CHAPTER - IV

Research Methodology
Research Methodology

The Advanced Learner's Dictionary of Current English (1952) lays down the meaning of research as "a careful investigation or inquiry especially through search for new facts in any branch of knowledge." Redman and Mory (1923) define research as a "systematized effort to gain new knowledge.

Research is an academic activity and as such the term should be used in a technical sense. According to Clifford Woody research comprises defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organizing and evaluating data; making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis.

D. Slesinger and M. Stephenson (1930) in the Encyclopedia of Social Sciences define research as "the manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge, whether that knowledge aids in construction of theory or in the practice of an art."

Research is, thus, an original contribution to the existing stock of knowledge making for its advancement. It is the pursuit of truth with the help of study, observation, comparison and experiment (Kothari C R, 1985).

Research methodology in general is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It is the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them.

Decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a research design. A research design is the
conceptual structure within which research is conducted; it constitutes the blueprint for
the collection, measurement and analysis of data.

After the selection of the topic, the standard books and literature on the subject
were reviewed. The research methodology was planned.

4.1 Statement of the Problem

The title of this study is “Human Resource Development Practices in Public
Sector Undertakings – A case study of Electronics Corporation of India Limited,
Hyderabad”.

This study was aimed at assessing the extent of HRD practices prevailing in ECIL
organisation in terms of “HRD Climate” and “Role Satisfaction” as perceived by the
executives of ECIL organisation.

The executives of ECIL are broadly categorised into two sets, based on
differences in ‘levels in organisational hierarchy’ and ‘gender’, to ensure proportionality
in the distribution of data collection from all the executives of ECIL to ensure accuracy
and validity of the of the research findings.

‘Levels’ viz. ECIL executives are categorized into three sub categories, i.e., (1)
Junior Level Executives (JLE), (2) Middle Level Executives (MLE) and (3) Senior Level
Executives (SLE).

‘Gender’ viz. ECIL executives are categorised into another two sub categories,
i.e., (1) Male Executives, (2) Female Executives.

A sample of about 1%, i.e., 250 respondents is chosen for the study, from a total
of approximately 2500 executives from ECIL, Hyderabad unit. The questionnaire relating
to ‘HRD Climate’ developed by XLRI – Jamshedpur and a questionnaire relating to
'Role Satisfaction' developed by Late Dr. Udai Pareek are administered to these respondents to find information about 'HRD practices in ECIL'.

It is necessary to define the different terms used in this thesis to determine the exact scope of the thesis. The personnel of any industrial setup have been broadly classified as executives or officers if they are not covered under the definition of 'workmen' under the Industrial Disputes Act, 1947. In other words, an employee is called an executive or officer if he is employed mainly in a managerial or administrative capacity, or a supervisory capacity, either by the nature of the duties attached to the office or by reason of the powers vested in him and the functions mainly of managerial nature. ECIL has also classified its human resources as executives/officers and workmen as per the definition of Industrial Disputes Act, 1947.

In the present study, the terms 'executives', 'officers' and 'employees' are used synonymously.

4.2 Significance of the Study

The PSUs occupy a strategic and crucial position in the Indian economic system for the last six decades. There is hardly any area of economic activity where PSUs do not operate. The 'Public Sector' is responsible not only for building the necessary infrastructure for industrialisation, but also for developing human resources and meeting the other social requirements like creation of employment and etc... The most important task before the public sector is to improve its performance with the existing resources. To get the best results from the existing infrastructure, human resources have to be developed in terms of competence, skills and attitude.

PSUs are created with multiple objectives, one among that one being social development. PSUs have defined and developed many specific policies and practices
with an objective to serve as model employers. The top management personnel of these PSUs are expected to create an appropriate working climate that will enable people to achieve their personal goals along with organisational goals.

It was observed in the review of literature that employees in most of the Indian firms, whether public or private, perceived the HRD activity as an intellectual thing and they have a misconception that the HRD is the responsibility of Personnel / HR department and the staff there in.

