and 78°40-79°40-east longitudes. In the west and north its boundary is contiguous with that of M.P. In point of fact, culturally it forms a part of Bundelkhand region most of which lies in M.P. The campus area of district Jhansi is 5024 sq Kms.

Table No. 2 (1)
Population of Jhansi in Decades and Growth rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Sex wise Distribution of Population</th>
<th>Decadal Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1971</td>
<td>555252</td>
<td>462761</td>
</tr>
<tr>
<td>1981</td>
<td>660664</td>
<td>569621</td>
</tr>
<tr>
<td>1991</td>
<td>700735</td>
<td>559529</td>
</tr>
<tr>
<td>2001</td>
<td>736926</td>
<td>569128</td>
</tr>
</tbody>
</table>

The change in population or the increase in population in the two decades has been stated in the following table. In both categories of male and female, in spite of being large on the basis of area, which constitutes of five Tehsil, the population growth is less.

Table No. 2 (2)
Male and female Ratio and Decadal Growth Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Decadal Growth</th>
<th>Females Per/1000 Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>555242</td>
<td>462761</td>
<td>1018013</td>
<td></td>
<td>860</td>
</tr>
<tr>
<td>1981</td>
<td>690644</td>
<td>569621</td>
<td>1260265</td>
<td>242252</td>
<td>884</td>
</tr>
<tr>
<td>1991</td>
<td>736926</td>
<td>566128</td>
<td>1333054</td>
<td>272789</td>
<td>832</td>
</tr>
<tr>
<td>2001</td>
<td>830075</td>
<td>695127</td>
<td>152502</td>
<td>234948</td>
<td>834</td>
</tr>
</tbody>
</table>
On the evaluation of the table we come to know that in the year 1971 total population of male was 555242 that of female was 462761, which rose to 690644 of male and 569621 of female in the year 1981. In this way for the year 1971 to 1981 the total change in population was 242252. In the year 1991, the population of males was 736926 and that of females were 566128. In this way the change in population was 272789 between the year 1981 to 1991. In the year 2001 ratio of female to male was 834 to 1000.

Table No. 2 (3)

Particulars of Medical facilities in Distt. Jhansi

The particulars of Public Sector physicians sanctioned and in position are given discipline wise of Jhansi:

<table>
<thead>
<tr>
<th>Allopathic</th>
<th>Ayurvedic / Unani</th>
<th>Homeopathic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>78</td>
<td>21</td>
<td>20</td>
</tr>
</tbody>
</table>

Table No. 2 (4)

Particulars of Private Sector Physician in Distt. Jhansi

The position of Private Sector physicians in Distt. Jhansi is given below:

<table>
<thead>
<tr>
<th>Allopathic</th>
<th>Ayurvedic / Unani</th>
<th>Homeopathic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>116</td>
<td>53</td>
<td>488</td>
<td>468</td>
</tr>
</tbody>
</table>

* Director of Health Services, Swasthya Bhawan, LKO, 1993 (Col. 1,2) Director of Homeopathy, 1993 (Col. 5, 6)
* Registrar Cum Secretary, I MC , Lko 1993
Table No. 2 (5)

Particulars of Public Sector Medical Institutions in Distt. Jhansi

Public Sector Medical Institutions in Distt. Jhansi can be known by following information**

<table>
<thead>
<tr>
<th></th>
<th>Allopathic</th>
<th>Ayurvedic / Unani</th>
<th>Homeopathic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>69</td>
<td>40</td>
<td>5</td>
<td>114</td>
</tr>
</tbody>
</table>

Table No 2(6)

Number of Govt. Recognised Teaching Institution in Jhansi District (Yearwise) *

<table>
<thead>
<tr>
<th>Year</th>
<th>Primary Schools</th>
<th>Junior High School</th>
<th>Girls Junior High School</th>
<th>High Schools</th>
<th>Girls High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-03</td>
<td>1120</td>
<td>286</td>
<td>37</td>
<td>114</td>
<td>18</td>
</tr>
<tr>
<td>2003-04</td>
<td>1253</td>
<td>390</td>
<td>37</td>
<td>124</td>
<td>24</td>
</tr>
<tr>
<td>2004-05</td>
<td>1258</td>
<td>393</td>
<td>37</td>
<td>126</td>
<td>24</td>
</tr>
</tbody>
</table>

