

## HUMAN RESOURCE DEVELOPMENT CLIMATE IN INFORMATION TECHNOLOGY ORGANISATIONS

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### Abstract

An organisation can become more dynamic and growth oriented by proper selection of people and by nurturing their competencies. Organisations are continuously improving the human resource development climate to meet the requirements of competitive and dynamic environment in the changing global scenario. Human resource development climate is an integral part of organisational climate. Organisational climate is a set of policies, practices and conditions which exist in the working environment to improve the skills of employees. The present paper, examines human resource development climate of different information technology organizations in India. The study is based on survey of in 13 selected information technology organisations such as Tata Consultancy Services, Wipro Technologies, Infosys Technologies Ltd., Hindustan Computer Ltd. (HCL), Dell International, Birlasoft, Pyramid Consulting Inc., Quark Inc., Semi-Conductor Laboratory (SCL Ltd.), Alcatel-Lucent Technologies, Attra, Kanbay International and Omnia Technologies from Delhi, Bangalore, Pune, Chandigarh and Mohali respectively. In this study, five-point Likert-scale, item-wise mean score and corresponding percentage scores, Standard deviations and ANOVA analysis have been used to evaluate the data and to draw inferences about prevailing human resource development climate in information technology organisations.

**Keywords:** ANOVA Analysis, Human Resource Development, Organizational climate, Human Resource Development Climate.

### Introduction

HRD aims at achieving higher and fuller development and utilization of human resource potential and for that purpose creating appropriate environment, values and culture for HR growth in organizational context. The structures, systems and techniques used by an organisation to help employees acquire and strengthen their capabilities are called HRD mechanisms which facilitate favourable HRD climate in the organisations. However organisations differ in the extent to which they are successful in promoting favourable HRD climate and hence a comparative study based on a comprehensive measure of HRD climate in Indian Information Technology industry is highly desirable.

### Review of Literature

Rao and Abraham (1991) studied the human resource development climate in the surveyed organisations and found it to be at average level in India. Aileni and Prasad (1995) examined the relationship between organisational climate and job satisfaction of the lower level managers in a public sector undertaking. The study reveals that the satisfied group gave top ranks to interpersonal relationship, risk taking and management of rewards.

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On the other side, the dissatisfied group gave top priority to supervision, communication and decision-making. Jain and Singhal (1997) study took into account three human resource development mechanisms including management policy, potential appraisal and organisational development to study variances of human resource development climate on account of these mechanisms. The effect of personal factors on human resource development climate was found to be low but positive. Pillai (2000) made an attempt to study the influence of the human resource development climate existing in banks on the learning orientation of the employees. The findings of the study show that about 57 percent of respondents perceive the learning, and development climate existing in banks as moderate. Pattanayak (2000) conducted a study on, the effect of shift-work and hierarchical position on satisfaction, commitment, stress and human resource development climate in a steel plant. The study calls for greater emphasis to be laid on human resource development interventions for improving organisational synergy. Tripathi, S. and Tripathi, N. (2002) studied the relationship between organisational climate and organisational success; which includes effectiveness, job satisfaction, organisational commitment and intention to quit. The results show that the climate is highly correlated with all components of effectiveness.

Ganesan, Samuel, Rajkumar and Saravanan (2002), studied the 'Determinants of Employee Relations Climate in Public Sector Undertakings.' The study revealed that by improving factors like working conditions, level of supervision, communication and worker's participation etc. favourable climate can be achieved. Purang (2006) in a comparative study of Public, Private and Multinational organizations shows that the human resource development climate scores of the two private organisations and the MNC are significantly higher than the two PSUs. Majee (2006) in the study of Chittaranjan Locomotive Workshop finds moderate level of HRD Climate with a lot of scope for improvement because HRD climate is the lifeblood for organization. Mufeed (2006) highlights the need for a focus on key elements of human resource development in hospitals. Lim and Morris (2006) study reveals that trainees' characteristics, instructional factors and organisational climate are closely correlated with both the trainees perceived learning and learning transfer collectively. Srimannarayana (2007) attempted to assess the extent of human resource development climate in Dubai organisations, such as shipping, banking, tourism, trading and food businesses. The results reveal moderate level of general HRD climate in the organisations.

### **Data-Base and Methodology**

In the present paper, organisation-wise human resource development climate of information technology sector has been studied. The present research is carried out in 13 selected different information technology organisations, such as Tata Consultancy Services, Wipro Technologies, Infosys Technologies Ltd., Hindustan Computer Ltd. (HCL), Dell International, Birlasoft, Pyramid Consulting Inc., Quark Inc., Semi-Conductor Laboratory (SCL Ltd.), Alcatel-Lucent Technologies, Attra, Kanbay International and Omnia Technologies from Delhi, Bangalore, Pune, Chandigarh and Mohali respectively. Questionnaires used in the work of Rao and Abraham (1986), Paul, and Anatharaman (2002) have been used in the present paper. Some modifications have been made in our questionnaire according to the requirements of our paper. We have tried to make it more effective instrument to measure the human resource development climate in information technology industry.

