III.1. Significance of the Study

The Growth of Indian Software Industry till date has been held mainly due to the availability of highly competent and the cost competitive software professionals in India. The Indian Software Industry has been playing a significant role in the growth of Indian economy. However, the projected growth of Indian software industry has been largely depending upon the Industries ability in managing of its human resources.

In fact, designing a system, innovation, creation and invention of new technology are all the outcomes of human brain. Management of human brain is more an art rather than a science. As such, it is a difficult task compared to management of other resources. The significance of Human Resource Management is clearly visualized from the saying that, “Japan is poor but Japanese are rich and India is rich but Indians are poor?” The significance of human resource management in the software companies need not be over-emphasized as the latter is a service industry which needs more of human brain rather than other resources for its survival, growth and development in the way of innovative and novel schemes and projects.

The employees of software companies i.e. software professionals are knowledge workers. These knowledge workers are skilled, use intuition and past experience. They are skilled in creating and innovating the things as well as creating the new knowledge, which is originating in their heads and their attitudes towards works is dedicated which is also evident in their commitment, attitude and relationship. These skilled software employees will work dedicatedly to extend their capacity so as to achieve the maximum benefit both for individual employee and organization. Peter .F. Drunker who coined the term ‘knowledge worker’ as ‘high level employees who apply their theoretical and analytical knowledge acquired through formal education, to developing new products and services and pointed out that “knowledge workers have mobility. They can leave. They can own their means of production” which is their knowledge.

Software Companies have been engaging the highly qualified professionals, many with Engineering Qualifications Backgrounds, Knowledge on Computer
Applications, Computer Science and minimum knowledge in other disciplines with suitable skills. The average age of the software employee in India in mid twenties is 35 years. It is a people's knowledge oriented industry and the significant input and output is knowledge.

The software professionals have been working under highly competitive and turbulent environment. The attainment of objectives of Human Resources Management is significantly dependent upon the development of human resources. Human Resources Development (HRD) is a process by which employees are continuously helped in a planned way to acquire all-round capabilities and organizational health. Thus, HRD can be attributed to the fact that it helps in improving Human Relations, developing the Congenial Organizational Climate in moulding the organizational culture and in maximizing the employee’s contributions in attaining the organizational goals economically and effectively.

In view of the vitality of Human Resources Development, the term ‘Human Resources Development’ has become very popular in the recent years. In fact, the Union Government has also instituted as a separate ministry of the Human Resources Development in the year 1986. Form this period onwards all type of organizations in the Indian environment have started replacing of the names as department of Human Resources Development, Human Relations division, Human Resources – Recruitment, Human Resources – Training and Development, etc., and also designated the employees as Manager – HR, Manager – Developments, Manager – Recruitments, Manager – Time Keeping, etc., to look after the Human Resources Development functions.

In spite of the human resources development boom, there seems to be a lot misguided thinking about human resources development in several organizations. One such misconception is treating human resources development equivalent to training and development. Therefore, Human Resources Development is not mere Training and Development but, it is the all round development of manpower at all levels in the entire organizations.
For the organizational effectiveness, the Human Resources are more significant in service-oriented organizations like software companies compared to that of manufacturing industries. Further, it is said that the human resource development plays a significant role in software companies in enhancing human resources contributions for strengthening the customer relations, maximizing the profitability, minimizing of different wastages, etc.

The root-cause for all problems and differences in profits is mostly due to the absence of proper management and development of human resources. The offshore opportunities, high salary packages, challenging work, competitions from within or/and outside of the country are the prevailing factors, to be considered by the software companies for their existence in the business for a considerable period of time. Even a glance at the annual reports of the software companies speaks that they are the first in spending huge amount for their HRD/HRM departments. Indian software industry is comparatively very young and many research studies have not been conducted in the software field. Against this background, it is profoundly felt that there is a Need for the Study of Human Resource Development in Software Companies.

### III.2. Need for the Study

Human Resources Development plays an important role in the economy of the country in general. The organizations producing the goods and services have to develop the human resources so as to meet the competition in the market, expansion of business activities, to bring changes in production or service areas. The organizations which are aspiring their development, such organizations have to provide proper training and development facilities for improving the performancy levels of the individuals in accomplishing the organizational tasks.

