

Human Resource Development Scenario in the Manufacturing Sector of Punjab



ISBN: 978-81-924713-8-9

Ramandeep Saini

Mohali affiliated to Punjab Technical University
(ramandeepsaini2000@gmail.com)

Rajiv Khosla

Chandigarh University
(rajivkhosla78@gmail.com)

Human Resource Development (HRD) has assumed significance in recent past for all types of businesses. Managers around the globe prefer using HRD mechanisms for incorporating changes in organizations. Further, these interventions aim at changing the behaviour of employees, improvement in skills and competencies and enhancing the performance. Present study has been carried out in dominant manufacturing industries of Punjab to examine and analyse the extent of implementation of HRD interventions besides identifying the factors affecting them. Results of the study will facilitate managers to develop robust HRD systems in order to face challenges emerging in the changing business environment.

Keywords: HRD, Manufacturing Sector, Changing Environment

1. Introduction

Industrialization is a process involving social and economic change which leads to the transformation of an economy from an agrarian society to an industrialized one. Industrial and technological revolution led to differences in living standards across various countries. Kuznets (1948) termed industrialization as the permanent growth of the proportion of the non-agricultural sectors within the national economy running with considerable increase of the total industrial production as well as with the spread of up-to-date technology. As far as industrialization in India is concerned, like other developing nations non-industrialization model was followed under colonial rule. After independence, Indian state intervention in industrial development has been extensive. Key industries like chemicals, electric power, steel, transportation, life insurance, portions of the coal and textile industries etc. were under state control and government made all out efforts to promote them. However, economic reforms in 1990s changed the scenario as liberalization started with relaxation in industrial and financial policies. Not only this, export incentives enhanced because of subsidies, tax concessions, and the depreciation of the currency. Liberalization further diluted the restrictions on import and export hence leading to economic growth.

Present day policy makers have realized that growth cannot be sustainable without industrialization. Accordingly, campaigns like "Make in India" are being initiated. Further, in the absence of industrialization, demographic dividends with which our economy is endowed with are also getting underutilized. Human resources are accepted as the biggest source of competitive advantage with a capability of converting all the other resources into product and service. Effectiveness of human resource further depends on the Human Resource Development (HRD) climate that prevails in the organizations. Human resource development is concerned with the provision of learning and development opportunities that support the achievement of business strategies and improvement of organizational, team and individual performance (Armstrong and Baron, 2002). HRD interventions are designed and developed with a purpose to create an environment which can facilitate changes in systems, structures, processes etc. The current study has been carried out to analyse the HRD scenario in manufacturing sector of Punjab. This was accomplished by comparing primary HRD interventions in the dominant industries of Punjab. Following objectives were framed for the study:

1. To identify the variables affecting selected HRD practices in the manufacturing sector of Punjab.
2. To determine the connection between the dominant variables.
3. To give recommendations for the effective implementation of HRD practices.

Study is divided into four sections. First section is introductory in nature while section II discusses database and methodology. Analysis of selected HRD practices is contained in section III and the entire discussion is summed up in section

2. Database and Methodology

In order to fulfil the above mentioned objectives, we have relied upon the secondary as well as primary data. Dominant industries of Punjab have been identified on the basis of National Industrial Classification (NIC) 2008. Data for the same is obtained from the Annual Survey of Industries for the year 2008-09 supplied by the Ministry of Statistics and Programme Implementation. In the year 2008-2009 a total of 56 manufacturing industries existed in the state of Punjab. Genuinely dominating ten industries were identified on the basis of five parameters viz. number of factories, invested capital, total output, number of persons engaged and wages and salaries (including employer's contribution). We endeavoured to collect data randomly from five managers each from the selected four units (both public and private) from ten dominant industries spread throughout the state. However, despite our best efforts, we could collect data from 160 respondents. It was either due to the non-cooperative attitude of the managers (particularly from the public sector) or the closure of certain units in the selected industries. HRD practices selected for the study included performance appraisal systems, career development and

training and development. Questionnaire was administered to five supervisor/officer/executive level employees in each of the units. 49 variables (annexure 1) affecting the selected HRD practices were included in the questionnaire after reviewing relevant literature.