If HRD plan is to be implemented in any organisation, top management has to extend full support with total commitment to implement the same in their organisations. HRD aims at bringing a change in the organisational culture to facilitate the development and utilisation of people. Such a change is a continuous process and may take place incrementally. In order to hasten this process and institutionalise the new culture, it is important to choose appropriate instruments. A decade ago 'Performance Appraisal' was perceived as a potential instrument for bringing about such changes in perceivable magnitude. However no single component of HRD alone can bring desired change in the organisation in terms of effectiveness in desired performance; but a combination of components of HRD in balanced can bring in desired effectiveness. Never HRD practices are for short term basis, but indeed they should be a practice forever.

Research on HRD practices, on the other hand, has so far had been made to limited extent, at least in the Indian context. While there are sufficient studies undertaken on 'HRD Climate' but there has been little effort to identify the relationship link between 'HRD Climate' and employee 'Role Satisfaction'. Here the researcher is trying to address this gap by trying to investigate the link between 'HRD Climate' and employee 'Role Satisfaction'.
The present study aims at finding out the existence of 'HRD Climate' and levels of 'Role Satisfaction' pertaining to the executives in ECIL. This study can help those who are interested to know the present status of HRD practices in ECIL. The study also reveals the areas where improvements are required to be made to develop the human resources. However, this study is primarily exploratory in nature. The observation made can be further investigated by research scholars.

Although there are various studies and published articles on the individual aspects of HRD and a handful on some of the PSUs in India, however, hardly there has been any empirical study on this subject concerning to ECIL, Hyderabad. This study takes into account some of the most important and influencing aspects of HRD along with a survey on 'HRD Climate' in ECIL, Hyderabad. As such, this observation along with the other reasons mentioned above make this study more significant.

4.3 Objectives of the Study

The following are the major objectives of this research study:

I. To study the level of 'HRD Climate' prevailing in ECIL.

II. To assess the existence and type of relationship between the 'HRD Climate' and 'Role Satisfaction' factors of ECIL employees.

III. To study the effectiveness of the HRD policies in ECIL.

IV. To draw conclusions and make suggestions for building a corporate 'HRD Climate' that facilities employee's 'Role Satisfaction', thereby increasing ECIL's overall performance.

4.4 Hypotheses of the Study

The following are the nine research hypotheses of the study, which are to be tested based on the evidence of facts collected through the questionnaires.
H₀₁: Executives of ECIL at different levels do not significantly differ in their perceptions about the existence of ‘HRD Climate’ in ECIL.

H₀₂: The perceptions about ‘HRD Climate’ among different groups of executives of ECIL will not differ significantly based on gender difference.

H₀₃: The overall perceptions about ‘HRD Climate’ among different groups of executives of ECIL will not differ significantly.

H₀₄: The present HRD practices in Electronic Corporation of India Limited are sound and effective.

H₀₅: Executives of ECIL at different levels do not significantly differ in their opinion about ‘Role Satisfaction’.

H₀₆: The opinion about ‘Role Satisfaction’ among different groups of executives of ECIL will not differ significantly based on gender difference.

H₀₇: The overall perceptions about ‘Role Satisfaction’ among different groups of executives of ECIL will not differ significantly.

H₀₈: The ‘Role Satisfaction’ levels in Electronic Corporation of India Limited are strong and effective.

H₀₉: The opinion of executives of ECIL is the same about the existence of ‘HRD Climate’ and level ‘Role Satisfaction’ in ECIL.

4.5 Scope and Limitations of the Study

The scope of the study is limited to the following:

(a) Electronics Corporation of India Limited, Hyderabad.

(b) It was envisaged to make a study only to bring out the presence of Developmental Climate in ECIL and a summary about the ‘Role Satisfaction’ and its relatedness...
to HRD – Climate as expressed by ECIL executives at different levels, during the year 2010.

(c) The study data was collected on perceived ‘HRD Climate’ and ‘Role Satisfaction’ levels of the respondents, who may be influenced by their own set of environmental factors which are beyond the control of the researcher.