In this modern technological generation, the human resource development occupies crucial role. Software organizations are facing the problem of Human Resource Development as the knowledge and skills of the employees are always have to be enhanced in the changing modular software environment. In this software field,
always the employees continuously have to look into the field as there may be tremendous changes within a short period in using the technology.

Hence, it is interesting to have a study on Human Resources Development Practices with reference to software companies. To establish the technology in software field, the organizations have to concentrate on the cost of Human Resources, and the level of software knowledge, qualifications, experiences, skills and etc.

Therefore, an attempt is made on the Human Resources Development Practices by choosing the software companies’ employees as a sample for the study with reference to Hyderabad software companies. There is need to review the studies held in the aspect of the Human Resources Development with reference to software industry.

III.3. Scope of the Study

The study is majorly covering the Human Resource Development concepts of the Learning and Knowledge of Employee, the Organizational Culture, the Training and Innovational facilities available in the organization for their employees the Career Advancement process followed on the organizations and the Performance Appraisal System and its benefits to the employees and organization.

The above concepts covered with a sample of 20 Software Companies in Hyderabad comprising a total sample of 387 respondent employees.

III.4. Objectives of the Study

The objectives of the study are:

1. To study the organizational climate towards Human Resource Development (HRD) in Software Industry;
2. To know the Social, Educational Qualifications, and work Experiences of the Employees in the software organizations.
3. To study the Learning of Employee and the Organizational Culture and its impact in the organizations.
4. To study the Training and Innovation facilities provided by the organizations.
5. To study the Career Advancement process and the Performance Appraisal System of the software organizations.
6. To analyse the Human Resources Management perspectives in the software organizations, and to recommended the appropriate methods of HRD with suitable suggestions.

In the fulfillment of all these objectives, a close and important study is made on all important areas of Human Resources Development in software companies.

III.5. Hypotheses of the Study

H₁: Significant positive relationship exists between technical skill training and employee learning abilities.
H₂: There will be a significant positive relationship between technical skill training and organizational culture.
H₃: It is assumed that training provided to employees will have significant positive impact on employee innovation.
H₄: Trained employees are good in understanding the new technologies and will have better career advancement.
H₅: There exists a significant positive association between training and employee performance.

III.6 Sources of the Data

Both the primary and secondary sources of data have been collected for the study. A questionnaire was designed to collect the primary data. The questionnaire consists two parts. In part I, questions related to demographic information like, gender, age group, years of experience, etc of the respondents was collected. Part II of the questionnaire had questions to measure the opinion of employees on study variables (Learning, Organizational Culture, Training, Innovation, Career Advancement and Performance Appraisal). A five point Likert scale with values ranging from 1 to 5 (1 = Strongly Disagree to 5 = Strongly Agree) was used. In
addition to administration of the questionnaire wherever required the researcher conducted focus group discussions and interviews with employees and managers.

**Examples of the questions used to measure the opinions of respondents**

1. Employees in my department are encouraged to participate in additional training to enhance their skills and abilities. *(Training)*
2. Our department allows employees to make mistakes and learn from it. *(Learning)*
3. Within our department everyone is involved in open and vigorous discussion regarding key strategic issues. *(Organizational Culture)*
4. I am able to introduce a significantly improved process at my work. *(Innovation)*
5. I optimistically view new opportunities as possible and attainable. *(Career Advancement)*
6. Is the Performance Appraisal System in your company provides an opportunity for each appraise to have a clear understanding that what is expected from the reporting officer during the performance year. *(Performance Appraisal)*

The secondary data have been collected from various sources. Factual data have collected from the sampled companies: records, manuals and annual reports, the data have also been collected from the published books of various authors, journals, magazines, news papers and companies’ web sites and other related web sites were browsed.

**III.7. Sampling**

The data for this study have been collected from both sources of primary and secondary which is based on the convenient sampling’ technique. Total IT companies are segregated into Capability Maturity Model level 1 through CMM level 5. The segregation is based on the satisfaction of Specific Key Performance Areas (KPA’s) listed in the Capability Maturity Model. From CMM level 3, CMM level 4 and CMM level 5 groups, conveniently different companies are chosen. The
total sample of companies selected for the study is 20 companies. The list of Companies is shown in Table 3.1.