Table No 2(7)

Number of Govt. Recognised schools of Jhansi District (Areawise) *

<table>
<thead>
<tr>
<th>Year</th>
<th>Area</th>
<th>Primary Schools</th>
<th>Junior High Schools</th>
<th>Girls Junior High Schools</th>
<th>High Schools</th>
<th>Girls High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>Rural</td>
<td>1017</td>
<td>355</td>
<td>29</td>
<td>39</td>
<td>6</td>
</tr>
<tr>
<td>2004-05</td>
<td>Year</td>
<td>241</td>
<td>58</td>
<td>8</td>
<td>87</td>
<td>18</td>
</tr>
<tr>
<td>2004-05</td>
<td>Total</td>
<td>1258</td>
<td>393</td>
<td>37</td>
<td>126</td>
<td>24</td>
</tr>
</tbody>
</table>

** Economics & Statistical Division State, 1992
# Source :- B.S.A. Office Jhansi
**Table No 2 (8)**

**Showing Higher Educational Institutions in Jhansi District***

<table>
<thead>
<tr>
<th></th>
<th>Degree Colleges</th>
<th>Girls Degree College</th>
<th>Post Graduate College</th>
<th>Girls Post Graduate College</th>
<th>I I T</th>
<th>IIT (Girls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-03</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2003-04</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2004-05</td>
<td>13</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Table No. 2 (9)**

**Showing No. Of Teachers in Govt. Recognised Teaching Institutions**

*(Year-wise)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Teachers in Primary Schools</th>
<th>Teachers in Girls Primary Schools</th>
<th>Teachers in Junior High Schools</th>
<th>Teachers in Girls Junior High Schools</th>
<th>Teachers in High Schools</th>
<th>Teachers in Girls High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>2869</td>
<td>781</td>
<td>674</td>
<td>92</td>
<td>1619</td>
<td>446</td>
</tr>
<tr>
<td>2002-03</td>
<td>2869</td>
<td>781</td>
<td>674</td>
<td>92</td>
<td>1619</td>
<td>454</td>
</tr>
<tr>
<td>2003-04</td>
<td>2869</td>
<td>783</td>
<td>674</td>
<td>92</td>
<td>1738</td>
<td>471</td>
</tr>
</tbody>
</table>

* Source - N. I. C. Jhansi
Table No. 2 (10)

Showing No. of Teachers in Govt. Recognised teaching institutions

(Area wise-2003-2004)*

<table>
<thead>
<tr>
<th>Area</th>
<th>Teachers in Primary Schools</th>
<th>Teachers in Girls Primary Schools</th>
<th>Teachers in Junior High Schools</th>
<th>Teachers in Girls Junior High Schools</th>
<th>Teachers in High Schools</th>
<th>Teachers in Girls High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural area</td>
<td>2183</td>
<td>448</td>
<td>534</td>
<td>62</td>
<td>933</td>
<td>139</td>
</tr>
<tr>
<td>Urban area</td>
<td>686</td>
<td>335</td>
<td>140</td>
<td>30</td>
<td>805</td>
<td>332</td>
</tr>
<tr>
<td>Total</td>
<td>2869</td>
<td>783</td>
<td>674</td>
<td>92</td>
<td>1738</td>
<td>471</td>
</tr>
</tbody>
</table>

Table No. 2 (11)

Showing No. of students enrolled in Recognized Educational Institution

in District Jhansi*

<table>
<thead>
<tr>
<th>Year</th>
<th>Boys (Class I to V)</th>
<th>Girls (Class I to V)</th>
<th>Boys (Class VI to VIII)</th>
<th>Girls (Class VI to VIII)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>145273</td>
<td>57552</td>
<td>34666</td>
<td>17035</td>
</tr>
<tr>
<td>2002-03</td>
<td>146634</td>
<td>58885</td>
<td>35512</td>
<td>17948</td>
</tr>
<tr>
<td>2003-04</td>
<td>160463</td>
<td>63589</td>
<td>36737</td>
<td>18567</td>
</tr>
</tbody>
</table>

* B S A Office Jhansi
* Source N I C Jhansi
Table No. 2 (12)
Showing No. of students enrolled in Recognized Educational Institution in District Jhansi (Area Wise – 2003-04)*