4.6 Period of Collection of Data

The primary data relating to ‘HRD Climate’ and ‘Role Satisfaction’ is collected during the financial year 2009 – 2010. After the progressive and effective implementation of various HR (Human Resources) policies due to the influence of the new industrial policy 1991, ECIL has come to stabilisation itself in almost all the aspects of its functioning, including HRM and HRD practices. As such the data collected during this above mentioned period is supposed to be more accurate, consistent and stable.

4.7 Statistical Tools Used

Keeping in view the objectives and hypotheses of this research study and to have an analytical understanding, the following set of statistical tools are used to evaluate the ‘HRD Climate’ prevailing in ECIL, Hyderabad and the extent to which this ‘HRD Climate’ is influencing the executives to derive ‘Role Satisfaction’.

The statistical tools like Mean (z – test based on mean), Standard Deviation, $\chi^2$ - test, ANOVA and Correlation Analysis are used as tests of significance for the analysis and interpretation of the data.

4.7.1 Mean

Mean is the simplest measurement of central tendency and is a widely used measure. Its chief use consists in summarizing the essential features of a series and in
enabling data to be compared. It is amenable to algebraic treatment and is used in further statistical calculations. It is a relatively stable measure of central tendency.

**z-test** is based on the normal probability distribution and is used for judging the significance of several statistical measures, particularly the mean. The relevant test statistic $z$, is worked out and compared with its probable value (to be read from table showing area under normal curve) at a specified level of significance for judging the significance of the measure concerned. This is a most frequently used test in research studies. *z*-test is generally used for comparing the mean of a sample to some hypothesized mean for the population in case of large sample.

### 4.7.2 Standard Deviation

Standard deviation is most widely used measure of dispersion of a series. Standard deviation is defined as the square-root of the average of squares of deviations, when such deviations for the values of individual items in a series are obtained from the arithmetic average. The standard deviation (along with several related measures like variance, coefficient of variation, etc.) is used mostly in research studies and is regarded as a very satisfactory measure of dispersion in a series. It is amenable to mathematical manipulation because the algebraic signs are not ignored in its calculation. It is less affected by fluctuations of sampling. These advantages make standard deviation and its coefficient a very popular measure of the scatteredness of a series. A small standard deviation indicates the scores are close together and a large standard deviation indicates that the scores are more spread out. It is popularly used in the context of estimation and testing of hypotheses.

*Continued in the next page...*
4.7.3 Chi – Square ($\chi^2$) – Test

$\chi^2$ - test is based on chi-square distribution and as a parametric test is used for comparing a sample variance to a theoretical population variance. $\chi^2$ - test explains whether or not two attributes are associated. In such a situation, the null hypothesis is that the means of the two attributes (viz., ‘HRD Climate’ and ‘Role Satisfaction’) represented from a homogeneous group of respondents, who have a similar opinion about these two attributes. On this basis, first calculate the expected frequencies and then work out the value of $\chi^2$. If the calculated value of $\chi^2$ is less than the table value at a certain level of significance for given degrees of freedom, it can be concluded that null hypothesis stands which means that the two attributes are from a homogeneous group of respondents, who have a similar opinion about these two attributes (i.e., ‘HRD Climate’ and ‘Role Satisfaction’). But if the calculated value of $\chi^2$ is greater than its table value, then the inference would be that null hypothesis does not hold good which means that the two attributes are not from a homogeneous group of respondents, hence who have dissimilar opinion about these two attributes (i.e., ‘HRD Climate’ and ‘Role Satisfaction’). It may, however, be stated here that $\chi^2$ is not a measure of the degree of relationship or the form of relationship between two attributes, but is simply a technique of judging the significance of such association or relationship between two attributes. To judge the significance of association between attributes, it is necessary that the observed as well as theoretical or expected frequencies must be grouped in the same way and the theoretical distribution must be adjusted to give the same total frequency as it is found in case of observed distribution. $\chi^2$ is then calculated, degrees of freedom play an important part in using the chi-square distribution and the test based on it, one must correctly determine the degrees of freedom. Thus, if ‘n’ is the number of groups and one constraint is placed by
making the totals of observed and expected frequencies equal, the d.f. (degrees of freedom) would be equal to \( (n - 1) \). In the case of a contingency table (i.e., a table with 2 columns and 2 rows or a table with two columns and more than two rows or a table with two rows but more than two columns or a table with more than two rows and more than two columns), then d.f. is worked out as follows: d.f. = \((c - 1) (r - 1)\) where ‘c’ means the number of columns and ‘r’ means the number of rows.