Variables selected for studying HRD practices in manufacturing industries of Punjab

ANNEXURE 1

Sr.No	Variable
1	Quality of personal objective setting for individual employees in your organization is excellent.
2	Ratings by appraisers are sometimes seen as based on subjective judgments like "not upto the mark".
3	Evidence of performance is gathered throughout the year.
4	Evidence from project work(extra assignments) are included in performance appraisal.
5	Comments from mentors or coaches are included in performance appraisal.
6	Employee's personal efforts to become more proficient in his/her assignment and to prepare for more responsibility are considered.
7	Comments on the methods and approach used by the employee in performing the job are evaluated.
8	Low performance is highlighted, but development support is also defined.
9	The appraisal system is maintained by monitoring its operation through periodic evaluation.
10	The critical incidences during the performance of job are recorded.
11	Appraisers are selected carefully by using a representative sample of people most critical to the ratee and who had the greater opportunity to observe his or her performance.
12	Potential assessment criteria is based mostly on an employee's process skills.
13	Potential of the employees is measured in terms of the competencies required to achieve the target level of performance in a particular job or at a particular level in company.
14	The potential of employees for the future assignments is considered.
15	The promotions are given on the basis of current performance and consideration is also given to the potential of employee.
16	Management believes in developing suitable employee base for succession planning.
17	Tests and exercises, assignments are given to employees to assess their competencies and on the job behaviour and potential to take higher responsibilities.
18	Potential assessment identifies training needs, provide guidance on possible directions in which an individual's career might go, and indicate who has potential for promotion.
19	Assessment centres provide good opportunities for indicating the extent to which candidates match the culture of the organization.
20	360-degree appraisal is effective in identifying and measuring interpersonal skills, customer satisfaction, and team-building skills.
21	Behaviourally Anchored Rating Scales (BARS) method is a relatively new technique which combines the graphic rating scale and critical incidents method.
22	Management By Objectives (MBO) is to create empowered employees who have clarity of the roles and responsibilities expected from them and understand their objectives.
23	Appraisal systems should include self-analysis, employee input into evaluations, feedback, and goal setting by workers.
24	Management is providing resources and linkages which ensure maximum person-job match, skills acquisition, and continual improvement.
25	Employees are allowed to do self-assessment to determine their career interests, values, aptitudes, and behavioral tendencies.
26	Employees are made aware of the existing and future opportunities and growth avenues that can be pursued and achieved within.
27	Your intentions to stay in the current organization are asked.
28	You are asked about your preferred successor.
29	Your organization's objectives are aligned with individual employees' vision of career success.
30	There is joint ownership and shared responsibility in your organization to create new ways for employees to grow and contribute.
31	HR department in the organization supports individual career plan through movement along the career path with job rotations, advancements, problem solving assignments.
32	Counseling is provided to the employees to plan their progress along their career paths.
33	Career plans for employees are developed keeping in mind the work environment.
34	Career development program can accelerate workforce adaptation to change, improve cost-effectiveness of human resource decisions.
35	Career Development means development both in horizontal and vertical direction.
36	Career Planning ensures higher loyalty and productivity from employees.
37	Efforts of career planning and development culminate into succession planning at highest levels in the organization.

Sr.No	Variable
38	Career planning facilitates in retaining and attracting people from different cultures thus enhancing cultural diversity.
39	Human relations competencies are adequately developed in your organization through training in human skills.
40	Training has developed managerial capabilities
41	Training process in your organization has the commitment and support of top management and active involvement of the middle management.
42	Training has enabled the executive or manager to leverage his or her personal skills more effectively.
43	Management in your organization believes that smarter, better trained managers increase chances of success.
44	The training process is regularly evaluated by empirical, evidence based feedback.
45	Employees get the right kind of climate to implement new ideas and methods acquired during training.
46	Training in specific performance management, how to manage and facilitate meetings, work/life balance issues, safety in the workplace, crisis intervention etc has increased efficiency of managers.
47	Training has increased loyalty of the managers in the demanding global business hours, language barriers, differing work ethics and uncertainties.
48	Effective training emphasizes what the employee has done well and how those behaviors can be continued into the future.
49	Leadership training if given to managers contributes to thinking and planning more strategically, to manage risk more effectively and to create and communicate vision.

