The term Methodology indicates the way of conducting research. Methodology is a scientific way of conducting research. It is basically concerned with observation of reality defining the problem its dimension a ‘planned’ approach towards analysis of the problem, interpretation of information and drawing conclusion. Through this process a researcher attempts to acquire knowledge and to understand the problem and make concrete suggestion towards its solution.

This chapter deals with the research procedure applied in conducting the present study. For convenience, the research methodology has been discussed under the falling three sub heading:

1. Research Design
2. Variables and their operationalization.
3. Data gathering procedure and statistical techniques used.

3.1 Research Design

I. Locale of Study:

(Sanganer and Bagru) in Rajasthan chosen as locale of study. This was done with the intention that these are the villages in which hand block printing is done at a very large scale and also vegetable dyes are used.

II. District under Study Jaipur
III. Selection of Institutes

SAMPLE SIZE

STATE

RAJASTHAN

DISTRICT

JAIPUR

VILLAGES

SANGANER

Respondents

BAGRU

Respondents

200 Total Respondents

IV. SELECTION OF SAMPLE:

A sample as the name implies is smaller representation of a large whole. A selection of the population selected form the later in such a way that they are representative of the universe called a sample. Simply speaking the method of selecting of a study a portion of the universe with a view to draw conclusion about the universe is known as sampling (Saravanavel 2005).
The sample was selected through random sampling techniques. While selected the sample no restriction of age, Sex, Education or Socioeconomic Status was considered.

The sample selection was based on the information collected from Udyog Bhawan Jaipur.

V. Pilot Study:

Prior to finally deeding the title of the Study a pilot Surveys of the areas were conducted. This gave an idea about the place of the study and nature of the sample that could be drawn and type of aspects and problems, which could be explored out.

VI. Pre-testing of Instruments:

Respondeds were interviewed with the help of schedule and question arises developed foe collection of data. This helped the investigator in making necessary changes in the instruments to be finally used wording and composition etc. Pre-tests are necessary measure for framing a perfect schedule. When a schedule has been prepared. It is tested once to find if any discrepancies have been left out as briefest. The weakness and shortcomings of the schedule were made apparent by administering It to ten present of the so total sample and pre-tested sample was left out in the final data collection.

3.2 Variables and their measurements

An important step in designing all quantitative research projects is defining or identifying the variables that will be manipulated, measured, described, or controlled. Although qualitative researchers do not define variables to the same extent that quantitative
researchers do, they still must outline what kinds of phenomena they are studying. The major types of variables, or phenomena of interest, are described briefly here, with common examples from service-learning research provided. These are presented in terms of labels from the quantitative research approach, but the qualitative tradition includes analogous examples.

**Independent Variable:** A variable that is selected or controlled by the researcher, to determine its relationship to the observed outcome of the research—also called explanatory, predictor, or manipulated variable. A common example is whether or not a course section involves service-learning pedagogy. The nature of what is varied should be carefully described so that the attributes of the different interventions or experiences are clear.

**Dependent Variable:** The variable being measured as an outcome—also called outcome, response, criterion, or explained variable.

The dependent and independent variable undertaken for the present study have been given below:

**Dependent Variable:** Effect of raw material and source of finance was taken as dependent variable for the present study.

**(i) Independent variables:** Background information like age, sex and education of workers.

**(a) Age of the Respondents:** The chronological age of respondents at the time of investigation was taken. All adolescents were listed according to following age groups and given the scored as follows:-
<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Score Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30</td>
<td>1</td>
</tr>
<tr>
<td>30-40</td>
<td>2</td>
</tr>
<tr>
<td>40-50</td>
<td>3</td>
</tr>
<tr>
<td>50-60</td>
<td>4</td>
</tr>
</tbody>
</table>

(b) Education of Respondents: Education was operationalised as the number of years of formal education obtained by the respondents:

**Education Qualification**

- Illiterate
- Primary
- Middle
- High School
- Graduate

c) Gender of the Respondents: Gender was distributed on the basis of Male and Female.

3.3 Research Design

“A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy in procedure,”

It comprises of the following sub-parts:

- Locale of study
- District under study
- Selection of the institutions
- Sample of respondents
- Pilot study
- Pre-test of instruments
TOOLS OF THE STUDY

Survey Method

Survey methodology as a scientific field seeks to identify principles about the sample design, data collection instruments, statistical adjustment of data, and data processing, and final data analysis that can create systematic and random survey errors. Survey methodology is both a scientific field and a profession, meaning that some professionals in the field focus on survey errors empirically and others design surveys to reduce them. For survey designers, the task involves making a large set of decisions about thousands of individual features of a survey in order to improve it (Groves 2009).

Questionnaire

- A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. Although they are often designed for statistical analysis of the responses. The questionnaire was invented by Sir Francis Galton.

- Questionnaires have advantages over some other types of surveys in that they are cheap, do not require as much effort from the questioner as verbal or telephone surveys, and often have standardized answers that make it simple to compile data. However, such standardized answers may frustrate users. Questionnaires are also sharply limited by the fact that respondents must be able to read the questions and respond to
them. Thus, for some demographic groups conducting a survey by questionnaire may not be practical.

**Schedule**

This method of data collection is very much like the collection of data through questionnaire with little difference which lies in the fact that schedules (proforma containing a set of questions) are being filled in by the enumerators who are specially appointed for a purpose.

**3.4 Statistical Technique:**

The following statistical techniques have been applied in the analysis of data.

1. **Percentage**- Single comparison were made on the basis of the percentages, the frequency of a particular call was multiplied by 100 and divided by total number of respondents in that particular category to which they belonged.

   \[
   \text{Percentage} = \frac{\text{The sum of all responses}}{\text{Total number of all the responses}} \times 100
   \]

2. **Arithmetic Mean**- The arithmetic average mean of a variable is obtained by dividing the sum of its given values by their number. If the values is denoted by \( x \) and if \( n \) values of \( x \) are given \( x_1, x_2 - \ldots - x_n \) then the arithmetic mean of \( x \) is

   \[
   \overline{x} = \frac{1}{n} \sum_{i=1}^{n} x_i
   \]

3. **Chi-square test** – In order to test the independence of two attributes a chi-square test was applied as –
\[ nX^2 = \sum_{i=1}^{\text{RxC}} \frac{(O_i - E_i)^2}{E_i} \]

Where,

\( O_i \) = Observed Frequency of \( i^{th} \) cell.

\( E_i \) = Expected Frequency of \( i^{th} \) cell.

In \( R \times C \) contingency table, \( X^2 \) value is compared at \((r-1) \times (c-1)\) degree of freedom with theoretical value of \( x^2 \) at 5 percent level of significance.

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