EFFECTIVENESS OF HUMAN RESOURCE DEVELOPMENT CLIMATE IN HIMACHAL PRADESH POWER CORPORATION LIMITED

A
SYNOPSIS

SUBMITTED TO THE HIMACHAL PRADESH UNIVERSITY, SHIMLA IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY
IN
COMMERCE
(2016)

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Introduction

India has the second largest pool of manpower in the world. Though humans are resources, they have to be trained and developed. Human Resource Development (HRD) is a dynamic and continuous process encompassing individuals, organisations and societies. The core of management - 'the human core', is the essence of Human Resource Development. With this realisation increasing number of organisations are creating proper HRD divisions for developing their employees and managerial personnel. With economic liberalisation, comprehensive implementation of HRD programmes has become the order of the day for companies facing intense internal and global competition. Development at times, can be a painfully slow process in our country with problems of poverty, instability, illiteracy, technological inadequacies and industrial strife. Under the circumstances, HRD appears to be the main silver lining for resolving our problems and maladjustments in all spheres provided sufficient investments be made on it by the government, corporate sector and world bodies to make it more comprehensive and vibrant institution. Human Resource Development is a proactive approach to human beings. HRD approach focuses on the optimum utilisation of valuable human resource through reduction of human wastage. HRD not only means a wide ranges of strategies for the improvement of human resource, but it is actually the concern for vitalising, activating and renewing an organisation through human resources with special emphasis on the prevailing patterns of activities, attitudes, values etc. of formal and informal system. HRD in many organisation has been understood as development through the training of individual persons. The main emphasis was put on developing individuals. The disillusionment with training, as a strategy for bringing about change in an organisation through individual has led to a realisation that training of individuals plays a limited role in Human Resource Development. Human Resource Development is not only training but the way the organisation works. Human resource development process is facilitated by mechanisms (instruments or sub systems) such as performance appraisal, training, organizational development (OD) feedback and counselling, career development, potential development, job rotation and rewards. Employees are helped constantly in order to acquire new skills. This is offered through a process of planning, performance, feedback and training. It also includes, assessment of the developmental needs, periodic reviews of performance, and the creation of development opportunities through training, job rotation, responsibility definition and similar other mechanisms. Human resource development is a people-oriented concept that focuses on developing the skills, knowledge and competencies of people. Human
resource development can be applied both at the organizational level and at the national level. Human Resource Development (HRD) aims at developing all the employees of an organisation in a planned manner not only to acquire and apply their existing capabilities for the organisation's growth, but also to develop their inner potential, which helps in building a climate with strong interpersonal bonds, which helps the organisation to achieve its goals. In brief, HRD is the process of improving, moulding and changing the skills, knowledge, creative ability, aptitude, attitude, values and commitment etc. based on present and future job and organisational requirements. HRD Climate is a measure of the perceptions of the knowledge workers about the prevailing nature of HRD.

**Human Resource Development Climate**

An organisation's success is determined by the competencies and motivation of the employees. Sincere and capable employees are the assets of any organisation. Individuals can be helped to give their full contribution according to their potentials if the organizations provide right type of Human Resources Climate. This helps to achieve the goals of the organization, and thereby ensuring optimum utilizations of human resources. Congenial Human Resources Climate is extremely important for development of employees and organizations. Effective implementation of all the Human Resources system ultimately results in building a congenial Human Resources Climate which promotes growth, development, for individual as well as organization. Human Resource Development Climate is an integral part of organizational climate. It can be defined as perceptions the employee can have on the developmental environment of an organization. It can be further grouped into three-broad Categories: 1- OCTAPACE culture 2- General Climate 3- Human Resource Development Mechanisms. The OCTAPACE items deal with the extent to which Openness, Confrontation, Trust, Autonomy, Pro-activity, Authenticity, Collaboration and Experimentation are valued in the organization. General Climate items focus on the importance given to human resources development by the top management. The items dealing with human resource development mechanisms measure the extent to which human resource development mechanisms are implemented seriously.

HRD Climate is an integral part of Organisational Climate. It can be defined as the employee's perception about the developmental environment of their organisation. This may include a number of characteristics such as the following:

- Importance given to human resources
- Openness of communication
• Encouragement given to risk taking and experimentation
• Feedback given to employees to make them aware of their strengths and weaknesses
• A general climate of trust
• Faith in employee's capabilities
• Employee's tendency to help each other and to collaborate with each other
• Team spirit
• Tendency to discourage stereotypes and favoritism
• Supportive personnel policies and practices.

The essence of HRD Climate is the importance which it gives to the development of OCTAPACE culture (developed by T.V.Rao and Udai Pareek) in an organisation. OCTAPACE stands for eight important values viz.,

<table>
<thead>
<tr>
<th>Value</th>
<th>Indicators</th>
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<tr>
<td>Openness</td>
<td>Disclosure of one's feelings</td>
</tr>
<tr>
<td>Confrontation</td>
<td>Facing problems and finding their solution</td>
</tr>
<tr>
<td>Trust</td>
<td>Mutual confidence</td>
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<tr>
<td>Authenticity</td>
<td>Willingness to acknowledge one's feelings</td>
</tr>
<tr>
<td>Pro-action</td>
<td>Willingness of the organisation to take initiative in influencing a situation instead of merely reacting to it.</td>
</tr>
<tr>
<td>Autonomy</td>
<td>The quality of an individual to seek help from others without feeling inferior</td>
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<tr>
<td>Collaboration</td>
<td>Members working in teams</td>
</tr>
<tr>
<td>Experimentation</td>
<td>Taking action on a trial basis initially.</td>
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</table>

Organisations differ in the extent to which they possess the above characteristics. OCTAPACE culture is the prerequisite of an effective organisation. In the HRD Climate questionnaire, average of all the score of all the items is taken as the HRD Climate. The greater this score the more conducive the organisational climate is for the success of HRD programmes.

The Human Resource Development Climate of an organization plays a significant role in ensuring competency, motivation and development of its employees. Human Resource Development Climate can be created using appropriate Human Resource Development
systems and leadership styles by top management. Human Resource Development Climate is both a means to an end and an end in itself. HRD Climate is helpful in the fulfilment of committed goals of an individual, organization and society. It increases the capabilities and efficiency of an individual and is likely to reflect itself in the long run in the well-being of the individual, reputation of the institution and ultimately the well-being of the society. However, the nature of efforts and investments in developing human resources may vary from organization to organization depending on its need, nature of capabilities the organization wants to build up and the size of the organization etc.