<table>
<thead>
<tr>
<th>Area</th>
<th>Boys (Class I to V)</th>
<th>Girls (Class I to V)</th>
<th>Boys (Class VI to VIII)</th>
<th>Girls (Class VI to VIII)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>119213</td>
<td>43503</td>
<td>30129</td>
<td>13362</td>
</tr>
<tr>
<td>Urban</td>
<td>41250</td>
<td>20086</td>
<td>6608</td>
<td>5205</td>
</tr>
<tr>
<td>Total</td>
<td>160463</td>
<td>63589</td>
<td>36737</td>
<td>18567</td>
</tr>
</tbody>
</table>

List of Govt. Primary Schools in Distt. Jhansi (Urban Area)

1- Primary School Datia Gate
2- Primary School Saiyer Gate (Boys)
3- Primary school Ganesh Bajar
4- Primary School Gowshala
5- Primary School D.A.V.
6- Primary School Orcha Gate
7- Primary School Sagar Gate
8- Primary School Naveen Saiyer Gate
9- Primary School Chaniyapura (Boys)
10- Primary School Baidyaraj
11- Primary School Naveen Orcha Gate
12- Primary School Talpura

* Source- B. S. A. Office Jhansi
13-Primary School Kushipura (Girls)
14-Primary School Naveen Kushipura
15-Primary School Chaniyapura (Girls)
16-Primary School Saiyergate (Girls)
17-Primary School Laxmibai
18- Primary School Aatiatalab
19-Primary School Unit Boys
20-Primary School Mukaryana
21-Primary School Rishikunj
22-Primary School Unaovgate (Boys)
23-Primary School Old Najaie
24-Primary School Gudari (Boys)
25-Primary School Sharda Sadan
26-Primary School Bharav Nikunj
27-Primary School Ganesh Madiya
28-Primary School Dhilwaribagh
29-Primary School Daru Bondela
30-Primary School Badagaon Gate (Boys)
31-Primary School Laxmi Gate
32-Primary School Naveen Unit
33-Primary School Unit (Girls)
34-Primary School Vasudev
35-Primary School Patla Hanuman
36-Primary School Arya Samaj
37-Primaru School Pareshwar
38- Primary School Bada gaon Gate (Girls)
39-Primary School Gudari(Girls)
40-Primary School Unaov Gate (Girls)
41-Primary School Dadiya Pura
42-Primary School Sutee Mill
43- Primary School Naveen Nagra(Girls)
44-Primary School Pahadiya
45-Primary School Maseeha Ganj
46-Primary School Pulia No. 9 (Pratham)
47-Primary School Premnagar (Boys)
48-Primary School Pulia No. 9 (Drithiya)
49-Primary School Police Line (Boys)
50-Primary School Naveen Nagra (boys)
51-Primary School Saraswati Sipri
52-Primary School Naina Gadh
53-Primary School Naveen Saraswati
54-Primary School Pulia No. 9 (Girls)
55-Primary School Police Line (Girls)
56-Primary School Prem Nagar (Girls)
57-Primary School Nandan Pura
58-Primary School Simardha
59-Primary School Budha
60-Primary School Pichore
61-Primary School Medical
62-Primary School Kocha Banwar (Boys)
63-Primary School Kocha Banwar (Girls)
64-Primary School Maeree
65-Primary School Rajgadh
66-Primary School P. A. C. Rajgadh
67-Primary School Hasari (Boys)
68-Primary School Hasari (Girls)
69-Primary School Lahare Girdh
70- Primary School Bijoli
71-Primary School Bijoli (Girls)
72-Primary School Gadhiyagaov (Boys)
73-Primary School Gadhiyagaov (Girls)
74 Primary School Kushipura (Boys)

List of Junior High Schools in Distt. Jhansi (Urban Area)

1- Junior High School New Basti
2- Junior High School Laxmi Bai
3- Junior High School Prem Nagar (Girls)
4- Junior High School Sipri Bazar
5- Junior High School Sagar Gate
6- Junior High School New Basti (Boys)
7- Junior High School D.C. Talpur
8- Junior High School Kocha Banwar
9- Junior High School Hasari
10- Junior High School Sutee Mill
11- Junior High School Pulia No. 9
12- Junior High School Lahare Girdh
13- Junior High School Simardha

RESEARCH DESIGN

Sociological studies are different on several basis some are to quench curiosity of man some for getting new knowledge. Some are for formulation of hypothesis, some for verification of theme. Some research is aimed to describe any social phenomenon, some for solving the social problem, some for purpose of planning, some for evaluation of the impact of programme, scheme and planned change. So on these objectives basic social researches are carried out. The objective of the study cannot be achieved without orderly action from the beginning of the study. This draft is called research design. It
means the type of research design is decided in accordance with type of selected problem or hypothesis, so that research study can get a certain direction and investigator escape to wander from hither to thither.

