CHAPTER 3
RESEARCH METHODOLOGY
3.1 The Study:

The present study is "A Study of the Impact of Communication Skills on Professional Effectiveness". Here, 'Professional Effectiveness' is the dependent variable and 'Communication Skills' is the independent variable. The study also studies the impact of the various components of communication skills viz. verbal, nonverbal and interpersonal on professional effectiveness; in terms of different types of industry-sectors, functionalities and levels of hierarchy.

3.2 The Sample:

The sample comprised of 400 professionals selected randomly from the organizations in and around Indore in MP. The sample has representation of Industry-Types (Manufacturing and Services), Functionality-Types (Marketing, Finance, Production, Operations, Human Resource Management and General Management) and Hierarchy-Levels (Front, Middle and Top).

Sample Description:

Table 3.1: Sample Description

<table>
<thead>
<tr>
<th>Industry-wise</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>144</td>
</tr>
<tr>
<td>Service</td>
<td>256</td>
</tr>
<tr>
<td>Level-wise</td>
<td></td>
</tr>
<tr>
<td>Front-level</td>
<td>107</td>
</tr>
<tr>
<td>Middle-level</td>
<td>236</td>
</tr>
<tr>
<td>Top-level</td>
<td>57</td>
</tr>
</tbody>
</table>
3.3 Data Collection:

The primary data required for the purpose of study was collected through two instruments designed by the researcher, one each for:

1) Communication Skills
2) Professional Effectiveness.

For the development of the instruments, first the list of 57 items/statements (carefully chosen after the review of literature) was made for Communication Skills. Similarly, the list of 59 items/statements (carefully chosen after the review of literature) was made for Professional Effectiveness.

Detailed interviews were conducted with 30 experts and on the basis of frequency of choices of judges, finally, a 17-item list was developed for Communication Skills and a 21-item list was developed for Professional Effectiveness.

These items/statements were employed on five-point Likert Scale ranging from ‘Rarely (1)’ to ‘Always (5)’ to come up with the final instruments.

The instruments were bilingual, i.e. developed in both English as well as Hindi, treating the term ‘communication skills’ as a variable much beyond just ‘English language’; and to cater to the targeted respondents, coming from varied industries and strata of society.
The reliability for the ‘Communication Skills’ scale was found to be 0.844 and the reliability for the ‘Professional Effectiveness’ scale was found to be 0.893. The content validity of the scales was high as the scales were developed on the basis of thorough review of literature and with the help of a panel of 30 experts.

The details of the tools are as follows:

‘Communication Skills’ Scale:
- Author: Dr. Sangeeta Jain and Sandeep Atre
- Nature: Verbal
- Structure: 17 items
- Duration: No time limit

‘Professional Effectiveness’ Scale:
- Author: Dr. Sangeeta Jain and Sandeep Atre
- Nature: Verbal
- Structure: 21 items
- Duration: No time limit

Instructions for Administration & Scoring:
- The instructions on the response sheets are self-explanatory and all-encompassing.
- No time-limit is to be enforced to complete the responses.
- It is advisable to emphasize that responses will be kept strictly confidential.
- It should be emphasized that there are no right or wrong answers to the statements.
- It should be told that the scale is not meant to rate the respondents as good or bad.
• It should be enumerated that all statements are to be answered.
• Each item should be scored as ‘1 for Rarely’, ‘2 for Occasionally’, ‘3 for Often’, ‘4 for Mostly’ & ‘5 for Always’.
• The sum of all 17 scores is ‘Communication Skill’ score.
• The sum of all 21 scores is ‘Professional Effectiveness’ score.

3.4 Data-Analysis:

The data collected from 400 respondents for both the scales was entered in the MS Excel Sheet 2007. The analysis was carried out by applying the various statistical tools (Correlation and Regression), using Windows-based Statistical Package for Social Sciences (SPSS).

Correlation and regression:

Correlation is the most familiar measure of dependence between two quantities. Pearson's correlation coefficient", commonly called simply "the correlation coefficient" is the most popular one. It is obtained by dividing the covariance of the two variables by the product of their standard deviations. Correlations will measure the degree to which these variables are related. Correlations range in value from zero to one. The higher the value, the greater the level of correlation. The values can be positive or negative, signifying positive or negative correlation (Rodgers and Nicewander, 1988).

Regression attempts to describe the dependence of a variable on one (or more) explanatory variables. The value of R-square tells you how much of the variation in the value of the dependent variable is explained by your regression model. The linear relationship among the variables in your regression can be determined by examining the Analysis of Variance (ANOVA). If the value of F is statistically significant at a level of 0.05 or less, this suggests a linear relationship among the variables. Values of your regression coefficients and the constant is the expected value of the dependent variable.
when the values of the independent variables equal zero. They represent the extent to which the value of that independent variable contributes to the value of the dependent variable. The t-values in the coefficients table indicate the variable's statistical significance. In general, a t-value of 2 or higher indicates statistical significance (Dowdy and Wearden, 1983).

### 3.5 Hypotheses:

As the objectives of the study are:

1. To study the impact of ‘Communication-Skills’ on ‘Professional Effectiveness’.
2. To study the impact of various components of Communication-Skills on ‘Professional Effectiveness’, in terms of different types of industry-sectors.
3. To study the impact of various components of Communication-Skills on ‘Professional Effectiveness’, in terms of different types of functionalities.
4. To study the impact of various components of Communication-Skills on ‘Professional Effectiveness’, in terms of different levels of the hierarchy.
5. To come up with a suggestive framework on customization of Communication-Skills for better Professional Effectiveness.