Human resource development climate survey includes the ten different dimensions in the study. These ten different dimensions are - rigorous selection process, value-based induction, comprehensive training, team based job design, working conditions/environment, employee friendly work environment, development oriented performance appraisal, compensation, career development and value added incentives. These dimensions include - 54

items in the questionnaire of human resource development climate survey. In this study five-point Likert-scale has been used to evaluate the prevailing human resource development climate dimensions in information technology organisations, in which mean score 5 indicates - almost always true (AAT), mean score 4 indicates - mostly true (MT), mean score 3 indicates -sometimes true (ST), mean score 2 indicates - rarely true (RT) and mean score 1 indicates - not at all true (NAT). Mean score 4 indicates that employees in these organisations agree that good human resource development climate prevailed in the organisations. It indicates that human resource development climate is of a desirable level, whereas mean score 3 indicates an average human resource development and mean score 2 indicates poor human resource development climate on each dimension. In the present study, mean scores have been converted into percentage scores by using the formula, percentage score = (Mean Score-1) × 25. Score of 1 represents - 0 percent, 2 represents - 25 percent, 3 represents - 50 percent, 4 represents - 75 percent and 5 represents - 100 percent. The percentage score indicates the degree to which a particular dimension exists in that organisation out of the ideal 100. Hence, it is desirable for an organisation to have percentage scores above 50 on each, and overall on all items. For evaluating the results of human resource development climate survey, the item-wise mean score, and corresponding percentage scores are calculated. Standard deviations formula is also applied to know the nature of the distribution. On the basis of overall mean score different ranks have been assigned to different organisations. The highest-rated organisation has been ranked one, the second highest-rated rank two, and so on until the lowest-rated company that is given rank 13. The mean score of all items for each dimension gives the dimension score, and the total of all the means gives the total human resource development climate score of the organisations.

### Findings of the Study

This paper gives dimension-wise analysis of human resource development climate in the different organizations that were covered. These dimensions are: rigorous selection procedure, value based induction, comprehensive training, team-based job design, working conditions/environment, employee friendly work environment, compensation, development oriented performance appraisal, career development and value added incentives.

Dimension1 shows that mean score, percentage and standard deviation in different information technology organisations in rigorous selection process. Tata Consultancy Services has attained the highest rank that is one. The overall mean score, percentage and standard deviation of Tata Consultancy Services organisation are 4.79, 94.67 and 0.40 respectively. Kanbay International and Attra organisations have attained equal rank 2 with same overall mean score 4.75 respectively. Whereas Semi-Conductor Laboratory (SCL Ltd) with overall mean score 4.20 and Omnia Technologies with overall mean score 3.91 have attained lowest rank that is 11 and 12 in rigorous selection process dimension.

Dimension 2 conveys that in value based induction dimension Tata Consultancy Services has again attained the highest rank, that is one. The overall mean score, percentage and standard deviation of Tata Consultancy Services organisation are 4.70, 92.38 and 0.52 respectively. Infosys Technologies Ltd. has attained second highest rank in value based induction with overall mean score 4.50, percentage 87.62 and standard deviation 0.63 respectively. Wipro Technologies and Attra, both organisations have attained same rank that is nine with mean score 4.20. Semi-Conductor Laboratory (SCL Ltd.) with overall mean score 4.09 and Omnia Technologies with overall mean score 3.50 have attained lowest rank that is 11 and 12 respectively in value based induction. It indicates scope for improvement.

Dimension 3 depicts that Tata Consultancy Services has attained first rank with mean score 4.57, percentage 89.17 and standard deviation 0.54 respectively. Alcatel-Lucent Technologies has attained second rank with mean score 4.45, percentage 86.17 and standard

deviation and 0.67 respectively. Quark Inc. with overall mean score 3.73 and Omnia Technologies with overall mean score 3.41 have attained lowest rank that is 12 and 13 respectively. It indicates the scope for improvement in these organisations.

Dimension 4 conveys that Alcatel-Lucent Technologies has attained first place in team based job design. The overall mean score, percentage and standard deviation of Alcatel-Lucent Technologies are 4.55, 88.63 and 0.62 respectively. Tata Consultancy Services has attained second highest rank with overall mean score 4.46 percentage 86.46 and standard deviation 0.67 respectively. Hindustan Computer Ltd. (HCL), Dell International and Kanbay International have acquired same rank in this dimension that is four with overall mean score 4.18. Attra, Wipro Technologies and Birlasoft have attained five rank with overall mean score 4.08. Semi-Conductor Laboratory (SCL Ltd) with overall mean score 3.86 and Omnia Technologies with overall mean score 3.59 have attained lowest rank that is eight and nine rank.

Dimension 5 shows that Tata Consultancy Services has again attained first rank for providing favourable working conditions with mean score 4.60, percentage 90.00 and standard deviation 0.58 respectively. Infosys Technologies Ltd. with overall mean score 4.56, percentage 89.05 and standard deviation 0.59 has attained second highest rank in providing good working conditions. Pyramid Consulting Inc. with overall mean score 4.02 and Omnia Technologies with overall mean score 3.42 have attained the lowest rank that is 12 and 13 respectively.

Dimension 6 reveals that Tata Consultancy Services has attained first rank for providing favourable work environment with mean score 4.51, percentage 87.71 and standard deviation 0.60 respectively. Infosys Technologies Ltd. with overall mean score 4.44, percentage 85.89 and standard deviation 0.73 has attained second highest rank in providing employee friendly work environment. Birlasoft and Wipro Technologies with overall mean score 4.09 have attained equal rank that is nine. Semi-Conductor Laboratory (SCL Ltd.) with overall mean score 3.47 and Omnia Technologies with overall mean score 3.31 have attained the lowest rank that is 11 and 12 respectively. Tata Consultancy Services has attained first rank for providing favourable working conditions with mean score 4.60, percentage 90.09 and standard deviation 0.50 respectively.

Dimension 7 shows that Hindustan Computer Ltd. (HCL) with overall mean score 4.46, percentage 86.48 and standard deviation 0.56 has attained second highest place in development oriented performance appraisal. Quark Inc. with overall mean score 3.79 and Omnia Technologies with overall mean score 3.35 have attained lowest rank that is 12 and 13 respectively. It depicts the scope for improvement in these two organisations.

Dimension 8 depicts that Tata Consultancy Services has attained the highest rank in this dimension of providing good compensation packages. The mean score, percentage and standard deviation of Tata Consultancy Services are 4.52, 87.92 and 0.51 respectively. Alcatel-Lucent Technologies has attained the second highest rank with overall mean score 4.35, percentage 83.63 and standard deviation 0.66 respectively. Both Quark Inc. and Semi-Conductor Laboratory (SCL Ltd.) with mean score 3.85 have attained equal rank that is 11. Whereas Omnia Technologies with overall mean score 3.53 has attained the lowest rank that is 12.