It has already been said that any social research cannot be conducted without any goal. These goals are formulated before starting study. So pre-planning of blueprint of various activities to be carried out in future is called research design. Ackoff in this connection says, “Design is the process of making decisions before the situation arise in which the decision is to be carried out.”

Now it is clear that there are many kinds of social research designs, and the investigator, in order to achieve his target selects one of them which is most suitable in his opinion and as soon as the type of design is determined the nature of research work and its objective are clear. Like if we know the research design is exploratory, than it is automatically understood that investigation of inherent reasons and causes of some social event is the main objective of the research work.

The main objective of all research is achievement of knowledge. This knowledge can be attained by various means. So research design is also of several types according to objectives. Mostly, Exploratory, Descriptive and Experimental research designs are used in sociological studies. In this research study exploratory design has been used.

Jahoda said that “Exploratory research design is necessary to obtain the experience which will be helpful in formulating relevant hypothesis for more definite investigation.” To learn the various problems of “Primary school teacher” researcher selected this design for her study. For example if we want to study the primary school teachers and their status role and problems then it would be necessary to study various issues related to the problems of primary

12 Jahoda, Seltiz, Deutch, Cook- Research Methods In Social Relations (1950) p 33
school teachers. Thus investigator selected exploratory design in this study to observe those factors, which are responsible for these problems. For the success of her research design investigator studied related literature, contacted all of those about whom she had heard that they had some knowledge of problems of primary school teacher. In this way their experiences become direction for researcher.

They all created internal motivation and insight and helped in the research work. There are various problems, out of which some are simple, some pathological and some are related with individual, which encouraged the scholar to study them.

**SAMPLE METHOD/SIZE**

"To estimate about ‘all’ by looking or by examining of ‘some’ is a method of sampling. It is assumption of this technique that the characteristics of ‘some’ represent the element of the ‘total’. This is one of the best methods because this method saves a lot of time, money and energy of researchers and it gives scope for accurate data. The selection of ‘some’ is carefully done. To take up ‘all’ is inconvenient expensive and require more time."\(^{13}\). Only representative sample study is best. In social research, use of sampling method is very popular, that’s why in the sense of its use, is done by a layman excessively. No one verifies each seed by opening the mouth of a bag but merely some seeds are tested from the bag and checked, then those seeds are evaluated. It is for all the wheat, which is in bag. We take care to select these seeds.

For testing seeds, they are not taken from the upper layer of its heap as good quality of seeds are kept on the upper layer by the businessmen and these seeds do not represent all the seeds of the heap. Instead, we draw seeds from

\(^{13}\) Mukerjee, Ravindranath(2001), ”Social Research & Statistics, Vivek Publication, 7, U.A Jawahar Nagar, Delhi P 279..
lower or inner layer of the heap for testing. Thus, there is need of more care. So it is necessary to be more vigilant and to prevent deception in purchase of wheat. This is just an applied sampling technique of social science. Its use is carried out in empirical study.

Research work can be conducted on the basis of two methods. We can make the basis of study the whole population or make basis of units for selection. These methods are called census and sampling method. If we want to conduct social survey of school children and if we have to interview with every child it will be called census. In sampling method, we select some students of every class. About sampling method Frank Yaton says “The term sample should be reserved for a set of units or portion of an aggregate of material which has been selected in belief that it will be representative of the whole aggregate.” Goode & Hatt (1950-200) say, “A sample as the name implies, is a smaller representation of a large whole.”

In research work sampling technique is one of the best method because this method save a lot of time, money and energy of researcher and it gives scope for accurate data. There are many types of sampling method such as:

(A) **Random Sampling:** It is considered as best method of sample selection because its every item or unit of universe has an equal opportunity for selection and selection is not influenced by personal bias and prejudices of the investigator. Thomas Carson (1941=224) says about random sampling that, “In a random sample the chance of ‘being drawn’ or ‘thrown’ is independent of the character of the event”

These are some techniques of random sampling: (i) Lottery method, (2) Ticket method, (3) Regular marking method,

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15 Thomas Carson, (1941) Mc Gromuck, Elementary Social Statistics P- 224
(4) Irregular marking method, (5) Tippet method, (6) Grid method and (7) Quota method.