In order to find out the effective variables among these, factor analysis technique has been used. Two tests - Kaiser Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of approximation were applied to check if factor analysis can be applied or not. Further, the multiple correlation was applied to determine the correlation between the identified dominant variables.

3. Analysis and Interpretation

A comparison of 56 industries existing in the state of Punjab for the year 2008-09 was made in terms of five parameters viz. number of factories, invested capital, total output, number of persons engaged and wages and salaries (including employer's contribution). An industry may be faring well in one of the parameters but may figure in the laggards list in terms of others. In order to trace the genuinely dominating industries in the state, analysis was made to find out the dominance of industries in the selected parameters. Results of the analysis showed that the industries exhibited in table 1 constituted the dominating industries and laid the foundation for further analysis.

Table 1 Dominant Industries in Punjab

Sr.No	Industry
1	Manufacture of grain mill products, starches and starch products industry (106)
2	Spinning, weaving and finishing of textiles industry (131)
3	Manufacture of basic iron and steel industry (241)
4	Manufacture of transport equipment n.e.c. industry (309)
5	Manufacture of knitted and crocheted apparel industry (143)
6	Manufacture of other fabricated metal products; metal working service activities (259)
7	Manufacture of special-purpose machinery industry (282)
8	Manufacture of non-metallic mineral products n.e.c industry (239)
9	Manufacture of other textiles industry (139)
10	Manufacture of parts and accessories for motor vehicles (293)

As discussed earlier, factor analysis test is used to identify the top variables affecting each of the three HRD practices. To check the suitability of factor analysis on the collected data, KMO and Bartlett's test are applied and the results are given in table 2. Values greater than 0.50 for KMO test generally indicate that a factor analysis is useful with the data. Bartlett's test of sphericity tests the hypothesis that correlation matrix is an identity matrix, and indicate that variables are unrelated and therefore unsuitable for structure detection. Small values (as in this case $0.00 < 0.05$) indicate that a factor analysis can be useful with the data. The figures in table 2 supported the application of factor analysis.

Table 2 KMO and Bartlett's Test

		Performance Appraisal	Career Development	Training and Development
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.666	.711	.799
Bartlett's Test of Sphericity	Approx. Chi-Square	963.830	671.789	478.045
	Df	253.000	105.000	55.000
	Sig.	.000	.000	.000

Results of factor analysis applied on the data collected in context of selected HRD interventions are shown in the table 3. Twenty three variables affecting performance appraisal systems were examined and it is evident from the table that eight factors have eigen values greater than 1 and together they accounted for 68 percent of variance. These eight variables are identified as careful selection of appraiser (0.854), 360 degree appraisal (0.845), succession planning (0.795), evidence of project work (0.765), evidence of performance (0.756), identifying potential employees for promotion (0.756), components of appraisal systems (0.755) and potential for future assignments(0.752). Further inter industry comparison has shown that Manufacture of other textiles industry (139) had the most effective performance appraisal systems being implemented in the manufacturing sector in Punjab followed by Manufacture of special-purpose machinery industry (282) and Manufacture of transport equipment n.e.c. industry (309).

Similarly, in case of career development, five variables had eigen values greater than 1 and together they accounted for 64 percent variance. These variables included awareness of existing and future growth opportunities (0.848), workforce adaptation to change (0.825), succession planning at highest levels (0.738), loyalty and productivity of employees (0.699) and retention and enhancing cultural diversity (0.668). It was revealed after comparison that career development programs were being effectively implemented in Manufacture of other textiles industry (139), Manufacture of parts and accessories for motor vehicles industry (293) and Spinning, weaving and finishing of textiles industry (131).

Analysis of training and development revealed three variables having eigen values greater than 1 and these accounted for 59 percent variance. The significant variables in this case comprised of utilisation of personal skills (0.830), identifying and sustaining good behaviours (0.773) and leadership training (0.632). Further, training and development process was found to be effectively being implemented in Manufacture of other textiles industry (139) (6.04), Spinning, weaving and finishing of textiles industry (131) (5.92) and Manufacture of transport equipment n.e.c. industry (309) (5.82).