T.V. Rao elaborates OCTAPACE culture thus "When people become open in terms expressing their ideas and feelings we can get the best in them. Openness brings new ideas, approaches and skills and talent to the organisation and satisfaction and even a sense of excitement to people. Openness combined with pro-activity encourages self-expression and gives rise to discovery of new approaches, methods and competencies. They pave the way for growth. Collaboration and team-work provide the strength to the organisation to perform. People derive strength from each other through the joy of working together. The we feeling created serves many purpose. It also gives stamina for people to meet a turbulent environment and solve problems. Confrontation of problems when they arise enhances the problem solving capability of the groups and the organisation. Trust and authenticity make life enjoyable besides reducing negative emotions and wastage of time of people. When people mean what they say a carry out the promises they make there will be no need for follow up and frustration gets reduced. Human dignity begins to emerge. Trust is a wonderful thing and we can become more trustworthy when we do what we say and we don't say what we cannot do. Autonomy and experimentation provide opportunities for people create organisational spaces for themselves and make an impact in their own ways in each of the job they perform.

**Dimensions /Elements of Human Resource Development Climate**

HRD Climate is characterized by the tendencies such as treating employees as the most important resources, perceiving that developing employees is the job of every manager, believing in the capability of employees, communicating openly, encouraging risk taking and experimentation, making efforts to help employees recognize their strengths and weaknesses, creating a general climate of trust, collaboration and autonomy, supportive personnel policies, and supportive HRD practices. An optimal level of development climate is essential to facilitate HRD activities (Rao, T.V. and E. Abraham, 1986). The top management
subscribing to these values is a starting point. When a critical mass internalized these values, there emerged a conducive climate for HRD. This positive HRD Climate renders the existing systems more effective and makes the organisations more receptive to the introduction of relevant additional system (Athreya, M. B, 1988). A healthy HRD Climate certainly bolsters the overall internal environment of the organisation, fosters employee commitment, involvement and satisfaction with the job.

The dimension/elements of HRD Climate can be grouped into three broad categories:

1. **General Climate**
2. **OCTAPACE culture, and**
3. **Human Resource Development Mechanisms.**

To begin with the General Climate items, focus on the importance given to Human Resources Development by the top management and line managers, in general. 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 organization. The items dealing with Human Resource Development Mechanisms measure the extent to which Human Resource Development Mechanisms are implemented seriously.

These three groups were taken with the following assumptions:

1. A supportive climate overall is important for human resource development to be effectively implemented. Such supportive climates consist of not only top management and line management's commitment but also good personnel policies and positive attitudes towards development.
2. An integrated look at human resource development and efforts to use as many human resource development mechanisms as possible will result in the successful implementation of human resource development. These mechanisms include: performance appraisal, potential appraisal, career planning, performance rewards, feedback and counselling training, employee welfare for quality work life, job-rotation, etc.
3. OCTAPACE culture is essential for facilitating human resource development.

HRD Climate is an integral part of organisational climate. HRD Climate is the perceptions that the employees have about the policies, procedures, practices, and conditions which exist in the working environment. As stated earlier, various HRD instruments create a climate conducive to achieve organisational effectiveness. The Climate in which the employees work is, to some extent, affected by the HRD instruments. Since such a climate is created by HRD instruments, it is termed as "HRD" Climate". The elements of HRD Climate can be grouped into three broad categories: general climate, OCTAPACE culture, and HRD
mechanisms. The general climate items deal with the importance given to human resource development in general by the top management and line managers. 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 items dealing with HRD mechanisms measure the extent to which these mechanisms are implemented seriously.

Himachal Pradesh Power Corporation Limited

Himachal Pradesh Power Corporation Limited (HPPCL) is a fast upcoming power generating utility with all the Technical and Organizational capabilities at par with other generating companies like NTPC/SJVNL/NHPC. Efforts are afoot to further strengthen the respective departments with professionals of proven credentials and qualified technical manpower.

Mission

Development and prosperity in Himachal Pradesh through Power generation.

Aim

To come up as a major power generating company of India with good managerial and technical capabilities.

Target

To develop 1111 MW Power generating capacity by March 2017 and; 2400 MW by the year 2022.
Projects

HPPCL has set itself a target of developing 3000 MW Power generating capacity by March 2017 and 5000 MW by the year 2022. Towards achieving this target HPPCL is currently engaged with development of seven Hydro Electric Power (HEP) projects in various parts of the state with a combined potential of 1012 MW.

HPPCL, apart from Hydro Power Development, intends to diversify its power development activities in other areas such as thermal, renewable sources of energy, such as solar and wind power, to meet the growing energy demands for the development of the state and the Indian nation. The plan to diversify into harnessing renewable energy sources for generating power is in keeping with our commitment to ensure environment and ecological balance for sustainable development.

Hydro Projects of HPPCL

Following Six Hydro Electric Power projects are already being developed by HPPCL.

- Shongtong Karcham HEP 450 MW
- Sainj HEP 100 MW
- Sawra Kuddu HEP 111 MW
- Kashang HEP 243 MW
- Renuka Ji Dam HEP 40 MW
- Chirgaon Majhgaon HEP 42 MW

Shongtong-Karcham Hydro-Electric Project (450 MW)

Shongtong Karchham Hydro Electric Project, a run-of-river scheme, on the river Satluj in Distt. Kinnaur of HP, envisages construction of 102.50 m long diversion barrage, near village Powari, to divert 406 cumecs discharge to four sedimentation chambers, each 300 m long. Water from sedimentation chambers is further carried through water conductor system comprising 8020 m long 10.00 m diameter circular HRT, terminating in 39.50 m diameter surge shaft and three 5.10 m diameter steel lined (each 211.00 m long) pressure shafts, to feed three vertical axis Francis Turbines, housed in an underground powerhouse, located on the left bank of the river Satluj near village Ralli, to generate 450 MW of power.

Sainj Hydro-Electric Project (100 MW)

Sainj HEP has been contemplated as a run of the river development on river Sainj – a tributary of River Beas in Kullu Dist. of HP. The project comprises: a diversion barrage on
the river Sainj near village Niharni, intake arrangement on right site of barrage for drawing 35.88 cusecs of water, an underground de-silting arrangement, with two chambers of 145 m x 15 m x 7 m size each, to eject all silt particles down to 0.2 mm, a 6300 m long 3.76 m diameter modified horse shoe shaped Head Race Tunnel, an underground restricted orifice type 9 m diameter, 87 m high surge shaft and one 2.75 m diameter 550 m long steel lined pressure shaft taking off from surge shaft, further bifurcating to feed two Pelton vertical axis turbines, each generating 50 MW power located in an underground power house on right bank of river the Sainj near village Suind.

**Sawra-Kuddu Hydro-Electric Project (111 MW)**

Sawra Kuddu HEP has been contemplated as a power generation development on the Pabbar River in Shimla District (HP). The project comprises of a piano key weir, an intake structure to draw 78 cusecs discharge through three openings, surface gutter type de-silting arrangement divided into three portions, each 80 m long 19.5 m wide and 10.5 m deep for exclusion of silt particles down to 0.2 mm size, 11.145 km long, 5 m diameter D-shaped Head Race Tunnel, 14 m diameter 82 m high underground restricted orifice type surge shaft, 4 m diameter steel lined pressured shaft, trifurcating in 2.30 m diameter branch shafts, to feed three 37 MW capacity each vertical axis Francis turbines, housed in an 90 m x 14 m x 39 m size underground power house cavity located on the left bank of the Pabbar river near Snail village.