(B) Purposive Sampling: When there is specific objective and researcher select some units deliberately from the universe is called purposive sampling. Adolph Jenson, rightly said about this sampling, “Purposive sampling denotes the method of selecting a number of groups of units in such a way that the selected groups together yield as nearly as possible the same averages or proportion as the totality with respect to those characteristics which are already a matter of statistical knowledge.”

(C) Stratified Sampling: Prof. Young writes about it, “Stratified sampling means taking from the population sub-samples which have common characteristics, such as type of farming, size of farms and ownerships, educational attainment, income, sex, social class etc. These elements making up the sub-samples are drawn together and classified as a type of categories.”

For the present research study the investigator has deployed Purposive sampling method to select respondents. Keeping in view the designated objective of studying Status–Role and Problems of primary school teachers the researcher has selected the respondent units from universal for this special purpose

Purposive sampling is less expensive as the size of selected samples is not large. The selected samples suitably represent the universal. However in order to ensure that the units so selected represent all the characters of universal group purposive sampling method is used.

In the present research study the researcher has, through purposive sampling method, selected 300 primary school teachers from Primary School of urban area of Jhansi city.

16 Young P. V - Fact Finding With Rural People, P-36-37
According to the information collected from the office of Basic Shiksha Adhikari there are 75 government primary schools and 13 junior high schools in Jhansi city. On the other hand there are 898 government primary schools and 191 junior high schools in rural area. Thus we conclude that there are total 973 government primary schools and 204 junior high schools in Jhansi district. In this research study researcher keeping all the essential points of sampling in consideration selected 300 primary school teachers for her research study.

**SOURCES OF DATA:**

Without information and data social research and Investigation is really like a handicapped person. The success of research depends on how much real dependable and appropriate information we collected and on reliable source of data. Therefore the information cannot be renovated in the field of social research. The information is not of single type, they are of many forms. The knowledge of different forms of data is essential for successful investigation. If the researcher does not know that from which source, which type of information can be obtained then he has to wander this side and that side and his precious time and labour will be wasted. Thus the knowledge of various sources of data is necessary for a research investigation.

In social research various types of information are needed. They are classified in two forms first primary data or those fundamental information which are collected in the field by face to face relationship with the respondents of research subject through interview or schedule or direct observation as palmer said, “Such sorts of individuals not only have ability to explain problem related to the subject but also indicate about internal. important steps in social process and observable curves.”

(1960=127) classified sources of information into two parts-documentary and field source”.\(^{18}\)

In this research study, researcher keeping in mind the problems of primary school teachers preferred primary source of data. Field observations were also made the centre of the study. Apart from primary information, documentary sources related books, life sketch, reports, newspapers content as evidence were also used because in India there is lack of statistical data and if available, they are not adequate. Census data can not be ignored, as these reports provide reliable data about social economic and cultural aspects of human life, for example, the size of family, sex ratio, castes wise and religious wise information, occupation wise, educational status, age-wise distribution and vital statistics about population of our country. These data of census are very important politically, socially, economically and commercially.

To observe scientifically, findings in social research about social phenomenon, scientific facts are not merely estimates but solid results based on actual facts and extract information. Thus it is clear that the fundamental condition of social research is collection of real information.

Real data cannot be collected by imaginary manner. For this scientific devices are essential. It is because of solid and empirical techniques through which data are collected, is called techniques of data collection. According to Moser “Techniques are those, accepted and systematized devices for a social scientist, which are used to obtain reliable facts related to his study”.\(^{19}\)

So the basis of social research is reliable data, information and facts. In sociology following are the techniques of the study of social phenomenon:

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\(^{19}\) Moser C. A. & Kalton C.(1961) Survey Method In Social Investigation P-271
1. **Questionnaire**: When respondents are scattered in a wide area they cannot be contacted easily then questionnaire are sent to them by mail along with a request letter. Respondents return them to the surveyor.

