CHAPTER-III

DESIGN OF THE STUDY

METHOD AND PROCEDURE OF THE STUDY

"Research design is plan, structure and strategy of investigation conceived, so as to obtained answers to research questions to control variations".

In any research work, 'Method of the study' plays an important role.

The present study is a survey type of research. Survey type studies are designed to obtain precise information concerning the current status of phenomena and whenever possible to draw valid conclusion from the facts discovered. It is the most popular and widely used research method in education. It is restricted not only to fact findings but may often result in the formulation of important principles of knowledge and solution of significant problems.
So taking the advantages of survey type research the investigator has adopted survey type research design to conduct the study because the present investigation is totally based on the problems faced by female teachers to get into secondary class specifically for teaching science subjects in urban areas just because our society wants to see them in four walls of houses thinking that women are shy and timid in nature by birth and for their safety our best halves of the society allow them to suffer from many social boundations.

And thus, to check out the present status of those working women who are teaching at secondary level class, and to know whether their teaching is effective in positive sense, when provided with social freedom and risk taking opportunities the survey method would be the most appropriate one for the investigator for the study.

**POPULATION OF THE STUDY**

A population refers to any collection of specified group of human and non-humans, such as objects, institutions, time units, geographical area or events. It is also called universe.
For the present study, female teachers of all the secondary level education in Jaunpur district were selected as population.

SAMPLE AND SAMPLING OF THE STUDY

Representative proportion of the population is called sample. This proportion is not fixed sometimes. Less than 1% proportion of the population may provide a representative sample but sometimes a bit larger sample is needed.

Sampling is 'indeed' an important research component, which is divided into two parts mainly as-

(1) Probability sampling and

(2) Non-probability sampling

These two designs also have several parts as below-

<table>
<thead>
<tr>
<th>Types of Sampling</th>
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<tbody>
<tr>
<td>(A) Probability Sampling</td>
</tr>
<tr>
<td>1. Simple Random Sampling</td>
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<tr>
<td>2. Systematic Sampling</td>
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<tr>
<td>3. Stratified Random Sampling</td>
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<tr>
<td>4. Multiple Sampling</td>
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<tr>
<td>5. Cluster Sampling</td>
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<td>6. Multistage Sampling</td>
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</table>
For the present study, 400 female teachers were selected on the basis of subject and locality, by using stratified Random Sampling.

In stratified Random Sampling the researcher first divides his whole population into different strata on the basis of certain characteristics and random sample is drawn from each stratum. This stratification of the population makes different small homogenous groups of the population and simple random sampling technique can be applied to each group to select required number of sample. This makes the sample more representative to the population.

The present study is stratified on the ground of sex, occupation, locality and subjects.

The efficiency of stratified random sample depends on the allocation of sample size to strata.

Percentage method is the best method of allocating sample size among strata.
TOOLS AND TECHNIQUES OF THE STUDY

The word 'Tool' is very important in the modern life of human being. So with the cause, this is the only medium by which the man achieves all his goals of life easily. As the weapons have their own importance in war, salt in food, vehicles in transport, so as tools have their own importance in research. Therefore, it is fact that goal of a man is big or small, he needs major tools for the fulfillment of them. In the same manner, the man needs various tools and techniques for the performance of research work.

Under the process of research work, there is a major need of various data thereafter the selection of sample, making hypothesis and determining the problem as well. Thus the researcher has essentially a need of various techniques according to the necessity of research as well, which has to be complete. During this modern age several tools and techniques have been investigated for the fulfillment of research work. Due to the medium of these tools, the researcher receives the most difficult data very easily.
Test and tools of Research

1. Observation
2. Interview
3. Sociometric Method
4. Inquiry Method
   i. Questionnaire
   ii. Checklist
   iii. Schedule
   iv. Rating Scale
   v. Attitude Scale
   vi. Score Card
5. Psychological Test and Techniques
   i. Intelligence Test
   ii. Achievement Test
   iii. Interest Inventory
   iv. Attitude Test
   v. Personality Inventory
   vi. Attitude Scale

Amongst the following, researcher used following standardized tools for collecting data-


2. Risk Taking Behaviour Scale- P.A. Arora and V. Sinha

3. Class Interaction Analysis- Flander's 10-Category System.

Here the 1st tool is Questionnaire with closed Question having 'yes' or 'No' type responses.
2\textsuperscript{nd} tool is similar to score card; in which for a particular item there is five possible answers and number for each is pre-allotted and scores are finally added.

And 3\textsuperscript{rd} tool is of controlled observation type in which, the researcher use to observe only the teachers behaviour in class and record the observations in record book in the form of coding.

**ADMINISTRATION OF THE TOOLS**

After finalisation of sample and tools to be used, the investigator procured forwarding letter from the head of the department of education addressed to the heads of institutions as per the sample. The investigator visited the institutions personally, took permission from the heads of institutions, observed and recorded teacher's class-room interactive behaviour by sitting back with students at well suited position from where she can notice all the member in class cleary.

After observing classroom teaching behaviour, research handed over two another tools (Women Social Freedom-\textit{L.I. Bhushan} & Risk Taking Behaviour-\textit{P.A. Arora} and \textit{V. Sinha}) to the respective teachers
(only teaching at secondary level classes) and ask them to tick their views on it as per the items.

**DATA COLLECTION:**

1. **Classroom Teaching Behaviour through CIA:** The researcher sat in the classroom for 45 minutes in the best position to hear and see the participants. At the end of each three second, the researcher decided the category that best represented the communication of events. The researcher wrote down this category number while simultaneously assessing communication in the next periods of time. The researcher continued at the rate of 20-25 observations per minute. The researcher's notes were merely a sequence of numbers written in a column, top to bottom, so that the original sequences were preserved.