**Integrated Kashang Hydro-Electric Project (243 MW)**

Integrated Kashang HEP envisages development of Kashang and Kerang Streams, tributaries of the river Sutlej comprising four distinct stages as under:

**Stage-I (65 MW):** Comprising diversion of the Kashang stream, at El.2829 m, to an underground powerhouse located on the right bank of Satluj near Powari Village, developing a head of approximately 830 m.

**Stage-II & III (130 MW):** Comprising diversion of the Kerang stream, at El. 2872 m, into an underground water conductor system leading to upstream end of Stage-I water conductor system, augmenting the generating capacity of Stage-I powerhouse, using Kerang waters over the 820 m head available in Kashang Stage-I powerhouse.

**Stage-IV (48 MW):** This stage is more or less independent scheme harnessing the power potential of Kerang stream upstream of the diversion site of Stage-II. In this scheme, a head of approximately 300 m could be utilized to develop power in an underground powerhouse located on the right bank of Kerang stream.
**Renuka Ji Dam Project (40 MW)**

Renuka Dam project, conceived as a drinking water supply scheme for the National Capital Territory of Delhi, envisages construction of 148 m high rock fill dam on river Giri at Dadahu in Sirmaur district and a powerhouse at toe of dam. The project will ensure 49800 ha m of live water storage in its reservoir and a firm water supply to the tune of 23 comics to Delhi besides generating 40 MW power exclusively for use of Himachal Pradesh. The Dam will also result in generating additional power of 93.83 MU by existing 60 MW Giri HEP. Total cost of the project at December, 2006 price level is Rs. 2175.00 crore which shall be borne by Govt. of India/ Govt. of Delhi and other beneficiary states. The project is scheduled for completion by November 2014.

**Background**

Himachal Pradesh Power Corporation Limited (HPPCL), was incorporated in December 2006 under the Companies Act 1956, with the objective to plan, promote and organize the development of all aspects of hydroelectric power on behalf of Himachal Pradesh State Government (GoHP) and Himachal Pradesh State Electricity Board (HPSEB) in Himachal Pradesh. The GoHP has a 60%, and HPSEB, a 40% shareholding in HPPCL.

To develop 1111 MW Power generating capacity by March 2017 and; 2400 MW by the year 2022. Towards achieving this target HPPCL is engaged with development of several power projects in various parts of the state with a total projected capacity of more than 1000 MW.

So far HPPCL has following Projects in hand:

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<thead>
<tr>
<th></th>
<th>Project Name</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>1</td>
<td>Shongtong Karcham HEP</td>
<td>450 MW</td>
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<tr>
<td>2</td>
<td>Sainj HEP</td>
<td>100 MW</td>
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<tr>
<td>3</td>
<td>Chirgaon Majhgaon HEP</td>
<td>42 MW</td>
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<tr>
<td>4</td>
<td>Sawra Kuddu HEP</td>
<td>111 MW</td>
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<tr>
<td>5</td>
<td>Kashang HEP</td>
<td>243 MW</td>
</tr>
<tr>
<td>6</td>
<td>Renuka Ji Dam HEP</td>
<td>40 MW</td>
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</tbody>
</table>
HPPCL is a fast upcoming power generating utility with all the Technical and Organizational capabilities at par with other generating companies like NTPC/SJVNL/NHPC. Efforts are afoot to further strengthen the respective departments with professionals of proven credentials and qualified technical manpower.

Diversification

HPPCL, apart from Hydro Power Development, intends to diversify its power development activities in other areas such as thermal, renewable sources of energy, mainly solar power etc. The basic idea is to have a long term corporate plan for planned implementation of power projects to meet the growing energy demand, ensuring environment and ecological balance for contributing towards the progress and prosperity of the State. HPPCL intends to meet the challenges of dynamically transforming business and environment to build a sustainable relationship with the stakeholders for maximum benefits and economic growth by achieving performance excellence.