2. **Schedule**: Investigator himself by face-to-face relationship in the field fills schedule. It is used for all type of respondents in the technique of data collection.

3. **Interview**: Interview is the technique in which investigator collects information from respondents himself in a homely environment.

4. **Observation**: Investigator in real field situation uses this method by eyewitness. This observation may be participant or non-participant by nature.

5. **Case Study**: In the area of social-research, many methods of data collection are deployed. Out of them, individual case study method is very important. In the words of Goode and Hatt, “In case study we submit step by step picture of special type of continuous experiences. In this form in the process of time numerous experiences, social forces and by implicating on background study of a certain unit full of logic is case study.”\(^{20}\)

   For the study of individual’s attributes, tendencies, sentiments and emotions, only interview technique provides its diagnosis. That is why this technique is superlative in all techniques of data collection. Allport very nicely said, “If we wish to know, what people feel, what do they experience and what do they remember, what are their sentiments and objectives of life, why don’t we our selves ask from them.”

   Side by side VM Palmer also said “The interview constitutes a social situation between two persons by psychological process, involves requiring both

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individuals mutually respond, though the social research purpose of interview calls for a very different response from the two parties concerned.\textsuperscript{21}

In this study, investigator used interview schedule method for data collection. For this researcher adopted following process for interview:

- Researcher conducted interview with respondents to collect information related to study. She collected data in face-to-face relationship, communication for the sake of research according to schedule.

- Interview starts: Investigator put up the aims and objectives of research study before respondents and requested them to provide cooperation and she assured them that their information would be kept confidential. First of all she asked about few primary information related to respondent such as name, education, occupation, etc. after that she asked questions related to study objectives.

- Noting information: Investigator noted the responses against questions given in schedule to avoid any kind of obstacle.

**CLASSIFICATION OF DATA**

In social research the basis of research is real the information concerned with study. This information when collected cannot be concluded as result nor informs anything about the subject. The mountain of information does not serve any purpose. It is to be given a systematic form; that is why classification of information is an essential task. When we classify the collected information on the basis of their differences and similarities it is called classification of data. Therefore Robert E Chaddock (1925:43) wrote

\textsuperscript{21} Palmer VM, Field Studies In Sociology, 1928, P-170.
Classification is especially important for the success of social research because many factors affect given situations and because the measurements show such wide variation."\(^{22}\) Conner (1936-18) also highlighted on the classification in the following words, "Classification is the process of arranging things (either actually or rationally) in groups and classes according to their resemblance and affinities and gives expression to the unity of attributes that may subsist amongst a diversity of individuals."\(^{23}\)

Keeping in mind the above consideration researcher systemized synchronize and limited the heaps of information on the basis of issues, characters and terms of similarity and differences, proximity and distances. In this study, informations are classified qualitatively that is simple or multi qualitatively along with quantitatively also, so that information may be understood and thus classification becomes statistically pure.

**TABULATION OF DATA**

In social research, after classification of information the data is placed in tables. Actually tabulation after classification is the next step in the process of analysis. With the help of it, information becomes simple and clear to understand and statistical data becomes demonstrational. In this process the data is kept in columns so that they can be understood as Jahoda wrote. "Just as coding is thought of as the technical procedure for the categorization of data, so tabulation may be considered as a part of the technical process in the statistical analysis of data"\(^{24}\) It is the reason Ghose (1950-94) explained, "Tabulation stands for the systematic and scientific presentation of Quantitative data in such a form so as to elucidate the problem under


\(^{23}\) Conner, L.R. (1936-18) Statistics In Theory & Practice.

\(^{24}\) Jahoda Duetsch & W.Cook--Research Methods In Social Relations P270
consideration”\textsuperscript{25} That is why young (1960-501) says, “Statistical tabulation is short hand of statistics because it becomes attractive, adequate in size, convenient for comparison, assumes clarity, is more appropriate to objective of study and scientificness”\textsuperscript{26}

In this research study, researcher has to make data more easily understandable; She used frequency tables as well as simple tables. She also considered all necessary rules of tabulation such as – (1) Write title of tabulation (2) Size according to area of page on which it was drawn (3) Captions (4) Write information in columns (5) Keep columns in sequences, (6) Division of columns, (7) Total and (8) Comments. With this process all collected data are systemized logically and to get clear picture in table.

This helps much in statistical analysis. Tabulation makes comparative interpretation simpler. It also saves time and space and makes scientific analysis work more simple.