2. **Risk Taking Questionnaire:** The testees were requested to give their responses to this questionnaire at the end of the administration. No time limit was imposed.
The instructions given to the testees were written in Hindi on the cover page of RTQ, a few examples and some precautions to be taken were also given on the cover page. All these were self explanatory.

3. **Women Social Freedom Scale:** Items in the form of simple statements in Hindi were constructed on each of the dimension mentioned above. All together 24 items including eight negative were there. To every item, two response categories ('Agree' and 'Disagree') were provided and a short instruction in simple understandable Hindi language was added in the beginning.

**SCORING AND TABULATION OF THE DATA**

1. **Classroom Interaction Analysis:**

The researcher prepared a Interaction Matrix for data interpretation. The matrix was of [10x10], i.e., since Flander have 10 categories, the matrix is of 10 row and 10 columns.
In order to work out with matrix, the scored numbers were made as 10 at starting and ending.

The scored entries were made pair in continuous manner and the 1st number of the 1st pair were entered in row and the 2nd number in column and the 2nd number of 1st pair become 1st number of 2nd pair and entered in row and 2nd number of 2nd pair were entered in column, similarly the procedure continued till all the numbers scored were tallied in matrix. After this, each row and each column was totaled separately and recorded, where each row and each column represents each category of teacher's behaviour.

After completing the matrix, the researcher did interpretation based on Behaviour Ratios. For this purpose, the researcher selected
five behavioural ratios (DTT, ITT, I/D, TQR, SIR) and calculated them for each female teachers separately.

After this, the whole sample were categorized into two i.e., based on locality and based on subject. Further these two were sub-categorized into two i.e., locality based female teachers were divided as female teachers teaching in urban area and in rural area in the same way female teachers based on subject were divided as teachers teaching Art subject and teachers teaching science subject.
Now values for each behavioural ratios to be studied were classified according to categories discussed i.e.

1. DTT
   - Art
   - Science
   - Rural
   - Urban

2. ITT
   - Art
   - Science
   - Rural
   - Urban

3. I/D
   - Art
   - Science
   - Rural
   - Urban

4. TQR
   - Art
   - Science
   - Rural
   - Urban

5. SIR
   - Art
   - Science
   - Rural
   - Urban
i.e., twenty tables were formed and for each table, for each behavioural ratio, C.R. value is calculated based on locality and subject-

1. \[
\begin{array}{c}
\text{DTT} \\
\text{Art} && \text{Science} && \text{Rural} && \text{Urban} \\
\text{C.R. Value} & & \text{C.R. Value} \\
\end{array}
\]

2. \[
\begin{array}{c}
\text{ITT} \\
\text{Art} && \text{Science} && \text{Rural} && \text{Urban} \\
\text{C.R. Value} & & \text{C.R. Value} \\
\end{array}
\]

3. \[
\begin{array}{c}
\text{I/D} \\
\text{Art} && \text{Science} && \text{Rural} && \text{Urban} \\
\text{C.R. Value} & & \text{C.R. Value} \\
\end{array}
\]

4. \[
\begin{array}{c}
\text{TQR} \\
\text{Art} && \text{Science} && \text{Rural} && \text{Urban} \\
\text{C.R. Value} & & \text{C.R. Value} \\
\end{array}
\]

5. \[
\begin{array}{c}
\text{SIR} \\
\text{Art} && \text{Science} && \text{Rural} && \text{Urban} \\
\text{C.R. Value} & & \text{C.R. Value} \\
\end{array}
\]
2. Risk Taking Behaviour Scale:

The answering of RTQ was based on five point scale. The testees were asked only to tick the leaning category liked by her. Every item was to be ticked out.

"Tick (✔) 'Very much' category, if you like very much the thing, mentioned in the particular item".

"In the same way to tick out in 'much', 'moderate', 'less', and 'very less' categories as you think fitness to yourself about the statement given in the item".

In RTQ, the five leaning categories i.e., very much, much, moderate, less and very less carry the 5, 4, 3, 2 and 1 scores respectively.

The sum of the scores in all the eight areas gives the total extent of risk-tendency in the testees. The RTQ is capable to shot out the risk-taking tendency in any one particular area. The maximum possible scores in the tool are 200 and the minimum scores are 40 only.
The value for RTQ also classified on the basis of locality (rural and urban) and subject (Art and science) and C.R. Value calculated respectively.

3. **Women Social Freedom:**

   For women social freedom scale, response of "agreement" to a positive item is scored as 1 and "disagreement" is scored as zero. In case of negative items (Sr. No. 3, 5, 6, 9, 11, 14, 19 & 22) the scoring is reversed. The possible scores, therefore, range from 0 to 24, higher score indicating greater desire for 'social freedom' on the part of the subject.

   The total score of WSF also classified on the basis of locality (rural & urban) and subject (Art & Science) and C.R. Value calculated respectively.

**Methods Involved in Statistical Analysis:**

\[
\text{Mean}(M) = \frac{\sum X}{N}
\]

\[\sum X = \text{Summation of Frequencies}\]
N = Number of Frequency

\[ \text{Standard Deviation (S.D.)} = \sqrt{\frac{\sum d^2}{N}} \]

\[ \text{Standard Error of Deviation (S.Ed.)} = \sqrt{\frac{\delta_1^2}{N_1} + \frac{\delta_2^2}{N_2}} \]

\[ \text{C.R. Value} = \frac{M_1 - M_2}{\text{S.Ed.}} \]
REFERENCES