OVERVIEW OF THE HIMACHAL PRADESH POWER CORPORATION

Himachal Pradesh Power Corporation Limited (HPPCL) was incorporated in 18th December, 2006 under the Companies Act 1956, with the objective to plan, promote and organize the development of all aspects of hydroelectric power on behalf of Himachal Pradesh State Government (GoHP) and Himachal Pradesh State Electricity Board Limited (HPSEBL) in Himachal Pradesh. The Go HP has a 60%, and HPSEBL, a 40% shareholding in HPPCL. HPPCL is entrusted with a target of achieving 3000 MW power generating capacity by March 2017 and 5000 MW by the year 2022. Towards achieving this target HPPCL is engaged with development of several power projects in various parts of the state with a total projected capacity of more than 1000 MW. So far HPPCL has following Projects in hand:
Himachal Pradesh Power Corporation Limited has set itself a target of developing the power capacity as stated also and for achieving this target HPPCL is currently engaged with development of seven Hydro Electric Power (HEP) projects in various parts of the state with a combined potential of 1012 MW. HPPCL, apart from Hydro Power Development, intends to diversify its power development activities in other areas such as thermal, renewable sources of energy, such as solar and wind power, to meet the growing energy demands for the development of the state and the Indian nation. The plan to diversify into harnessing renewable energy sources for generating power is in keeping with the commitment to ensure environment and ecological balance for sustainable development. HPPCL is a fast upcoming power generating utility with all the Technical and Organizational capabilities at par with other generating companies like NTPC/SJVNL/NHPC. Efforts are afoot to further strengthen the respective departments with professionals of proven credentials and qualified technical manpower.
Himachal Pradesh Power Corporation Limited is responsible for recruitment of all types of employees on regular, contract, part time and daily wages basis for construction of Hydro Power Projects at various sites of the work. Uniform policy based on merit, qualification and experience is being employed to avoid anomalies. All vacancies are being monitored through a vacancy chart listing and the location wise requirement of manpower specifying the level/grade, discipline or branch, total numbers need approved by the management. Recruitment in the organization is primarily through appointment advertisements in National Dailies. In the Himachal Pradesh Power Corporation Ltd. specific skills are identified for various jobs to be performed at different levels and the recruitment is based on job requirement. There is a need to impart training to the employees to cope with the future challenges, since men also get obsolete over time just like machinery and technology. Therefore, a mix of short and long term training program is required for achieving desired results. Management is required to look into the training needs of the support group also, since they also play an important role in the growth of organization.
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<tr>
<th>Sr. No</th>
<th>Author/s</th>
<th>Objectives</th>
<th>Methodology</th>
<th>Finding/Conclusion &amp; Recommendation</th>
<th>Limitation/Future research</th>
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<tbody>
<tr>
<td>1</td>
<td>Rao, T.V &amp; Rao &amp; Yadav (2001)</td>
<td>To Examine the current status of HRD function and subsystem in the Indian corporate sector.</td>
<td>The study included secondary as well as primary data collected from 12 organizations, cover financial services, consumer products, electronics, cement, tyres, and Automobiles respectively were interviewed using questionnaires.</td>
<td>It is revealed that a number of human resources development frameworks has come into existence in the last ten years from various parts of the world. Indian organizations have begun to use these for improving their HRD systems and their impact. An Integrated HRD Systems Approach was evolved for Indian organizations at the Indian Institute of Management, Ahmedabad by Udai Pareek and T V Rao for L&amp;T. This paper examines the current status of structuring of the HRD function and HRD subsystems in India against this &quot;Integrated HRD Systems&quot; framework. The paper also comments on the recent approaches to HRD. Data from HRD audits of 12 Indian organizations indicated that HRD function is not well structured, is inadequately differentiated, poorly staffed, and fails to meet the requirements of this framework. In the light of these experiences of Indian organizations in implementing this framework, the paper points out the prerequisites for success of other HRD frameworks in India.</td>
<td>The scope of in this study is very brief, so it can't full fill the present need of study requirement. For future study, HRD function could be well structured.</td>
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<td></td>
<td>Mishra &amp; Bhardwaj (2002)</td>
<td>To ascertain the nature of HRD climate, as perceived by managerial personnel at senior, middle and lower level in a private sector organisation.</td>
<td>For the study, primary data were collected from a group of 107 managers belonging to 12 senior level, 41 middle level, and 54 lower level managers served as sample for the study. Data were analyse using statistical tools.</td>
<td>It is found that the present study was undertaken to examine the nature of HRD climate as perceived by three hierarchical levels of managers in a large private sector organisation. To attain the objectives of the study, the HRD Climate Survey (Reo and Abraham, 1990) was administered to the sample population. Results revealed that the overall HRD Climate in the organisation covered under study was good. Significant difference were also observed among three levels of management with respect to different dimensions of HRD Climate as well as overall HRD Climate. Implication of results of the study are discussed.</td>
<td>The study was consisted only managerial personnel category. In future other categories of employees i.e., supervisors and workers etc. could also be considered.</td>
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<td></td>
<td>Petridou &amp; Glaveli (2003)</td>
<td>To examine the Human Resource Development Practices in a Greek Bank.</td>
<td>For primary data, questionnaires were distributed and personal interviews were conducted among 700 employees covering the various modern topics of banking interest.</td>
<td>The study reveals that the changes in the external environment have reshaped the banking industry environment. Responding to that, Greek bank are adopting new strategies towards organizational development and realize that success requires adjustments to their HRD effort. The case example presented here refers to a leading Greek bank that was involved in a systematic HRD effort, based on the use of training interventions as a short-term solution to transit smoothly to the new era. The results of this effort are connected to the improvement of the bank’s position in the market, despite its problematic past. However, the next challenge for the bank is to realize that the formation of a long-term development strategy and its integration with wider HR management policies are a priority.</td>
<td>For the future study, the bank focus on HR Development programmes.</td>
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<td></td>
<td>Lewlyn &amp; Rodrigues (2004)</td>
<td>To examine the Human Resource Development Climate in the engineering institute in India.</td>
<td>For the primary data, a sample size of 200 teaching faculty was selected on proportionate by using random sampling basis. Factor analysis has been carried out to validate the instrument. Besides the averages, mean and standard deviation, t-test and chi-square test have been carried out to test the two hypotheses.</td>
<td>The study has been undertaken to examine the correlates of the Human Resource Development Climate dimensions in the engineering institutes in the Karnataka State of India. Likert type-5 point scale has been used to convert the qualitative data into quantitative data, which investigate the relationship applicable to Human Resource Development Climate. Through the empirical study results, missing HRD mechanisms have been identified based on which suggestions are made for the improvement of Human Resource Development Climate.</td>
<td>For the future study sample size could be extended.</td>
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<td>5</td>
<td>Lewlyn &amp; Rodrigues (2005)</td>
<td>To obtain the correlations between various dimensions of the HRD Climate as applicable to the public sector and engineering institution.</td>
<td>A sample size of 100 each from the public sector and the institute was selected on proportionate representative random sampling basis, Likert type 5-point scale was used to convert the qualitative data into quantitative type.</td>
<td>The study was undertaken to compare the Human Resource Development Climate in the engineering institute with that in a public sector based on seven dimensions reflecting the nature of HRD Climate, and thereby, making suggestions to improve the HRD Climate in the institute. Through the empirical study result, suggestion are made to enhance the HRD mechanisms of the engineering institutes. Introducing a performance enhancement oriented HRD system seems to be the need of the hour with over 1250 engineering institutes in the country.</td>
<td>For the future study, sample size could be extended.</td>
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6  Purang (2006)  To compare the HRD Climate perceptions on middle level managers of public, private and multinational organisation.  For the study, primary data were collected from 247 middle level managers from five organisation; two private sector, two public sector and one multinational organisation selected using random sampling.  It is found that the most researcher agree that a congenial HRD Climate is extremely important for the ultimate achievement of the business goals. It is a phenomenon experience by employees and often referred to by expressions like 'environment', 'atmosphere' and so on. Climate at the individual level is a summary perception of the organisation's work environment that is descriptive rather than evaluated in nature. Another approach to climate is the cultural approach, which proposes that climate arises from inter subjectivity of member as they interact within a context established by an organisation's culture. In the Indian context, type of organisation influences the culture prevalent in the organisation. Since climate is an outcome of culture this study attempts to compare the HRD Climate perceptions of public, private and multinational organisations.  In the future study it is important to focus on various aspects of the HRD climate prevalent in the organisation.