Dimension 9 conveys that Tata Consultancy Services has attained the highest rank with mean score 4.39, percentage 84.72 and standard deviation 0.66 respectively. Infosys Technologies Ltd. has attained the second highest rank in this dimension with mean score 4.34, percentage 83.61 and standard deviation 0.66 respectively. Pyramid Consulting Inc. with overall mean score 3.66 and Omnia Technologies with overall mean score 3.35 have attained the lowest rank that is 12 and 13 respectively.

Dimension 10 conveys that Hindustan Computer Ltd. (HCL) has attained highest rank with overall mean score 4.60, percentage 90.00 and standard deviation 0.53 respectively. Second highest rank is attained by Infosys Technologies Ltd with overall mean score 4.35, percentage 83.75 and standard deviation 0.75 respectively. Omnia Technologies with overall mean score 3.30 and Semi-Conductor Laboratory (SCL Ltd.) overall mean score 3.10 have attained lowest ranks that is 12 and 13 respectively.

The overall mean score of all dimensions of surveyed organisations are more than 3 score, it shows desirable environment in information technology industry. Human resource development climate in information technology industry as revealed by the surveyed data is good, positive and favourable. The best organisations in terms of human resource development climate are - Tata Consultancy Services and Infosys Technologies Ltd., whereas the poorly performing organisations are Omnia Technologies and Semi-Conductor Laboratory (SCL Ltd.). Overall mean score of two dimensions - career development and value added incentives is less compare to other dimensions which indicates need for further improvement.

### **Mean Score, Percentage and Standard Deviation of the Organisations on Various Dimensions of Human Resource Development Climate**

Table 3 shows organisation-wise total of all mean score of all dimensions. Tata Consultancy Services has attained the highest rank that is one on the basis of 45.39 total mean score of human resource development climate. Total mean score of human resource development climate in Infosys organisation is 44.37 with rank two. Alcatel-Lucent Technologies has attained third rank with 43.55 total mean score; Dell international has attained fourth rank with 42.90 total mean score, Hindustan Computer Ltd. (HCL) has attained fifth rank with 42.67 total mean score, Attra has attained sixth rank with 41.99 total mean score, Birlasoft has attained seventh rank with 41.67 total mean score, Kanbay has attained eighth rank with 41.33 total mean score, Wipro has attained ninth rank with 41.07 total mean score, Pyramid Consulting Inc. has attained tenth rank with 40.83 total mean score, Quark has attained eleventh rank with 39.12 total mean score, Semi-Conductor Laboratory (SCL Ltd.) has attained twelve rank with 38.81 total mean score and Omnia technology has attained thirteen rank with 34.67 total mean score. Total mean score of Pyramid Consulting Inc., Quark, Semi-Conductor Laboratory (SCL Ltd.), and Omnia technologies have attained low ranks which indicate further scope for improvement in these organisations. Total mean score of all these organisations show satisfactory human resource development climate.

### **Item-Wise ANOVA Analysis of Different Information Technology Organisations**

One-way ANOVA analysis has been used to analyze the item-wise mean differences among the means of different 13 information technology organisations. Human resource development climate survey includes the ten different dimensions in the study. These ten dimensions include - 54 items in the questionnaire of human resource development climate survey. Item-wise ANOVA analysis of mean scores of various items in the human resource development climate survey shows that whether the item-wise mean scores among 13 organisations are significantly different from each other or not. If the calculated value of F statistic of an item is higher than the tabulated value at 1% or 5% level of significance, we can conclude that there are significant mean differences among 13 information technology organisations. Results of ANOVA analysis in table 3 show that all the item-mean scores of these organisations are significantly different from each other as the calculated values of F ratio are higher than tabulated values of F ratio. Thus, null hypothesis of equal means of these



organisations is rejected and we can conclude that human resource development climate varies from organisation to organisation.

### **Conclusions**

Most of the employees are highly satisfied with the prevailing human resource development practices, policies and climate in the different organisations. Information technology industry being a knowledge-led industry needs knowledgeable, trained and expert employees. Various facilities, such as good working conditions, good and friendly relations with employees, good infrastructure, advance and multiple skills training, high wage rates and perks have been provided to its employees. In information technology organisations employees are selected through various rounds of tests and interviews as per organisations' requirement. In information technology industry multi-skill training is given to employees because this industry is complicated, dynamic and technical in nature.

In these organisations physical conditions, infrastructure, safety standards and canteen, refreshment facilities, sanitation, ventilation and furnishing, working environment, employees and management friendly relationship are up to the mark. Such human resource development climate motivates employees in a positive way. Different organisations pay different wages, perks and compensation and also promote career plans for personal as well as organisational development. Attractive bonus, flexible compensation and benefits, soft loans, stock options are provided to employees on the basis of their performance in different information technology organisations. Hence, human resource development has become an integral part of the surveyed information technology organisations.