**In the light of the above objectives, following hypotheses have been formulated:**

**H\(_{001}\):** There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’.

**H\(_{002}\):** There is no significant impact of ‘Verbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Manufacturing sector.

**H\(_{003}\):** There is no significant impact of ‘Nonverbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Manufacturing sector.
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H₀₀₄: There is no significant impact of ‘Interpersonal Communication Skills’ on ‘Professional Effectiveness’, in terms of Manufacturing sector.

H₀₀₅: There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’, in terms of Manufacturing sector.

H₀₀₆: There is no significant impact of ‘Verbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Service sector.

H₀₀₇: There is no significant impact of ‘Nonverbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Service sector.

H₀₀₈: There is no significant impact of ‘Interpersonal Communication Skills’ on ‘Professional Effectiveness’, in terms of Service sector.

H₀₀₉: There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’, in terms of Service sector.

H₀₁₀: There is no significant impact of ‘Verbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Marketing functionality.

H₀₁₁: There is no significant impact of ‘Nonverbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Marketing functionality.

H₀₁₂: There is no significant impact of ‘Interpersonal Communication Skills’ on ‘Professional Effectiveness’, in terms of Marketing functionality.

H₀₁₃: There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’, in terms of Marketing functionality.

H₀₁₄: There is no significant impact of ‘Verbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Finance functionality.

H₀₁₅: There is no significant impact of ‘Nonverbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Finance functionality.
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\( H_{016} \): There is no significant impact of ‘Interpersonal Communication Skills’ on ‘Professional Effectiveness’, in terms of Finance functionality.

\( H_{017} \): There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’, in terms of Finance functionality.

\( H_{018} \): There is no significant impact of ‘Verbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Production functionality.

\( H_{019} \): There is no significant impact of ‘Nonverbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Production functionality.

\( H_{020} \): There is no significant impact of ‘Interpersonal Communication Skills’ on ‘Professional Effectiveness’, in terms of Production functionality.

\( H_{021} \): There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’, in terms of Production functionality.

\( H_{022} \): There is no significant impact of ‘Verbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Operations functionality.

\( H_{023} \): There is no significant impact of ‘Nonverbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Operations functionality.

\( H_{024} \): There is no significant impact of ‘Interpersonal Communication Skills’ on ‘Professional Effectiveness’, in terms of Operations functionality.

\( H_{025} \): There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’, in terms of Operations functionality.

\( H_{026} \): There is no significant impact of ‘Verbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Human Resource (HR) functionality.

\( H_{027} \): There is no significant impact of ‘Nonverbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Human Resource (HR) functionality.
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H$_{028}$: There is no significant impact of 'Interpersonal Communication Skills’ on 'Professional Effectiveness’, in terms of Human Resource (HR) functionality.

H$_{029}$: There is no significant impact of 'Communication Skills’ on 'Professional Effectiveness’, in terms of Human Resource (HR) functionality.

H$_{030}$: There is no significant impact of 'Verbal Communication Skills’ on 'Professional Effectiveness’, in terms of General Management functionality.

H$_{031}$: There is no significant impact of 'Nonverbal Communication Skills’ on 'Professional Effectiveness’, in terms of General Management functionality.

H$_{032}$: There is no significant impact of 'Interpersonal Communication Skills’ on 'Professional Effectiveness’, in terms of General Management functionality.

H$_{033}$: There is no significant impact of 'Communication Skills’ on 'Professional Effectiveness’, in terms of General Management functionality.

H$_{034}$: There is no significant impact of 'Verbal Communication Skills’ on 'Professional Effectiveness’, in terms of Front level of hierarchy.

H$_{035}$: There is no significant impact of 'Nonverbal Communication Skills’ on 'Professional Effectiveness’, in terms of Front level of hierarchy.

H$_{036}$: There is no significant impact of 'Interpersonal Communication Skills’ on 'Professional Effectiveness’, in terms of Front level of hierarchy.

H$_{037}$: There is no significant impact of 'Communication Skills’ on 'Professional Effectiveness’, in terms of Front level of hierarchy.

H$_{038}$: There is no significant impact of 'Verbal Communication Skills’ on 'Professional Effectiveness’, in terms of Middle level of hierarchy.

H$_{039}$: There is no significant impact of 'Nonverbal Communication Skills’ on 'Professional Effectiveness’, in terms of Middle level of hierarchy.
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$H_{040}$: There is no significant impact of ‘Interpersonal Communication Skills’ on ‘Professional Effectiveness’, in terms of Middle level of hierarchy.

$H_{041}$: There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’, in terms of Middle level of hierarchy.

$H_{042}$: There is no significant impact of ‘Verbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Top level of hierarchy.

$H_{043}$: There is no significant impact of ‘Nonverbal Communication Skills’ on ‘Professional Effectiveness’, in terms of Top level of hierarchy.

$H_{044}$: There is no significant impact of ‘Interpersonal Communication Skills’ on ‘Professional Effectiveness’, in terms of Top level of hierarchy.

$H_{045}$: There is no significant impact of ‘Communication Skills’ on ‘Professional Effectiveness’, in terms of Top level of hierarchy.