7  Srimannarayana (2007)  To assess the extent of HRD climate prevailing in the Dubai organisations.  The study was based on the responses of 216 executives working in shipping, banking, insurance, tourism, trading and food business organisations located in Dubai. Data were analysed using mean score.  The study reviewed that the study attempts to assess human resource development (HRD) Climate prevailing in Dubai organisations and concludes that the climate is at an average level. In comparison, it is observed that the HRD Climate in banking business is higher than the other businesses. This is followed by the insurance and shipping businesses. Low level of HRD Climate is observed in tourism, food and trading organisations when compared to banking, insurance and shipping organisations.  For the future study, area and sample size could be extended,
<table>
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<tr>
<th>No</th>
<th>Author</th>
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<th>Future Study Considerations</th>
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<tr>
<td>8</td>
<td>Srimannarayana (2008)</td>
<td>To assess the human resources development (HRD) Climate prevailing in Indian organisations.</td>
<td>For the study, the information collected from 1905 employees working in 42 organisations covering 18 manufacturing sector, 13 service sector and 11 IT sectors in India. Using mean scores converting into the percentage score.</td>
<td>It is found that the study was aimed at assessing the extent of human resources development (HRD) Climate prevailing in Indian organisations. It was found that the HRD Climate prevailing in the organisations in India was only moderate. In comparison, the HRD Climate in manufacturing sector was better, than in the service sector.</td>
<td>The study was confined to the OCTAPACE culture and also observed that it is more prevalent than HRD mechanisms and general climate for the future study other dimension of HRD climate could be focused.</td>
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<td>9</td>
<td>Srimannarayana (2009)</td>
<td>To assess the extent of HRD climate existing in a manufacturing organizations.</td>
<td>For primary data, the information collected from 726 employees working in 18 organizations in manufacturing sector in India using mean scores.</td>
<td>The present study aims to explore extent of Human Resource Development (HRD) climate prevalent in manufacturing organizations in India, this study has found that the overall HRD climate prevailing in this sector is of moderate level only.</td>
<td>The study was limited only moderate HRD Climate rather than employees welfare programmes in future study employees welfare programmes could be considered.</td>
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<td></td>
<td>Saraswathi (2010)</td>
<td>To assess the extent of Developmental climate prevailing in manufacturing and software organizations.</td>
<td>For the purpose of the study, primary data is collected from 100 employees of various software and manufacturing organization through a structured questionnaire and analysed using quantitative techniques.</td>
<td>The study revealed that an organisation's success is determined by the skills and motivation of the employees. Competent employees are the greatest assets of any organisation. Given the opportunities and by providing the right type of climate in an organization, individuals can be helped to give full contribution to their potentials, to achieve the goals of the organization, and thereby ensuring optimization of human resources. For this purpose a congenial HRD Climate is extremely important. Thus, an optimal level of HRD Climate is essential for facilitating HRD. The findings indicate significant difference in the developmental climate prevailing in software and manufacturing organisations.</td>
<td>For the future research, sample size could be extended.</td>
</tr>
<tr>
<td>---</td>
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</tbody>
</table>
|   | Solkhe & Chaudhary (2011) | To critically review the relationship of HRD Climate and Job Satisfaction and subsequently the impact of developmental climate on job satisfaction of the individuals. | The study is based on the responses sought from 71 executives from various departments and different hierarchical levels of a public sector undertaking located in North India. The questionnaires relating to the HRD Climate (Rao and It is found that HRD Climate helps the employees to acquire required competencies that would enable them to execute their present or future expected roles and aids in developing their capabilities for better Organizational Performance. Though the measures of Organizational Performance are many ranging from financial to behavioural ones’, but researcher has focused only on single measure i.e. Job Satisfaction because of dearth in amount of studies exploring this relationship. The present paper attempts to analyse and determine the relationship, further the impact of HRD Climate, OCTAPACE Culture on Job Satisfaction as an Organizational Performance measure in the selected public sector enterprise. The findings indicate that HRD Climate has a definite impact on job satisfaction. | The present study was concentrating on single variable i.e. just job satisfaction, but there are many other indicators of Organizational Performance such as Financial Performance, Employee
Abraham (1985) and Job Satisfaction (Daftuar, C.N, 1997) was administered to the sample population were analysed using statistical Measures. Impact on Job Satisfaction which in turn leads to the increased organizational performance. Turnover, Market Performance, Sales Turnover, Productivity which remains unconsidered. For the future research, these variable could also be considered.

<p>| 12 | Benjamin (2012) | To examine the Level/extent of relationship between HRD Climate, OCB and VTI according to employees’ perception. | For primary data about 600 questionnaires were distributed and a total of 303 were received representing a response rate of 50.5%. Of these, 233 were usable for data analysis as others were incomplete. Data were analysed using Statistical techniques. It is found that the study aims to examine the relationships among human resource development climate, organisational citizenship behaviour (OCB) and voluntary turnover intentions (VTI) in the banking sector. Questionnaires were distributed to working adults in Nigerian commercial banks to gauge the employees’ individual perception, and thus data obtained was treated as an individual data source. The results indicate that the HRD Climate has a significant relationship with OCB and VTI. However, OCB shows no significant relationship with VTI. The study findings and their implications for organisations in general and Nigerian banks in particular are discussed. For further research, emerging critical issues in the banking sector is suggested as future research. |</p>
<table>
<thead>
<tr>
<th></th>
<th>Author (Year)</th>
<th>Objective</th>
<th>Methodology</th>
<th>Findings</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Mittal (2013)</td>
<td>To assess the employees perception towards the HRD climate in the public and private sector banks.</td>
<td>The primary data is collected from 200 employees through a structured questionnaire comprising 40 items and were analysed using descriptive statistical tools.</td>
<td>The study revealed that perception of employees towards the HRD Climate in the two leading banks. It also tries to find out the difference between the perception of employees of private and public sector banks with respect to all the dimensions of HRD Climate. The HRD Climate is subdivided into General Climate, OCTAPACE and HRD Mechanisms. The questionnaire measured General Climate, HRD Mechanisms and Openness, Collaboration, Trust, Proactiveness, Autonomy, Confrontation and Experimentation. HRD Climate of the public sector bank is found better than in the private sector counterpart.</td>
<td>The study was confined to SBI Bank and Axis Bank branch. For the future, comparative study on more other public and private sector banks could also be considered.</td>
</tr>
<tr>
<td>14</td>
<td>Tiwari (2014)</td>
<td>To assess the variations in HRD climate, HRD mechanisms, HRD values and HRD climate dimensions among various group of teachers.</td>
<td>For the study, 25 items of HRD climate survey questionnaire was administered to the selected respondents. Questionnaires distributed among the various cadres of I Group A (University Professors &amp; College Principals), II Group B (University and College Associate Professors), III Group C (University and College Assistant Professors)</td>
<td>It is found that Human Resource Development is needed to every organisation that is interesting in stabilizing, growing, diversifying, renewing it-self to become more effective, and in improving its system and services, change and for becoming more dynamic and for playing leadership role. The present study is undertaken with a view, to assess the HRD Climate, HRD mechanisms, HRD values and dimensions of HRD Climate among teaching staff of the university teaching departments and affiliated colleges of A.P.S. University Rewa, Madhya Pradesh. Results indicate that the HRD Climate among teachers in higher education institutions appears to be good. The General climate and HRD values scored fairly good while HRD mechanisms appears good score.</td>
<td>For the future study, sample size could be extended for broader comparison.</td>
</tr>
<tr>
<td>15</td>
<td>Shivaji &amp; Basavaraj (2015)</td>
<td>To critically evaluate the employee perceptions regarding overall HRD culture and climate at HAL, Bangalore.</td>
<td>For the study, primary data were collected from 200 employees using a structure questionnaire. Data were analysed using random sampling.</td>
<td>It is found that Human Resource Development (HRD) is to create context for technological and managerial excellence in any industry, more so in the globally competitive aerospace industry. An organisation’s success is determined as much by the skill and motivation of its members as by almost any other factor. The overall objective of the HRD plan is to build a vibrant performance and learning culture that meets the challenges of customer, quality, cost, delivery, and excellence. The HRD climate of an organisation, created using appropriate HRD systems and leadership styles of top management, plays a significant role in ensuring the competency, motivation, and development of its employees. The study reveals: some dimensions of HRD culture-climate show values lower than the norms specified and there is variation in the organisational dimensions.</td>
<td>For the future study, the study size of sample and area could be extended.</td>
</tr>
<tr>
<td>16</td>
<td>Mittal, Gupta &amp; Mottiani (2016)</td>
<td>To examine the relation between HRD climate and customer satisfaction.</td>
<td>For the study, Dyad-level data were collected from 203 private bank employees. 203 participants, 84.72% were males and 15.27% were females using random sampling.</td>
<td>The present study examines the relationship between HRD climate and customer satisfaction. The HRD climate is conceptualized as comprising three components: general climate, OCTAPAC and HRD mechanisms. A survey based study was conducted in the Indian private banks and collected dyad level data. The data was collected from the employees and customers who were served directly by the bank employees. Data analysis was performed using a SEM technique, which showed that all the three components of HRD climate have a positive impact on customer satisfaction. Implications for research and practice are discussed.</td>
<td>The present study was limited only one industry, for the future study multiple industries and large size of sample could be considered.</td>
</tr>
</tbody>
</table>
Research Gap