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**Table - 1**  
**Sample Size of Selected Information Technology Organisations**

<b>S. No.</b>	<b>Name of Organisations</b>	<b>Nature of Organisations</b>	<b>Sample Size</b>
1	Tata Consultancy Services	Software	30
2	Wipro Technologies	Software	30
3	Infosys Technologies Ltd.	Software	30
4	Hindustan Computer Ltd.(HCL)	BPO	30
5	Dell International	BPO	50
6	Birlasoft	Software	25
7	Pyramid Consulting Inc.	BPO	50
8	Semi-Conductor Laboratory (SCL)	Hardware	30
9	Alcatel-Lucent Technologies	Software	50
10	Attra	Software	35
11	Kanbay International Inc.	Software	40
12	Omnia Technologies	BPO	50
13	Quark	Software	50

Source: Primary Survey

**Table - 2**



## Human Resource Development Climate in Different Information Technology Organizations

Items	TCS			WIPRO			INFOSYS			HCL			DELL			BIRLASOFT		
	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD
<b>Dimension – 1: Rigorous Selection Process</b>																		
<b>Overall Mean Score</b>	4.79	94.67	0.40	4.49	87.33	0.55	4.60	90.00	0.54	4.29	82.17	0.62	4.30	82.50	0.69	4.37	84.20	0.75
<b>Rank</b>	1			5			3			10			9			8		
<b>Dimension – 2: Value-Based Induction</b>																		
<b>Overall Mean Score</b>	4.70	92.38	0.52	4.20	80.12	0.55	4.50	87.62	0.63	4.17	79.29	0.72	4.48	87.00	0.60	4.41	85.29	0.61
<b>Rank</b>	1			9			2			10			3			5		
<b>Dimension – 3: Comprehensive Training</b>																		
<b>Overall Mean Score</b>	4.57	89.17	0.54	4.22	80.56	0.60	4.43	85.83	0.74	4.20	80.00	0.69	4.32	83.00	0.68	4.36	84.00	0.65
<b>Rank</b>	1			9			3			10			5			4		
<b>Dimension – 4: Team Based Job Design</b>																		
<b>Overall Mean Score</b>	4.46	86.46	0.67	4.08	76.88	0.64	4.38	84.58	0.71	4.18	79.38	0.70	4.18	79.50	0.66	4.08	77.00	0.72
<b>Rank</b>	2			5			3			4			4			5		
<b>Dimension - 5: Working Condition</b>																		
<b>Overall Mean Score</b>	4.60	90.00	0.58	4.09	77.14	0.60	4.56	89.05	0.59	4.18	79.40	0.74	4.40	85.00	0.61	4.39	84.71	0.63
<b>Rank</b>	1			11			2			9			4			5		
<b>Dimension 6: Employee Friendly Work Environment</b>																		
<b>Overall Mean Score</b>	4.51	87.71	0.60	4.09	77.19	0.61	4.44	85.89	0.73	4.15	78.75	0.67	4.30	82.56	0.71	4.09	77.31	0.66
<b>Rank</b>	1			9			2			6			4			9		
<b>Dimension 7: Development Oriented Performance Appraisal</b>																		
<b>Overall Mean Score</b>	4.60	90.09	0.50	4.18	79.44	0.51	4.44	86.02	0.67	4.46	86.48	0.56	4.26	81.39	0.65	4.27	81.78	0.65
<b>Rank</b>	1			8			3			2			7			6		
<b>Dimension 8: Compensation</b>																		
<b>Overall Mean Score</b>	4.52	87.92	0.51	4.03	75.63	0.53	4.33	83.33	0.78	4.23	80.63	0.70	4.32	82.88	0.57	4.22	80.50	0.65
<b>Rank</b>	1			10			3			5			4			6		
<b>Dimension 9: Career Development</b>																		
<b>Overall Mean Score</b>	4.39	84.72	0.66	4.09	77.36	0.80	4.34	83.61	0.66	4.21	80.14	0.68	4.26	81.58	0.67	4.12	78.00	0.70
<b>Rank</b>	1			8			2			5			3			7		
<b>Dimension 10: Value Added Incentive</b>																		
<b>Overall Mean Score</b>	4.25	81.25	0.89	3.60	65.00	0.84	4.35	83.75	0.75	4.60	90.00	0.53	4.08	77.00	0.82	3.36	59.00	0.74
<b>Rank</b>	3			8			2			1			4			11		

Contd.

Items	PYRAMID		SCL			ALCATEL			ATTRA			KANBAY			OMNIA			QUARK				
	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	
<b>Dimension – 1: Rigorous Selection Process</b>																						
<b>Overall Mean Score</b>	4.40	85.10	0.59	4.20	80.00	0.52	4.42	85.60	0.65	4.75	93.86	0.49	4.75	93.75	0.44	3.91	72.70	0.84	4.57	89.20	0.59	
<b>Rank</b>	7			11			6			2			2			12			4			
<b>Dimension – 2: Value-Based Induction</b>																						
<b>Overall Mean Score</b>	4.23	80.71	0.65	4.09	77.26	0.55	4.44	86.00	0.62	4.20	79.90	0.45	4.25	81.25	0.45	3.50	62.57	0.77	4.21	80.21	0.73	
<b>Rank</b>	7			11			4			9			6			12			8			
<b>Dimension – 3: Comprehensive Training</b>																						
<b>Overall Mean Score</b>	4.31	82.67	0.75	4.16	78.89	0.61	4.45	86.17	0.67	4.24	80.95	0.50	4.28	81.88	0.48	3.41	60.17	0.79	3.73	68.17	1.05	
<b>Rank</b>	6			11			2			8			7			13			12			
<b>Dimension – 4: Team Based Job Design</b>																						
<b>Overall Mean Score</b>	3.96	73.88	0.67	3.86	71.46	0.73	4.55	88.63	0.62	4.08	76.96	0.58	4.18	79.53	0.45	3.59	64.63	0.77	4.02	75.50	0.77	
<b>Rank</b>	7			8			1			5			4			9			6			
<b>Dimension - 5: Working Condition</b>																						
<b>Overall Mean Score</b>	4.02	75.43	0.78	4.36	83.93	0.82	4.44	86.07	0.63	4.32	82.96	0.61	4.11	77.77	0.51	3.42	60.43	0.71	4.28	82.00	0.72	
<b>Rank</b>	12			6			3			7			10			13			8			
<b>Dimension 6: Employee Friendly Work Environment</b>																						
<b>Overall Mean Score</b>	4.24	80.97	0.75	3.47	61.67	0.91	4.36	83.94	0.68	4.14	78.48	0.56	4.10	77.58	0.52	3.31	57.78	0.67	3.82	70.44	0.86	
<b>Rank</b>	5			11			3			7			8			12			10			
<b>Dimension 7: Development Oriented Performance Appraisal</b>																						
<b>Overall Mean Score</b>	4.35	83.83	0.75	3.88	71.94	0.74	4.32	83.00	0.65	4.10	77.46	0.45	4.03	75.76	0.47	3.35	58.78	0.66	3.79	69.78	0.86	
<b>Rank</b>	4			11			5			9			10			13			12			
<b>Dimension 8: Compensation</b>																						
<b>Overall Mean Score</b>	4.09	77.13	0.70	3.85	71.25	0.70	4.35	83.63	0.66	4.11	77.68	0.44	4.05	76.25	0.51	3.53	63.25	0.70	3.85	71.13	0.92	
<b>Rank</b>	8			11			2			7			9			12			11			
<b>Dimension 9: Career Development</b>																						
<b>Overall Mean Score</b>	3.66	66.58	0.76	3.84	71.11	0.61	4.20	80.08	0.70	4.22	80.48	0.82	4.04	75.94	0.81	3.35	58.75	0.72	3.68	67.08	0.94	
<b>Rank</b>	11			10			6			4			9			13			12			
<b>Dimension 10: Value Added Incentive</b>																						
<b>Overall Mean Score</b>	3.57	64.25	0.74	3.10	52.50	0.92	4.02	75.50	0.83	3.83	70.71	1.08	3.54	63.44	1.01	3.30	57.50	0.89	3.62	65.50	1.01	
<b>Rank</b>	9			13			5			6			10			12			7			