4.7.4 Analysis of Variance (ANOVA)

ANOVA is a statistical method that stands for analysis of variance, which is used to do the analysis of variance between and within the groups whenever the groups are more than two. The use of ANOVA depends on the research design. It is used to test the equality of three or more sample means. Based on the means, inference is drawn whether samples belongs to same population or not. When to compare more than two groups, based on one factor, this is called ‘One Way Analysis of Variance’.

ANOVA is also a parametric test and has some assumptions, which should be met to get the desired results. ANOVA assumes that the distribution of data should be normally distributed. ANOVA also assumes the assumption of homogeneity, which means that the variance between the groups should be equal. In ANOVA, a researcher first sets up the null and alternative hypothesis. The null hypothesis assumes that there is no significant difference between the groups. The alternative hypothesis assumes that there is a significant difference between the groups.

Do the necessary calculation and calculate the F-ratio. F-test is based on F-distribution and is used to compare the variance of the two-independent samples. This test is also used in the context of analysis of variance (ANOVA) for judging the significance of more than two sample means at one and the same time. It is also used for
judging the significance of multiple correlation coefficients. Test statistic, F, is calculated and compared with its probable value (to be seen in the F-ratio tables for different degrees of freedom for greater and smaller variances at specified level of significance) for accepting or rejecting the null hypothesis.

If the calculated critical value is greater than the table value, the null hypothesis will be rejected and the alternative hypothesis is accepted. Rejecting the null hypothesis, we will conclude that the mean of the groups are not equal. If the calculated value is less than the table value, we will accept the null hypothesis and reject the alternative hypothesis.

4.7.4.1 One-way ANOVA

Following are the steps followed in ANOVA:

❖ Calculate the variance between samples.
❖ Calculate the variance within samples.
❖ Calculate F ratio using the formula.
❖ Compare the value of F obtained above in (c) with the critical value of F such as 5% level of significance for the applicable degree of freedom.
❖ When the calculated value of F is less than the table value of F, the difference in sample means is not significant and a null hypothesis is accepted. On the other hand, when the calculated value of F is more than the critical value of F, the difference in sample means is considered as significant and the null hypothesis is rejected.

4.7.5 Correlation Analysis

Simple correlation is the most widely used method of measuring the degree of relationship between two variables. This coefficient assumes the following:
• That there is a linear relationship between the two variables.
• One of the variables is a dependent variable and the other being the independent variable.
• A large number of independent causes are operating in both variables so as to produce a normal distribution.

The coefficient of correlation value lies between ± 1. Positive value indicates positive correlation between the variables and vice versa. A zero value indicates that there is no association between the two variables.

4.8 Sampling Technique

'Stratified Random Sampling' technique has been used in this study to collect the primary data related to 'HRD Climate' and 'Role Satisfaction' of ECIL officers at various levels and gender differences. However, incidental sampling procedure has been used within the strata to collect the primary data. The total number of participants consisted of 250 management personnel, who are exclusively managers and executives in the officer cadre drawn from different divisions/sections of ECIL. The data was collected through comprehensive self-administered questionnaire.

4.9 Sampling Frame for the Research Study

This study was conducted by collecting the primary source of data from a sample size of about 250 executives of ECIL (out of a total of approximately 2500 executives at Hyderabad) at various levels starting from 'Graduate Engineer Trainee' cadre to the 'General Manager' cadre. The questionnaires were administered with the help of members of ECOA (ECIL's Officers' Association). The analysis of the data, observations and conclusions were based on statistical analysis, logical deduction and reasoning about
"HRD Climate" and "Role Satisfaction" are given in Chapter – 05 and Chapter – 06 respectively.