Table 3.1 showing the list of Companies

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<thead>
<tr>
<th>S.no</th>
<th>Name of the Company</th>
<th>S.no</th>
<th>Name of the Company</th>
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<tbody>
<tr>
<td>1</td>
<td>CMC Limited</td>
<td>11</td>
<td>InfoTech</td>
</tr>
<tr>
<td>2</td>
<td>HCL Technologies</td>
<td>12</td>
<td>Infosys</td>
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<tr>
<td>3</td>
<td>Value Labs</td>
<td>13</td>
<td>TCS</td>
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<td>4</td>
<td>Cisco</td>
<td>14</td>
<td>IBM</td>
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<td>5</td>
<td>Accenture Services</td>
<td>15</td>
<td>Tech Mahindra</td>
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<td>Polaris,</td>
</tr>
<tr>
<td>7</td>
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<td>17</td>
<td>Intergraph</td>
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</tr>
<tr>
<td>10</td>
<td>Wipro</td>
<td>20</td>
<td>CtrlS Datacenters Ltd</td>
</tr>
</tbody>
</table>

To fulfill the objectives framed in the study, a sample of 20 IT companies located in Hyderabad city have been selected and from each company I have randomly selected 50 employees, totaling to 1,000 sample size. Of these employees initially only 200 employees returned the completed questionnaire. I made a follow up by personally visiting the companies for the second time. This effort fetched me another 150 responses. In stage three, I requested the HR Managers to instruct the employees to actively participate in the study. This time I got good response and another 200 respondents filled the questionnaire. Further requests do not yield any more responses.

I tabulated all the 550 responses in excel sheet followed by SPSS. I found 163 responses with incomplete information. These respondents are deleted from final analysis.

Finally, the usable responses are 387 which represent 39 percent of questionnaires administered. This low response rate is due to work pressure of employees, their timing, fear, and employees are skeptic about anonymity.
In addition to the responses obtained through the questionnaires, the researcher has also collected the data by means of discussions and interviews with the respondent employees of the organizations so as to make the objectives fulfillments effectively.

III.8. Statistical Tools used in the Study

The data that have been collected in the study systematically analyzed based on the questionnaire used. In analyzing the study various statistical tools are used Viz., Frequency test, Cross tabulation, Scale Reliability, Correlation and Regression. The Correlation coefficient has been used to check the consistency of the data. To find the HRD Practices implemented in the organizations, the various statistical calculations have been held as stated above.

Tenure of the data collection

The data for the present study have been collected during the period Nov 2012 to April 2013.

III.9. Presentations of the Study

The study on “Human Resources Development Practices - A Study with Reference to Software Industry of Hyderabad” has been presented in ten chapters.

Chapter I deals with the introduction of HRD practices and its components. Existing and prior literature is discussed in chapter II. Objectives and Hypotheses are explained in chapter III. Profile of the software industry is depicted in chapter IV. Demographic characteristic of the sample is presented in chapter V. Chapter VI and VII presents the data analysis. Furthermore, in chapter VIII Hypotheses results are presented. Chapter IX presents the findings and suggestions of the study. Finally, I conclude the research work in chapter X.
III.10. Limitations of the study

As companies are chosen based on Capability Maturity Model level 3, CMM level 4 and CMM level 5 certification and the study is limited to Hyderabad as the Hyderabad’s Hi-tech city has become a hub of software activities, almost all Domestic, National, Multinational and the star multinational software companies are present and thousands of software professionals are working in Hyderabad. This made the researcher to choose Hyderabad. Software companies for conducting the study. Findings cannot be generalized to all Indian software companies as some of software companies are not certified. Further, the study is limited to Hyderabad only, despite the presence of respondent companies across the globe. The data have collected through sampling; there may be deviation in generalizing the opinions of software professionals. The following are other major limitations in conduction this study:

1. Time constraint is there in the study in covering various software companies
2. The financial constraint is there in the study as the expenditure on study is completely born by the researcher.
3. The time spent by the respondents is very less, while interacting with the researcher.