Source: Primary Survey

Table 3

Total of all Dimensions' Mean Score, Percentage and Standard Deviation

Organisations	TCS			WIPRO			INFOSYS			HCL			DELL			BIRLASOFT		
	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD
<b>Rigorous Selection Process</b>	4.79	94.67	0.40	4.49	87.33	0.55	4.60	90.00	0.54	4.29	82.17	0.62	4.30	82.50	0.69	4.37	84.20	0.75
<b>Value-Based Induction</b>	4.70	92.38	0.52	4.20	80.12	0.59	4.50	87.62	0.63	4.17	79.29	0.72	4.48	87.00	0.60	4.41	85.29	0.61
<b>Comprehensive Training</b>	4.57	89.17	0.54	4.22	80.56	0.60	4.43	85.83	0.74	4.20	80.00	0.69	4.32	83.00	0.68	4.36	84.00	0.65
<b>Team-Based Job Design</b>	4.46	86.46	0.67	4.08	76.88	0.64	4.38	84.58	0.71	4.18	79.38	0.70	4.18	79.50	0.66	4.08	77.00	0.72
<b>Working Conditions/ Environment</b>	4.60	90.00	0.58	4.09	77.14	0.60	4.56	89.05	0.59	4.18	79.40	0.74	4.40	85.00	0.61	4.39	84.71	0.63
<b>Employee Friendly Work Environment</b>	4.51	87.71	0.60	4.09	77.19	0.61	4.44	85.89	0.73	4.15	78.75	0.67	4.30	82.56	0.71	4.09	77.31	0.66
<b>Development Oriented Performance Appraisal</b>	4.60	90.09	0.50	4.18	79.44	0.51	4.44	86.02	0.67	4.46	86.48	0.56	4.26	81.39	0.65	4.27	81.78	0.65
<b>Compensation</b>	4.52	87.92	0.51	4.03	75.63	0.53	4.33	83.33	0.78	4.23	80.63	0.70	4.32	82.88	0.57	4.22	80.50	0.65
<b>Career Development</b>	4.39	84.72	0.66	4.09	77.36	0.80	4.34	83.61	0.66	4.21	80.14	0.68	4.26	81.58	0.67	4.12	78.00	0.70
<b>Value-Added Incentives</b>	4.25	81.25	0.89	3.60	65.00	0.84	4.35	83.75	0.75	4.60	90.00	0.53	4.08	77.00	0.82	3.36	59.00	0.74
<b>Total Human Resource Development Climate</b>	45.39			41.07			44.37			42.67			42.90			41.67		
<b>Rank</b>	1			9			2			5			4			7		

Source: Primary Survey

Contd.

Organisations	PYRAMID			SCL			ALCATEL			ATTRA			KANBAY			OMNIA			QUARK		
Dimensions	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD	Mean	%age	SD
<b>Rigorous Selection Process</b>	4.40	85.10	0.59	4.20	80.00	0.52	4.42	85.60	0.65	4.75	93.86	0.49	4.75	93.75	0.44	3.91	72.70	0.84	4.57	89.20	0.59
<b>Value-Based Induction</b>	4.23	80.71	0.65	4.09	77.26	0.55	4.44	86.00	0.62	4.20	79.90	0.45	4.25	81.25	0.45	3.50	62.57	0.77	4.21	80.21	0.73
<b>Comprehensive Training</b>	4.31	82.67	0.75	4.16	78.89	0.61	4.45	86.17	0.67	4.24	80.95	0.50	4.28	81.88	0.48	3.41	60.17	0.79	3.73	68.17	1.05
<b>Team-Based Job Design</b>	3.96	73.88	0.67	3.86	71.46	0.73	4.55	88.63	0.62	4.08	76.96	0.58	4.18	79.53	0.45	3.59	64.63	0.77	4.02	75.50	0.77
<b>Working Conditions/Environment</b>	4.02	75.43	0.78	4.36	83.93	0.82	4.44	86.07	0.63	4.32	82.96	0.61	4.11	77.77	0.51	3.42	60.43	0.71	4.28	82.00	0.72
<b>Employee Friendly Work Environment</b>	4.24	80.97	0.75	3.47	61.67	0.91	4.36	83.94	0.68	4.14	78.48	0.56	4.10	77.58	0.52	3.31	57.78	0.67	3.82	70.44	0.86
<b>Development Oriented Performance Appraisal</b>	4.35	83.83	0.75	3.88	71.94	0.74	4.32	83.00	0.65	4.10	77.46	0.45	4.03	75.76	0.47	3.35	58.78	0.66	3.34	58.61	0.76
<b>Compensation</b>	4.09	77.13	0.70	3.85	71.25	0.70	4.35	83.63	0.66	4.11	77.68	0.44	4.05	76.25	0.51	3.53	63.25	0.70	3.85	71.13	0.92
<b>Career Development</b>	3.66	66.58	0.76	3.84	71.11	0.61	4.20	80.08	0.70	4.22	80.48	0.82	4.04	75.94	0.81	3.35	58.75	0.72	3.68	67.08	0.94
<b>Value-Added Incentives</b>	3.57	64.25	0.74	3.10	52.50	0.92	4.02	75.50	0.83	3.83	70.71	1.08	3.54	63.44	1.01	3.30	57.50	0.89	3.62	65.50	1.01
<b>Total Human Resource Development Climate</b>	40.83			38.81			43.55			41.99			41.33			34.67			39.12		
<b>Rank</b>	10			12			3			6			8			13			11		