**Table 4.1: Sampling Frame**

<table>
<thead>
<tr>
<th>Categorisation</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Level Executives (SLE)</td>
<td>30</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>Middle Level Executives (MLE)</td>
<td>73</td>
<td>37</td>
<td>110</td>
</tr>
<tr>
<td>Junior Level Executives (JLE)</td>
<td>50</td>
<td>30</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>153</strong></td>
<td><strong>97</strong></td>
<td><strong>250</strong></td>
</tr>
</tbody>
</table>

- Senior Level Executives (SLE) consists of the following cadre: General Manager (GM), Additional General Manager (AGM), Senior Deputy General Manager (Sr. DGM) and Deputy General Manager (DGM).
- Middle Level Executives (MLE) consists of the following cadre: Senior Manager (SM) and Technical Manager (TM).
- Junior Level Executives (JLE) consists of the following cadre: Senior Technical Officer (STO), Technical Officer (TO), Assistant Technical Officer (ATO) and Graduate Engineer Trainee (GET).

**4.10 Coverage**

This study is primarily focused on to establish the presence of HRD practices influencing 'HRD Climate' and 'Role Satisfaction' as perceived by the executives of ECIL, Hyderabad for its executives. This study also intends to establish the relationship between 'HRD Climate' and one's 'Role Satisfaction' in ECIL, Hyderabad as expressed by its executives. The information collected for the purpose of research analysis is for the year 2009 – 10 by collecting information through administering two questionnaires on
'HRD Climate' and 'Role Satisfaction' respectively, for 250 executives at different (Junior / Middle / Senior) levels of ECIL, Hyderabad.

4.11 Process of Collection of Data

The methodology used in this thesis for the collection of primary data is through survey method by administering two questionnaires to the executives from the main unit of ECIL, Hyderabad and also by having discussions with them. This ensured validity and reliability of information.

Questionnaire method of data collection is quite popular, particularly in case of big inquiries. In this method a questionnaire is sent to the persons concerned with a request to answer the questions and return the questionnaire. A questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms. The questionnaire is administered to respondents who are expected to read and understand the questions and write down the reply in the space meant for the purpose in the questionnaire itself. The respondents have to answer the questions on their own.

The two questionnaires (given in Appendix - I) administered to the executives of ECIL, Hyderabad for the measurement of 'HRD Climate' and 'Role Satisfaction' are tested for validity and reliability by the developers of these research instruments and are found to be consistent in these tests. These two questionnaires are extensively used by many researchers in the field of HR studies to get the factual information pertaining to these two specific areas, i.e., 'HRD Climate' and 'Role Satisfaction'.

A questionnaire schedule was designed for the collection of Primary Data and to test the hypotheses framed.

The schedule is divided into the following two sections:

- The First Section elicits the presence of 'HRD Climate' in ECIL.
• The **Second Section** elicits the level of 'Role Satisfaction' as expressed by the employees of ECIL.

The questionnaires intended to elicit the opinion and attitudes of the ECIL employees in the areas of 'HRD Climate' and 'Role Satisfaction'. The question asked to the respondents are to be rated on a 5 point scale ranging from 1 to 5.

The **Secondary Data** was collected from the following sources:

- Annual Reports of the ECIL Company.
- Other Published information by ECIL and ECOA news letters of the company.
- Other published information in various books, journals and magazines on HRM and HRD. Related information on the internet.
- Articles, research theses and etc. belonging to some of the Indian academic institutions like IIM-A, Osmania University, Sri Venkateswara University, Sri Krishnadevaraya University, Institute of Public Enterprise (IPE) and etc...
- Government's policy for the management of Public Sector Undertakings.