HRD climate one of the development programme for the organisation and its employees too. In power corporations HRD climate play a very significant role in the development of human resource in a organisation. Power corporation in present time is the outcome of the development of every countries by generating power, Technological innovation, growth and development of economy, maximise production and productivity through constructing projects are the important feature of the organisation. HPPCL is also one of the power generating utility of the Himachal Pradesh. Different authors have touch varied aspect of HRD climate like HRD climate : an empirical study in different sectors and organisation by Bhardwaj (2002), Rodrigues (2004-2005), Saraswathi (2010), Chaudhary (2011), Tiwari (2014), Comparatives study on public, private and multinational sector, organisation and Banks by Petridou & Glaveli (2003), Purang (2006), Srimannarayana (2007-2008-2009), Benjamin (2012), Mittal (2013), Shivaji & Basavaraj (2015), Mittal, Gupta & Mottiani (2016). Most of the studies in HRD climate conducted in Indian and Foreign organisation. Which are not relevant with regard to Himachal Pradesh. So, the present study will try to fill the gap by empirically covering all the dimension of HRD climate viz: general climate, HRD mechanisms and OCTAPACE culture In Himachal Pradesh Power Corporation Limited. Further, the present study is related to the Effectiveness of Human Resource Development Climate in Himachal Pradesh Power Corporation limited.

Need of the study

A congenial HRD Climate is extremely important for the ultimate achievement of the business goal. Since climate is an outcome of culture. HRD Climate has been grouped into three categories: 1) General climate; 2) OCTAPACE culture; and 3) HRD mechanisms. The general climate items deal with the importance given to the Human resources development in general by the top management and line managers. 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 organization. The items dealing with HRD mechanisms measure the extent to which HRD mechanisms are implemented seriously. This study is an attempt to analyse the HRD Climate prevailing in Himachal Pradesh Power Corporation Limited.

Himachal Pradesh Power Corporation Limited (HPPCL) is a fast upcoming power generating utility with all the Technical and Organizational capabilities at par with other generating companies like NTPC/SJVNL/NHPC. HPPCL, apart from Hydro Power Development, intends to diversify its power development activities in other areas such as thermal, renewable sources of energy, mainly solar and wind power etc. The basic idea is to have a long term corporate plan for planned implementation of power projects to meet the growing energy demand, ensuring environment and ecological balance for contributing towards the progress and prosperity of the State. With the help of this study we will be get to know about the HRD climate and its effective implementation in HPPCL. HPPCL intends to meet the challenges of dynamically transforming business and environment to build a sustainable relationship with the stakeholders for maximum benefits and economic growth by achieving performance excellence. In the present study we will be examining the Dimension of HRD Climate and their role for the development of Human resource.

HRD Climate is an integral part of organisational climate. It can be defined as the employee's perception about the developing environment of their organisation. It makes a sincere effort to gauge the employees’ perception on the core aspects of HRD Climate i.e. 1) General Supportive Climate, 2) Functioning of HRD Mechanisms and 3) and OCTAPACE Culture. In Indian context, type of organisation the success of organisation depends upon the effective implementation of Human Resource Development Climate in organisation and also because HRD Climate plays a very significant role in development of the organisation as well as the human resources. In the present study we will be analyse the employee perception about the Human Resource Development climate and its effective on the overall organisational environment. So, the need of the study was felt to understand the HRD
Climate in Himachal Pradesh Power Corporation Limited and also because HPPCL plays a very vital role in the power generating as well as economic development in the state.

Tabular Form of Objective of the Study

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Objectives</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To study the effectiveness of HRD Climate prevailing in Himachal Pradesh Power Corporation Limited.</td>
<td>Reputation of the organisation, goodwill of the organisation, profit maximization of the organisation, higher productivity, growth and diversification of units, cost reduction, more profits, better public image of the organisation, top management style and philosophy, supportive personnel policies, supportive HRD practices, positive attitude towards development, career planning policies, job satisfaction of an individual, commitment of top and line management for the development of their subordinate, effective implementation of all human resources system to achieve the organisation goal, effective welfare and development activities, increasing competencies and motivation of employees, effective implementation of human resource which promotes growth, development for individual as well as organisation, increasing team spirit, maintaining collaboration with each other, importance given to human resource development practices by the top management, effective training programmes, maintaining better relationship between superior and employee, effective communication and feedback.</td>
</tr>
<tr>
<td>2</td>
<td>To study the impact of various dimension prevailing in HRD Climate in overall working environment of H.P. Power Corporation Limited.</td>
<td>Importance given to human resource, openness of communication, encouragement given to risk taking and experimentation, feedback given to employee to make them aware of their strength and weaknesses, a general climate of trust, faith in employee's capabilities, employee's tendency to help each other, collaborate to each other, team spirit, tendency to discourage stereotypes and favouritism, supportive personnel.</td>
</tr>
</tbody>
</table>
policies and practices, and it is the perception that the employees have about the policies, procedures, practices and conditions which exist in the working environment i.e. (career planning, job satisfaction, training and selection, job evaluation and rotation, rewards, performance appraisal/potential, employee welfare for quality work life, feedback and counselling).