Source: Primary Survey

**Table - 4**  
**Item-Wise ANOVA Analysis of Different Information Technology Organisations**

Particulars	ANOVA	Sum of Squares	df	Mean Squares	F
<b>(A ) Rigorous Selection Process</b>					
1. Select the candidates, our company conducts					
(a) Written Test	Between groups	27.2775	12	2.27	*5.0113
	Within groups	220.9048	487	0.45	
	<b>Total</b>	<b>248.1823</b>	<b>499</b>		
(b) Test On Programming Skills	Between groups	43.9785	12	3.66	*8.0504
	Within groups	221.7013	487	0.46	
	<b>Total</b>	<b>265.6798</b>	<b>499</b>		
(c) Technical Interview	Between groups	32.4220	12	2.70	*8.5253
	Within groups	154.3390	487	0.32	
	<b>Total</b>	<b>186.7610</b>	<b>499</b>		
(d) General Interview	Between groups	47.3615	12	3.95	*12.3562
	Within groups	155.5562	487	0.32	
	<b>Total</b>	<b>202.9177</b>	<b>499</b>		
2. Our company looks at candidate's ability to work in a team.	Between groups	36.3835	12	3.03	*7.0039
	Within groups	210.8198	487	0.43	
	<b>Total</b>	<b>247.2033</b>	<b>499</b>		
<b>(B) Value-Based Induction</b>					
1. Our Company organizes a formal induction programme for new comers very effectively	Between groups	65.7905	12	5.48	*15.7927
	Within groups	169.0657	487	0.35	
	<b>Total</b>	<b>234.8562</b>	<b>499</b>		
2. Induction training provides an excellent opportunity for new comers to learn comprehensively about					
(a) The organisation in general	Between groups	46.0720	12	3.84	*9.2067
	Within groups	203.0874	487	0.42	
	<b>Total</b>	<b>249.1594</b>	<b>499</b>		
(b) Its mission and goals	Between groups	52.6185	12	4.38	*10.6288
	Within groups	200.9095	487	0.41	
	<b>Total</b>	<b>253.5280</b>	<b>499</b>		
(c) Its norms and values	Between groups	51.3160	12	4.28	*11.7268
	Within groups	177.5912	487	0.36	
	<b>Total</b>	<b>228.9072</b>	<b>499</b>		
(d) Its customs	Between groups	54.8030	12	4.57	*10.6395
	Within groups	209.0407	487	0.43	
	<b>Total</b>	<b>263.8437</b>	<b>499</b>		
3. Induction training is used as an opportunity in our company to create bonds between the company	Between groups	45.7780	12	3.81	*8.9106
	Within groups	208.4962	487	0.43	

Particulars	ANOVA	Sum of Squares	df	Mean Squares	F
and the new employees.	<b>Total</b>	<b>254.2742</b>	<b>499</b>		
4. The new recruits find induction training very useful in this organisation.	Between groups	40.5905	12	3.38	*7.0570
	Within groups	233.4264	487	0.48	
	<b>Total</b>	<b>274.0169</b>	<b>499</b>		
<b>(C) Comprehensive Training</b>					
1. The training needs of each individual are identified in order to develop critical skills needed for the assigned work.	Between groups	49.3988	12	4.12	*8.2929
	Within groups	241.7464	487	0.50	
	<b>Total</b>	<b>291.1452</b>	<b>499</b>		
2. When employees are sponsored for training, they take it seriously	Between groups	70.8125	12	5.90	*9.7018
	Within groups	296.2131	487	0.61	
	<b>Total</b>	<b>367.0256</b>	<b>499</b>		
3. The technical skills of the employees are constantly upgraded through a variety of training programmes, workshops and seminar	Between groups	66.9480	12	5.58	*11.9603
	Within groups	227.1664	487	0.47	
	<b>Total</b>	<b>294.1144</b>	<b>499</b>		
<b>(D) Team-Based Job Design</b>					
1. Self-managed work teams and semi-autonomous work groups are the building blocks of the work system	Between groups	51.1850	12	4.27	*7.9903
	Within groups	259.9724	487	0.53	
	<b>Total</b>	<b>311.1574</b>	<b>499</b>		
2. The actual job duties are shaped more by the employees than by a specific job description	Between groups	32.1330	12	2.68	*5.1195
	Within groups	254.7257	487	0.52	
	<b>Total</b>	<b>286.8587</b>	<b>499</b>		
3. Employees are given the details of the consumers and their requirements	Between groups	47.2480	12	3.94	*9.5884
	Within groups	199.9800	487	0.41	
	<b>Total</b>	<b>247.2280</b>	<b>499</b>		
4. Individuals and groups are involved in making decisions that affect their work	Between groups	47.6630	12	3.97	*9.3726
	Within groups	206.3817	487	0.42	
	<b>Total</b>	<b>254.0447</b>	<b>499</b>		
<b>(E) Working Conditions/ Environment</b>					
1. The quality of physical conditions provided in the work-place is good.	Between groups	16.0200	12	1.34	*2.9909
	Within groups	217.3712	487	0.45	
	<b>Total</b>	<b>233.3912</b>	<b>499</b>		
2. Our company provider excellent infrastructure and support services for high performance.	Between groups	54.9965	12	4.58	*8.2172
	Within groups	271.6181	487	0.56	
	<b>Total</b>	<b>326.6146</b>	<b>499</b>		
3. Sources of frequent interruption or distraction that degrade the effectiveness of work environment are identified and minimized	Between groups	46.9715	12	3.91	*9.0086
	Within groups	211.6048	487	0.43	
	<b>Total</b>	<b>258.5763</b>	<b>499</b>		
4. Periodic improvements are made to the work environment that increases effectiveness in performing work	Between groups	49.9730	12	4.16	*8.7869
	Within groups	230.8057	487	0.47	