4.12 'HRD Climate' Variables - OCTAPACE

The HRD culture or climate can be measured by analysing the **OCTAPACE** factors, which brings out the way employees are handled and encouraged in the organisation. The essence of 'HRD Climate' is attributed to the importance given to the development of OCTAPACE (O – Openness, C – Confrontation, T – Trust, A – Autonomy, P – Pro-activity, A – Authenticity, C – Collaboration, and E – Experimentation) culture in an organisation (Rao T.V. and Abraham, 1986). The term OCTAPACE stands for 8 important characteristics which are:
Openness is there when employees feel free to discuss their ideas, activities and feelings with each other.

Confrontation is bringing out problems and issues into the open with a view to solving them rather than hiding them for fear of hurting or getting hurt.

Trust is taking people at their face value and believing what they say.

Autonomy is giving freedom to let people work independently with responsibility.

Pro-activity is the tendency to think ahead before a problem takes place.

Authenticity is the tendency on the part of people to do what they say.

Collaboration is to accept interdependencies, to be helpful to each other and work as teams.

Experimentation is the extent to which the management encourages its employees to take initiative and risks.

4.12.1 Questionnaire on 'HRD Climate'

To measure the 'HRD Climate' prevalent in ECIL, a questionnaire on 'HRD Climate' in the organisation was administered to the executives in the ECIL organisation at various hierarchical levels. This questionnaire having 38 statements was developed by T. V. Rao and E. Abraham (1985) at the Centre for Human Resources Development, Xavier Labour Relations Institute (XLRI), Jamshedpur. This questionnaire was developed to assess the development climate of an organisation and HRD mechanisms. This questionnaire has statements related to OCTAPACE. This questionnaire is allowed to be used freely without restriction. These 38 items can be grouped into three categories:

(1) General Climate (2) OCTAPACE Climate (3) HRD Mechanisms
The General Climate items deal with the importance given to HRD in general by the top management, the line managers, personal policies and positive attitude. The OCTAPACE items deal with the extent to which Openness, Confrontation, Trust, Autonomy, Pro-activity, Authenticity, Collaboration, and Experimentation are valued and promoted in the organisation. The HRD Mechanisms like performance appraisal, potential appraisal, career planning, performance reward, feedback and counselling, training, employee welfare for QWL (Quality of Work Life) and job rotation indicate the extent to which HRD mechanisms are implemented seriously.

The statements relate to the attitude of top management towards its human resources, the attitude of seniors towards juniors, personnel policies, attitude of employees towards each others, implementation of promotion policy, performance appraisal, training and self development.

Each manager is required to score each of the 38 items on a 1-5 point scale. The average of the responses of all the managers is taken as item score for the organisation. Average of all the scores of all the items is taken as the ‘HRD Climate’. The mean score of each item could theoretically range from 1.0 to 5.0 where 1.0 indicates extremely poor ‘HRD Climate’ and 5.0 indicates extraordinarily good ‘HRD Climate’ on that dimension.

The items of the questionnaire on ‘HRD Climate’, (Appendix II) are exclusively related to OCTAPACE culture of ‘HRD Climate’ and these exclusive items are specific to ‘HRD Climate’. Thus, this questionnaire can be expected to measure ‘HRD Climate’.

XLRI established the factorial validity and internal consistency of 38-items instrument developed to measure ‘HRD Climate’ of the questionnaire through correlation analysis, factor analysis and cluster analysis. These tests have established the validity of the questionnaire.
4.12.2 Variables influencing OCTAPACE Climate of HRD

1) Top Management’s Belief in HRD (TMBHRD)

2) Superior-Subordinate Relationship (SSR)

3) Personnel Policies (PP)

4) Supportive and Encouraging Climate (Team Spirit) (SEC)

5) Employee Development Orientation (EDO)

6) Training (TG)

7) Encouragement of Employee Initiative (EEI)

The first dimension identified is Top Management’s Belief in HRD (TMBHRD). The first and foremost task of the HRD department is to come to grips with the existing philosophy and beliefs of the top management. If it finds that these beliefs are running counter to the HRD philosophy, it should influence the top management to change its belief and make it believe that any organisation’s success depends on the presence of developmental climate.