| 3 | To examine the employee's perceptions towards the attitude of management with regard to existing HRD Climate policies of the Corporation. | Commitment of line management for the development, attitude of top management towards the welfare of employee, effective personnel policies, providing career planning opportunities, promotion policies, recruitment and selection policies, providing job rotation and evaluation, rewards, collaborative attitude of managers, performance appraisal, delegation of authority, training and development programmes, employees welfare for quality work life, motivation and encouragement, attitude of supervisor while employee discussing about their problem, satisfactory induction programmes, relations of management with their employees, satisfactory training programmes, providing opportunities to employee while return from training programmes, meeting employees with their weaknesses and strength, superior eager to solve the problems of their subordinates/employees. |

| 4 | To critically evaluate the core aspect of overall HRD Climate and its dimension/elements i.e. general climate, HRD mechanisms and OCTAPACE Culture in H.P. Power Corporation Limited. | General climate :- top management style, attitude of management, commitment of the management towards overall development, personnel policies HRD mechanisms :- performance appraisal, potential appraisal, career planning, performance rewards, grievance mechanism, feedback and counselling, training and development, recruitment, selection and placement, role analysis, quality circle, organisation development, human resource planning, employee welfare for quality work life, job rotation OCTAPACE culture :- openness, confrontation, trust, authenticity, pro-activity, autonomy, collaboration, experimenting. |
**Hypotheses of the study**

1) Testing the level of significant difference between the perception of employees in HPPCL regarding HRD Climate

\( H_0 \): there is no significant difference between the perception of employees in HPPCL regarding HRD Climate

\( H_1 \): there is a significant difference between the perception of employees in HPPCL regarding HRD Climate

2) Testing the significant difference between the level of awareness among the employees working in HPPCL

\( H_0 \): there is no significant difference between the level of awareness among the employee regarding the HRD Climate in HPPCL

\( H_1 \): there is a significant difference between the level of awareness among the employee regarding the HRD Climate in HPPCL

3) Testing the significant level of inconsistency for applying three dimension of HRD climate

\( H_0 \): there is no significant difference between the level of inconsistency in applying three dimension of HRD Climate in HPPCL

\( H_1 \): there is a significant difference between the level of inconsistency in applying three dimension of HRD Climate in HPPCL

**Scope of the study**

The present study aims to see the effect of the Human Resource Development climate as perceived by executives, on their organisational commitment. HRD Climate is the human environment in which the employees work in an organisation. It is an outcome of the favourableness or unfavourableness with which the Human Resource practices followed by the organisation are perceived. The study of HRD Climate are necessary to the each organisation to understand their climate condition in the organisations. Now a days the development of the worker's and the organisation are depends upon the effective climate. The
concept of development in organisation is a multi-dimensional concept. HRD Climate is developing the people, place and the organisation. Real development of any organisation can take place if there is proper development of manpower or personnel. The staff members alone can bring about rapport between the organisation and the public. Thus, developing the manpower in the organisation will certainly be helpful for achieving the organisational objectives for which they are meant. In the present study we will studied about the HRD Climate and it three dimension i.e. general climate, OCTAPACE culture and HRD mechanisms in the main head office of Himachal Pradesh Power Corporation Limited and the selected Hydro Electric Projects of the corporation. The sample size of 336 employee will be selected from the head office and the projects of Himachal Pradesh Power Corporation Limited. Which is 50% of total overall 672 employees in Power Corporation Limit. The time period of ten years will be taken from 2008 to 2018 for studying the HRD Climate of Himachal Pradesh Power Corporation Limited. Data will be obtained through a carefully designed questionnaire/interview and schedule. The scope of the present study is restricted to the employee working in the projects of HPPCL which is operating all over state with its head office at Shimla, spreading over the entire Himachal Pradesh.

**Research Methodology**

Methodology is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge.

**Nature Of The Data** - To serve the purpose of the study, the study will be primary and secondary in nature.

**Data Collection** - The objectives demand detailed data for the study. To trace out the source the study seeks following source of data.

**Primary Data** - The primary data will be collected with the help of questionnaires, schedules and informal interviews of the Executive, Supervisory Staffs and the employees of HPPCL. Some observations also will be made by the researcher.
Secondary Data- The secondary data are collected through library visits, books, Journals, magazines and souvenirs. Internal office record of the concerned units was referred. The secondary data necessary for completing the research will collected mainly from the published sources in the academic libraries and annual reports of these cooperatives.

Research Design

A detailed outline of how an investigation will take place. A research design will typically include how data is to be collected, what instruments will be employed, how the instruments will be used and the intended means for analyzing collected data.

Sampling Design

A population means the entire field under investigation about which knowledge is sought. The relevant universe in this case is all employees of Himachal Pradesh Power Corporation Limited. A quota sampling will be used in the organisation for selection of the sample. Out of Total 672 employees a sample of 336 is taken for the study which is 50% of the total existing employees in HPPCL.

<table>
<thead>
<tr>
<th>Sr.no.</th>
<th>Category/Class</th>
<th>No. of Employees</th>
<th>50% Sample Taken for Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Executives</td>
<td>327</td>
<td>163</td>
</tr>
<tr>
<td>2</td>
<td>Supervisory Staffs</td>
<td>148</td>
<td>74</td>
</tr>
<tr>
<td>3</td>
<td>Workman Staffs</td>
<td>197</td>
<td>98</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>672</strong></td>
<td><strong>336</strong></td>
</tr>
</tbody>
</table>

The present study will be based on primary as well as secondary data. Primary Data will be collected by filling up the well structured standardized questionnaire from 336 employees of HPPCL. This questionnaire consist of 38-item on a five point Likert scale ranging from (1) strongly disagree to (5) strongly agree to measure the elements of HRD climate which can be grouped into three categories i.e. general climate, HRD mechanisms and OCTAPACE culture. The HRD climate questionnaire develop by Rao and Abraham (1990) at centre for HRD Xavier Labour Relations Institute (XLRI) will be used in the present study.
For further study we will be collecting the data from the Corporate office of HPPCL at Shimla and selected Projects, namely Sawra Kuddu HEP (111 MW) a run-of-the-river scheme on Pabber River in Rohru Tehsil of Shimla District, Shongtong Karcham HEP (450 MW) a run-of-the-river scheme on the Sutlej in District Kinnaur and Renukaji Dam Project (40 MW) dam on river Giri at Dadahu in District Sirmaur of Himachal Pradesh.

**SELECTION OF SAMPLE UNITS IN DETAIL**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category/Class</th>
<th>Corp. Office Shimla</th>
<th>SKHEP (111 MW) Shimla</th>
<th>STKHEP (450 MW) Kinnaur</th>
<th>RDP(40MW) Sirmaur</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Executive (Civil)</td>
<td>27</td>
<td>18</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Executive (Elect.)</td>
<td>10</td>
<td>6</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Executive (Other)</td>
<td>9</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Executive (F&amp;A)</td>
<td>15</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Executive (P&amp;A)</td>
<td>19</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Supervisory Staffs</td>
<td>18</td>
<td>20</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Supervisory Categories other than sanctioned in HPPCL</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Workman Staffs</td>
<td>54</td>
<td>20</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>9</td>
<td>Workman Categories other than sanctioned in HPPCL</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>156</strong></td>
<td><strong>76</strong></td>
<td><strong>71</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>
Tools and Techniques for analysis

For the purpose of analysis of data various tools will be planned to adopt that test suit the objectives of the study. The data collected from different sources will be classified and arranged in table in one or more forms according to the requirement and following method will be used for analyzing them.