Particulars	ANOVA	Sum of Squares	df	Mean Squares	F
	<b>Total</b>	<b>280.7787</b>	<b>499</b>		
5. Sanitation, ventilation and furnishing facilities in the company are good	Between groups	75.6465	12	6.30	*14.9399
	Within groups	205.4895	487	0.42	
	<b>Total</b>	<b>281.1360</b>	<b>499</b>		
6. Canteen and refreshment facilities arrangement are good	Between groups	76.0390	12	6.34	*12.3835
	Within groups	249.1962	487	0.51	
	<b>Total</b>	<b>325.2352</b>	<b>499</b>		
7. Safety standards maintained by the department are good	Between groups	68.5980	12	5.72	*14.4901
	Within groups	192.1274	487	0.39	
	<b>Total</b>	<b>260.7254</b>	<b>499</b>		
<b>(F) Employee Friendly Work Environment</b>					
1. The top management believes that human sources are an extremely important resource and that they have to be treated more humanly.	Between groups	87.6055	12	7.30	*14.8151
	Within groups	239.9798	487	0.49	
	<b>Total</b>	<b>327.5853</b>	<b>499</b>		
2. The top management of this organisation goes out of its way to make sure that employees enjoy their work	Between groups	70.1735	12	5.85	*11.4846
	Within groups	247.9731	487	0.51	
	<b>Total</b>	<b>318.1466</b>	<b>499</b>		
3. The top management is willing to invest a considerable part of their time and other resource to ensure the development of employees.	Between groups	89.5615	12	7.46	*14.8235
	Within groups	245.1990	487	0.50	
	<b>Total</b>	<b>334.7605</b>	<b>499</b>		
4. The top management of this organisation makes efforts to identify and utilize the potential of employees.	Between groups	75.1835	12	6.27	*13.2674
	Within groups	229.9779	487	0.47	
	<b>Total</b>	<b>305.1614</b>	<b>499</b>		
5. Seniors guide their juniors and prepare them for future responsibilities / roles they are likely to take-up	Between groups	59.5505	12	4.96	*8.8963
	Within groups	271.6581	487	0.56	
	<b>Total</b>	<b>331.2086</b>	<b>499</b>		
6. When seniors delegate authority to juniors, the juniors use it as an opportunity for development	Between groups	58.6265	12	4.89	*8.6682
	Within groups	274.4798	487	0.56	
	<b>Total</b>	<b>333.1063</b>	<b>499</b>		
7. Employees are not afraid to express or discuss their feeling with their colleagues.	Between groups	109.7160	12	9.14	*17.2468
	Within groups	258.1724	487	0.53	
	<b>Total</b>	<b>367.8884</b>	<b>499</b>		
8. Employees are encouraged to take initiative and do things on their own without having to wait for instructions from supervisors.	Between groups	65.0325	12	5.42	*8.2775
	Within groups	318.8448	487	0.65	
	<b>Total</b>	<b>383.8773</b>	<b>499</b>		
9. Employees are not afraid to express or discuss their feelings with their superiors.	Between groups	87.9220	12	7.33	*16.5863
	Within groups	215.1274	487	0.44	
	<b>Total</b>	<b>303.0494</b>	<b>499</b>		
10. Employees are not afraid to express or discuss their feelings with their	Between groups	83.2965	12	6.94	*16.3402
	Within groups	206.8798	487	0.42	