The second dimension is Superior-Subordinate Relationship (SSR). It is every manager’s responsibility to ensure that the development and utilisation of the capabilities of his subordinates is for the purpose of creation of a healthy and motivating work climate, and to set examples for his subordinates to follow.

The third dimension is initiation of Personnel Policies (PP). These provide more specific guidelines for making decisions on matters relating to the development of Human resources. Personnel policies provide guidelines for a variety of employment relationships and identify the organisations intensions in recruitment, selection, development, promotion, compensation, motivation and integration of human resources.
The fourth dimension, Supportive and Encouraging Climate (Team Spirit) (SEC) speaks about the efforts of the management to inculcate a sense of belongingness to the employees by inspiring them with team spirit.

The fifth dimension is Employee Development Orientation (EDO); in the face of rapid technological and social change; executives need to grow not only in knowledge but also in their interpersonal and decision making skills. The executive developments can be divided into three categories viz., (1) Methods that aim at improving the decision making skills of the executives, (2) Methods that aim at improving the inter-personal skills of the employees and (3) Methods that aim at improving the executive’s knowledge.

The sixth dimension is Training (TG). In today’s context, training programmes offer something for everyone from pre-employment preparation for the first job to pre-retirement for those who are due for retirement soon, as training involves some amount of leaning. The range of training is so broad that it provides opportunity to the unskilled to become skilled: it provides an opportunity to the lower-level manager to climb to the higher level. Each training method provides opportunity to develop a particular skill or set of skills.

The seventh dimension is Encouragement for Employee Initiative (EEI). Even though EEI is the last dimension but definitely not the least dimension, which reveals the fact that though employees may take the initiative, it is the duty of the management or superior to encourage and support the cause of the employees in all circumstances.

These statements on ‘HRD Climate’ questionnaire (Appendix-I) contribute to the above parameters. The following Table 2.1 shows the parameters and corresponding statements numbers of the questionnaire.
The comments and observations are based on the following analysis:

Since the questionnaire uses a five point scoring scale, average score around 3 indicate a moderate tendency on that dimension existing in that company. Scores around 4 indicate a fairly good degree of that dimension existing in the company. In order to make interpretations easy the scores are converted into percentage scores using the formula.

\[
\text{Percentage (\%)} \text{ Score} = (\text{Mean Score} - 1) \times 25
\]

This was done assuming that:

- A Score of 1 represents 0%
- A Score of 2 represents 25%
- A Score of 3 represents 50%
- A Score of 4 represents 75%
- A Score of 5 represents 100%

The percentage score indicate the degree to which the particular dimension exists in that company of the ideal 100%. It is certainly desirable for any organisation to have percentage scores of 50 and above. The overall mean score is computed by adding the score on all 38 items for that company and dividing by 38. This gives the overall climate of ECIL Company.

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### Table 4.2: Variables of 'HRD Climate' vs. Question Numbers

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Statement Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management's Belief in HRD (TMBHRD)</td>
<td>1, 2, 5, 13, 19, 21, 36</td>
</tr>
<tr>
<td>Superior-Subordinate Relationship (SSR)</td>
<td>3, 6, 12, 16, 20, 28, 30, 31, 35</td>
</tr>
<tr>
<td>Personnel Policies (PP)</td>
<td>4, 7, 14, 15, 17, 37, 38</td>
</tr>
<tr>
<td>Supportive and Encouraging Climate (SEC)</td>
<td>9, 10, 18, 27, 29, 33, 34</td>
</tr>
<tr>
<td>Employee Development Orientation (EDO)</td>
<td>3, 5, 7, 8, 11, 21, 22, 32, 36, 38</td>
</tr>
<tr>
<td>Training (TG)</td>
<td>24, 25, 26</td>
</tr>
<tr>
<td>Encouragement of Employee Initiative (EEI)</td>
<td>15, 16, 19, 30, 37</td>
</tr>
</tbody>
</table>