Mathematical Tools

In the present research work, mathematical tools viz. percentage and simple average will be used to analyse the collected data.

Statistical Method

Statistics is an imposing form of mathematics. It is the aggregate of facts affected to a marked extent by multiplicity of causes, numerically expressed, enumerated or estimated according to a reasonable standard of accuracy, collected in systematic manner for a predetermined purpose and place in relation to each other. In the present study following statistical methods will be used:

Descriptive Statistics

Descriptive Statistics will be used to focus on measures of central tendency, dispersion and standard error and will be displayed using a combination of frequency distribution table and line graph. These following methods will be used:

Diagrammatic and Graphic Representation

Chart, tables, and line graphs will be used. These methods give a bird’s eye view of a given set of numerical data. They register a meaningful impression on the mind almost before anyone thinks. They also save a lot of time as a very little effort is required to grasp them and draw meaningful inferences from them.

Frequency Distribution

Frequency distribution is the simplest form of representing research findings. The use of draft frequency distribution of responses (income, age, education, wise etc.) facilitated the understanding of the contents of data in the extraction sheet.

Measures of central Tendency

It is One most useful and widely used techniques for doing this –one quite well known, is the average, or, as it is known in statistics, the Arithmetic mean. It is possible to arrive at
the mean by simply adding up a set of scores and then dividing it by number of scores. This can also be done with the help of the most basic statistical formula:

**Arithmetic Mean is calculated**

\[ \bar{X} = \frac{\sum X}{N} \]

Where,

\[ \sum X = \text{Total of the observe values} \]

\[ N = \text{Number of observations} \]

**Measures of Dispersion**

Dispersion is the measure of the Variation in the opinion of the items. Standard deviation is the most important and widely used measure of studying dispersion. The standard deviation is also known as root mean square deviation from the arithmetic mean. The standard deviation measures the absolute variability of distribution. The greater the standard deviation, the greater will be the magnitude of the deviations of the values from their arithmetic mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of the series or vice-versa.

\[ \sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \]

Where,

\[ \sigma = \text{Symbol of Standard Deviation} \]

\[ \bar{X} = \text{Arithmetic Mean} \]

\[ N = \text{Number of Observations} \]

**Standard Error**

In the theory of statistics and probability for data analysis, Standard Error is the term used in statistics to estimate the sample mean dispersion from the population mean. Standard Error is a method of measurement or estimation of standard deviation of sampling distribution associated with an estimation method. The formula to calculate Standard Error is,
Standard Error Formula:

\[ SE_{\bar{x}} = \frac{s}{\sqrt{n}} \]

where

- \( SE_{\bar{x}} \) = Standard Error of the Mean
- \( s \) = Standard Deviation of the Mean
- \( n \) = Number of Observations of the Sample

**Co-efficient of Skewness**

The co-efficient of skewness, as a statistical tool, helps in the study of the degree and direction of variation from the centre value. It also shows that a particular distribution is positively or negatively skewed. This method is useful in studying the concentration of responses of the respondents either on the higher side or lower side of mean score with respect to their opinion on different statements. In the case of normal distribution, the value of skewness will be zero. The positive skewness is denoted by Mode<Median<Mean and in case of the negative skewness we find Mean<Median<Mode. It has been calculated with the help of following formula:

\[ SK = \sqrt{\frac{X - Z}{\sigma}} \]

Where:

- \( X \) = Arithmetic mean
- \( Z \) = Mode
- \( \sigma \) = Standard Deviation

**Factor Analysis**

Factor analysis is a data reduction technique and most useful when identifying variable, or factor, that explains the pattern of variance and correlation with in a set of observed variable. There are many different methods that can be used to conduct a factor analysis (such as principal axis factor, maximum likelihood, generalized least squares, unweighted least squares) will be used in the present study.

If sample are normally distributed then we will be use parametric test and if skewness is present then we will be use non parametric test. e.g. chi square test
**Chi – square \( \chi^2 \) Test of Independence**

This test is non-parametric test and data does not follow the normal curve of the probability and have unequal or un-measurable scale intervals between categories. Chi-square test is a test, which describes the magnitude of deference between observed frequencies and the frequencies expected under certain assumptions. With the help of Chi-square test, it is possible to find out whether such differences are significant or are insignificant and or could have arisen due to fluctuations of sampling. In the Chi-square test, the only problem is to decide as to how the expected frequencies have to be arrived at. There is no hard and fast rule of it and the method of arriving at the expected frequencies would depend upon the nature of the problem. Once the expected value has been arrived at, the calculation of chi-square and its interpretation are very easy. In the present research work, Chi-square test is applied to study the relationship between the quantity variables and for analyzing the opinion of the respondents regarding different factors. The Chi - square test will be calculated as under :-

\[
\chi^2 = \frac{\sum (O - E)^2}{E}
\]

Where,

\( O \) = Observed frequencies

\( E \) = Expected frequencies

**ANOVA**

Analysis of variance (ANOVA) splits the variance of the variable into two components. One component is the variability among group means. It is computed by summing square of the differences between every group mean and overall mean of the distribution. This value is divided by the degree of freedom \( k-1 \) where \( k \) number of groups to obtain Mean Sum of squares between groups (MSB) The other component is the variability within the groups (also called residual variation). It is quantified as the sum of squares of the differences between each observation and its respective group mean. This value is divided by degrees of freedom \( n-k \) where \( n \) is total number of observations and \( k \) is number of groups, to find Mean Sum of squares within groups (MSW). The ratio of the MSB and MSW is called the F ratio. The calculated F ratio values are compared to the standardized table value of F from the F distribution. If the calculated F-ratio value is greater than the table value at an acceptable level of significance, we will reject the null hypothesis of equality of means and conclude that the means of the groups are significantly different. In other words, large F ratios signify that
the variation among group means is more than it would we if this variation were simply outcome of chance.
However further tools may be used as and when need arises.

**Tentative Scheme of Chapterization**

I. Introduction
II. Review of Literature
III. Research Design
IV. Human Resource Development Climate in Himachal Pradesh Power Corporation Limited
V. Employee's perceptions regarding existing HRD Climate practices policies of the Corporation.
VI. Performance, Evaluation and Effectiveness of Human Resource Development Climate in Himachal Pradesh Power Corporation Limited
VII. Finding, Conclusion and Suggestion
Bibliography
Appendices
References