Particulars	ANOVA	Sum of Squares	df	Mean Squares	F
subordinates.	<b>Total</b>	<b>290.1763</b>	<b>499</b>		
11. Employees are encouraged to experiment with new methods and try out creative ideas.	Between groups	125.2725	12	10.44	*22.4939
	Within groups	226.0162	487	0.46	
	<b>Total</b>	<b>351.2887</b>	<b>499</b>		
12. Weakness of employees is communicated to them in a non-threatening way.	Between groups	80.3895	12	6.70	*13.3509
	Within groups	244.3629	487	0.50	
	<b>Total</b>	<b>324.7524</b>	<b>499</b>		
13. Employees in this organisation are very informal and do not hesitate to discuss their personal problems with their superiors/ subordinates.	Between groups	75.9590	12	6.33	*10.7058
	Within groups	287.9429	487	0.59	
	<b>Total</b>	<b>363.9019</b>	<b>499</b>		
14. Communication in the organisation is both at upwards and downward is effective.	Between groups	83.5830	12	6.97	*15.4322
	Within groups	219.8057	487	0.45	
	<b>Total</b>	<b>303.3887</b>	<b>499</b>		
15. People in this organisation don't have any fixed mental impression about each other.	Between groups	59.6320	12	4.97	*9.1066
	Within groups	265.7495	487	0.55	
	<b>Total</b>	<b>325.3815</b>	<b>499</b>		
16. Team spirit is of high order in this organisation.	Between groups	64.5290	12	5.38	*10.2916
	Within groups	254.4590	487	0.52	
	<b>Total</b>	<b>318.9880</b>	<b>499</b>		
<b>(G) Development Oriented Performance Appraisal</b>					
1. Our performance appraisal system provides feedback from superiors.	Between groups	67.6735	12	5.64	*12.8039
	Within groups	214.4981	487	0.44	
	<b>Total</b>	<b>282.1716</b>	<b>499</b>		
2. There is high employee participation in the appraisal process.	Between groups	66.5395	12	5.54	*12.6220
	Within groups	213.9429	487	0.44	
	<b>Total</b>	<b>280.4824</b>	<b>499</b>		
3. Performance appraisal is based on					
(a) Individual results	Between groups	73.0000	12	6.08	*12.0577
	Within groups	245.7007	487	0.50	
	<b>Total</b>	<b>318.7007</b>	<b>499</b>		
(b) Group results	Between groups	57.8340	12	4.82	*12.9009
	Within groups	181.9324	487	0.37	
	<b>Total</b>	<b>239.7664</b>	<b>499</b>		
(c) Quantifiable standards, such as the value of project completed.	Between groups	55.2235	12	4.60	*9.5256
	Within groups	235.2781	487	0.48	
	<b>Total</b>	<b>290.5016</b>	<b>499</b>		
(d) Qualitative standards, such as teamwork.	Between groups	80.6495	12	6.72	*15.9880
	Within groups	204.7179	487	0.42	
	<b>Total</b>	<b>285.3674</b>	<b>499</b>		
4. The objective of the appraisal process is employee's development.	Between groups	49.0990	12	4.09	*8.4092
	Within groups	236.9540	487	0.49	

Particulars	ANOVA	Sum of Squares	df	Mean Squares	F
	<b>Total</b>	<b>286.0530</b>	<b>499</b>		
5. If performance problems occur they are discussed with the appropriate individuals or groups.	Between groups	60.7560	12	5.06	*12.3081
	Within groups	200.3295	487	0.41	
	<b>Total</b>	<b>261.0855</b>	<b>499</b>		
6. Performance appraisal reports in our organisation are based on objective assessment and adequate information and not on favoritism.	Between groups	60.6645	12	5.06	*12.4831
	Within groups	197.2248	487	0.40	
	<b>Total</b>	<b>257.8893</b>	<b>499</b>		
<b>(H) Compensation</b>					
1. Each individual's compensation package is determined through a document procedure that is consistent with organisation's compensation policy, strategy and plan.	Between groups	58.5695	12	4.88	*9.8989
	Within groups	240.1229	487	0.49	
	<b>Total</b>	<b>298.6924</b>	<b>499</b>		
2. Compensation is primarily determined by results achieved / contribution to the company.	Between groups	38.5930	12	3.22	*7.0405
	Within groups	222.4600	487	0.46	
	<b>Total</b>	<b>261.0530</b>	<b>499</b>		
3. Decisions regarding an individual's compensation package are communicated to the individual.	Between groups	36.9065	12	3.08	*6.1268
	Within groups	244.4645	487	0.50	
	<b>Total</b>	<b>281.3710</b>	<b>499</b>		
4. In our company high performers are given higher pay package.	Between groups	64.8205	12	5.40	*13.9640
	Within groups	188.3864	487	0.39	
	<b>Total</b>	<b>253.2069</b>	<b>499</b>		
<b>(I) Career Development</b>					
1. In our company a personal development plan is created and maintained for each individual.	Between groups	68.0800	12	5.67	*9.8780
	Within groups	279.7050	487	0.57	
	<b>Total</b>	<b>347.7850</b>	<b>499</b>		
2. Company provides every employee with opportunities to choose a career path to suit the individual's core competence.	Between groups	56.3550	12	4.70	*7.9002
	Within groups	289.4967	487	0.59	
	<b>Total</b>	<b>345.8517</b>	<b>499</b>		
3. An individual's development plan and activities are periodically reviewed to determine whether organisational competency needs will be met.	Between groups	50.1160	12	4.18	*7.1386
	Within groups	284.9124	487	0.59	
	<b>Total</b>	<b>335.0284</b>	<b>499</b>		
4. Individuals in this company have clear career paths within the organisation.	Between groups	58.3285	12	4.86	*8.8112
	Within groups	268.6531	487	0.55	
	<b>Total</b>	<b>326.9816</b>	<b>499</b>		
5. Our company has created a learning environment in the organisation for both professional and personal growth.	Between groups	62.4260	12	5.20	*9.2921
	Within groups	272.6450	487	0.56	
	<b>Total</b>	<b>335.0710</b>	<b>499</b>		
6. Job rotation in this organisation facilities employee development.	Between groups	68.2830	12	5.69	*9.6003
	Within groups	288.6524	487	0.59	
	<b>Total</b>	<b>356.9354</b>	<b>499</b>		

Particulars	ANOVA	Sum of Squares	df	Mean Squares	F
<b>(J) Value-Added Incentives</b>					
1. Employees are offered an extremely flexible compensation and benefits package like housing assistance, stock options, soft loans and asset acquisition assistance.	Between groups	83.2505	12	6.94	*7.4058
	Within groups	456.2074	487	0.94	
	<b>Total</b>	<b>539.4579</b>	<b>499</b>		
2. Extensive performance-based incentives and bonuses are available to all employees.	Between groups	70.0488	12	5.84	*9.1501
	Within groups	310.6867	487	0.64	
	<b>Total</b>	<b>380.7355</b>	<b>499</b>		

Source: Primary Survey

\* Significant at 1% level of significance

\*\* Significant at 5% level of significance