ANALYSIS AND INTERPRETATION OF DATA

“Scientific analysis assumes that behind the accumulated data there is something more important and revealing than the facts themselves, that will marshal facts when related to the whole study, have a significant general meaning, from which valid interpretation can be drawn”\textsuperscript{27}

The simple meaning of above statement is that the objective of cause and effect would not be clear by collecting a mountain of information unless these collected data are systemized and then analysed and interpretation done. The well known mathematician Jules Henri Poincare wrote that “Science is

\textsuperscript{25} Ghose M K & Choudhary S C (1950-94) Statistic, Theory And Practice.
\textsuperscript{26} Young P V (1960). Scientific Social Survey & Research, Asian Publication House, Bombay P-509
\textsuperscript{27} Young P V (1960). Scientific Social Survey & Research, Asian Publication House, Bombay P-509
built with facts as a house is built with stone, but a collection of facts is no more science then a heap of stone is a house”

Therefore it is essential for science that collected data should be orderly edited and then analysis and interpretation can be done so that true knowledge may be achieved. The fundamental need of analysis and interpretation of data if were not systemized they remain meaningless and we cannot find any result from data. The research study will remain half if data are not in analyzed form and interpreted. It is the only reason that Smt. Young says, “Research is creative aspect of scientific analysis.”

Social researcher does not accept that any phenomenon is independent. He accepts collected facts, present ideals and inherent social philosophy of relevant time. Therefore any empirical result can be achieved through the careful checking of collected data, their mutual relationship in the context of relation with total events.

He can only succeed by examining old concepts and challenging situation of new concepts during the process of analysis of data. In this way whatever insight he gains by process of analysis of information, he reexamines on the basis of it and achieves a solid base for interpretation of data.

That is why real interpretation of data is not possible without adequate analysis of data and without factual interpretation;, an investigator cannot obtain any result of findings. According to Smt young (1960-310) “The function of systematic analysis is to formulate a solid organization of a edifice which helps to keep collected facts in their place, so that general inferences can be extracted from them.” In this way without analysis of data the explanation of cause and effect relationship pertaining to any subject or phenomenon is not possible nor any progress of science, achievement of real

28 Young P V (1960) Scientific Social Survey & Research ,Asia Publication House, Bombay P 509
29 Young P V op, cit, P -509
knowledge is possible, because on the basis of analysis and interpretation of data, real scientific rules can be formulated. Therefore, analysis and interpretation of collected data is essential to test old thesis and rules or to certify old theories or rules.

In this research study, researcher considering all above guidance and principles in the mind, classified the collected data and tabulated them so that it becomes simple and likely to be understood easily. Thus, she used analysis and interpretation of data as are adopted by sociological research reports. The same is used here.

**DIAGRAMMATIC PRESENTATION OF DATA:**

The main aim and objective of statistical method is to provide simple form to collected data so that every body can easily understand them as well as appropriate findings may be observed. It is often observed that by classification and tabulation of data we get systematic orderly and brief form of scattered data. Pictures are the effective form to demonstrate these collected data.

For general man only data are uninteresting, complex and with no attraction. Therefore, one does not pay any attention to figures. On the other hand pictures are more attractive and one cannot live without effect of it. It is only the utility and mystery of popularity of data demonstration. Thus Bodington has to write "A properly constructed diagram appeals to the eyes and also to the mind because it is practically clear and easily understandable even by those unacquainted with the method of presentation."  

Infact tabulation makes more help in scientific analysis of data. Yet for a general man, frequencies that are given in tabulation form, has no special meaning, because it is difficult for him to understand these figures. Alternatively, if they are exhibited in picture form they appeal to all and

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30 1. Bodingtons, Statistics & Its Application To Commerce P-140
sundry. Side by side pictures provide comparative importance to its visitors. Therefore, each student of social research should acknowledge the art of demonstrating figure in the form of pictures. Bowley very nicely said, "Diagrams are merely an aid to eye and a means of saving time."

In this research study the investigator demonstrated data in the form of simple diagram, multibar diagrams and pie diagram so that 1) effective and attractive presentation of data may ensured 2) data would be simple in understanding 3) time may be saved 4) data can be easily compared 5) data may simplify in one outlook 6) proved utilization for research and they should be able to indicate about future.