#### 4.13 Questionnaire on 'Role Satisfaction'

This questionnaire was developed by Late Dr. Udai Pareek (1993) for the purpose of 'Motivational Analysis of Organisation – Roles' in short form it is called as 'MAO – R'. This ‘MAO - R’ consists of 25 statements, five relating to each of the five needs discussed above: (1) Achievement, (2) Affiliation, (3) Influence, (4) Control and (5) Extension. The concept of 'Role Satisfaction' was used in developing the instrument ‘MAO – R’ for measuring ‘Role Satisfaction’. The reliability and validity of this
questionnaire was established by the original developer of this questionnaire by using correlation analysis for reliability and factor analysis for validity. This questionnaire is allowed to be used freely without restriction.

The statements on ‘Role Satisfaction’ questionnaire (Appendix-I) contribute to the above parameters. The following Table 2.1 shows the parameters and corresponding statements numbers of the questionnaire.

4.13.1 Variables Influencing Employee’s ‘Role Satisfaction’

Role is a position or a designation or an office an individual assumes plus that individual’s personality and responsibilities that are defined by various expectations from that position of that person. Role is a set of specific tasks a person performs because of the position he / she holds in the organisation. Role Analysis technique is followed in HRD to explain and bring into light several aspects of the role of an executive which many a times are not clearly specified or defined in the job description. The measurement of ‘Role Satisfaction’ is a sub-set of measurement of job satisfaction. An attempt has been made in this study to explore the relationship between ‘HRD Climate’ and ‘Role Satisfaction’ of the individual in the organisation. By taking into account the expectations of various members of the role set, role analysis enables the role incumbent to perform his job effectively.

The basic human needs are achievement, influence, control, extension and affiliation. Although some needs may be higher than others, and varies from person to person. However, everyone has these needs and seeks to satisfy them in their organisational goals. The more opportunity one has to satisfy one’s needs in the organisation, the more satisfying the role is.
As already discussed in the earlier chapters, the ‘Role Satisfaction’ is influenced by the following variables:

- **Achievement (AC)** The first dimension is achievement which is the behavior directed towards competition with a standard of excellence to reach goals.

- **Affiliation (AF)** The second dimension is the Affiliation which tries for establishing and maintaining close, personal relationships and tend to express one’s emotions

- **Influence (IN)** The third dimension is the concern which implies to make an impact on others and an urge to develop people.

- **Control (CL)** The fourth dimension is the control which indicates the behavior of an individual with orderliness and urge to monitor and take corrective action when needed.

- **Extension (EX)** The fifth dimension is in the form of extension by showing concern for others, interest in super-ordinate goals and the urge to be relevant and useful to others.

*Continued in the next page...*
Table 4.3: Variables of 'Role Satisfaction' vs. Question Numbers

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Statement Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement (AC)</td>
<td>1, 6, 11, 16, 21</td>
</tr>
<tr>
<td>Affiliation (AF)</td>
<td>2, 7, 12, 17, 22</td>
</tr>
<tr>
<td>Influence (IN)</td>
<td>3, 8, 13, 18, 23</td>
</tr>
<tr>
<td>Control (CL)</td>
<td>4, 9, 14, 19, 24</td>
</tr>
<tr>
<td>Extension (EX)</td>
<td>5, 10, 15, 20, 25</td>
</tr>
</tbody>
</table>

The respondents, i.e., executives of ECIL are asked to rate each statement on a 5-point scale; for the amount of opportunity he/she gets to do the things reflected in the statement. The comments and observations are based on the following analysis.

Since the questionnaire uses a five point scoring scale, average score around 3 indicate a moderate tendency on that dimension existing in that company. Scores around 4 indicate a fairly good degree of that dimension existing in the company. The overall mean score is computed by adding the score on all 25 items for that company and dividing by 25. This gives the overall 'Role Satisfaction' of executives of ECIL Company.

The next two chapters deal about the empirical analysis in detail.