On the whole sixteen variables are revealed to be having maximum influence on the selected HRD practices. 360 degree appraisal has figured as a preferred method of performance appraisal as this enables employees to receive confidential, anonymous feedback from the people who work around them. Further, components of performance appraisal system should be taken into consideration since they have a direct bearing on the output of this process. Not only this, appraisers evaluating the performance of employees should be adequately trained and possess the requisite experience of the job.

With an increased awareness of career management at the workplace, organizations can design and implement strategies which align business objectives with individual visions of career success. Career development programs should ensure that proper counselling is provided to the employees and career plans should be developed keeping in mind the work environment. Employees should be made aware of existing and future growth opportunities. Moreover, HR department should be supportive enough to ask individual about their preferred

Table 3 Total Variance Explained

Comp onent	Performance Appraisal						Career Development						Training and Development					
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Initial Eigenvalues			Extraction Sums of Squared Loadings			Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.029	21.865	21.865	5.029	21.865	21.865	4.320	28.798	28.798	4.320	28.798	28.798	3.919	35.627	35.627	3.919	35.627	35.627
2	2.221	9.659	31.524	2.221	9.659	31.524	1.565	10.432	39.230	1.565	10.432	39.230	1.519	13.812	49.439	1.519	13.812	49.439
3	1.852	8.052	39.576	1.852	8.052	39.576	1.457	9.715	48.945	1.457	9.715	48.945	1.034	9.397	58.836	1.034	9.397	58.836
4	1.557	6.777	46.346	1.557	6.777	46.346	1.203	8.017	56.962	1.203	8.017	56.962	.890	8.094	66.930			
5	1.448	6.293	52.639	1.448	6.293	52.639	1.014	6.757	63.719	1.014	6.757	63.719	.806	7.328	74.258			
6	1.284	5.581	58.221	1.284	5.581	58.221	.880	5.864	69.583				.699	6.357	80.615			
7	1.244	5.410	63.631	1.244	5.410	63.631	.821	5.473	75.056				.571	5.189	85.803			
8	1.014	4.39	68.0	1.014	4.39	68.02	.76	5.06	80.12				.48	4.44	90.25			

potrg	0.34	0.19	0.32	0.41	0.41	1.00										
degree	-0.08	-0.16	0.22	-0.08	0.02	0.04	1.00									
appsys	0.26	0.01	0.20	0.18	0.32	0.32	0.09	1.00								
empawr	0.21	0.10	0.27	0.24	0.30	0.17	0.22	0.17	1.00							
cardev	-0.12	-0.14	0.02	0.07	0.14	0.11	-0.07	0.08	-0.01	1.00						
carplg	0.06	0.08	0.29	0.23	0.34	0.37	0.09	0.07	0.23	0.20	1.00					
carsuc	0.22	-0.03	0.06	0.16	0.08	0.17	0.12	0.33	0.20	-0.12	0.07	1.00				
carrtg	0.09	0.15	0.09	0.11	0.16	0.22	-0.13	0.36	0.10	0.24	0.22	0.29	1.00			
trgper	0.24	0.04	0.14	0.40	0.37	0.21	0.05	0.40	0.43	0.09	0.25	0.11	0.04	1.00		
desbeh	0.12	-0.03	0.12	0.14	0.12	0.00	0.30	0.08	0.23	0.04	0.19	0.20	0.16	0.30	1.00	
ledtrg	0.03	-0.10	0.12	0.18	0.27	0.21	0.15	0.06	0.01	0.16	0.31	-0.05	0.03	0.19	0.13	1.00

Source: Primary Data

4. Conclusions and Recommendations

As discussed earlier, human resources are acknowledged as the most significant component for industrial growth and their development is taken on priority these days. HRD interventions hence are aimed at building a development culture in an organization through improvement of human quality. Human development needs to be accelerated to reach the expected level. Managers across the industries in Punjab should adopt modern styles and interventions in order to develop human capital. There is a need to equip human resources with education, knowledge and skills to enhance the process of production. In the light of this discussion, we favour the development of strong HRD climate in manufacturing sector of Punjab. Managements today accept the responsibility of employee development and performance appraisal is a way to fulfil the same. Performance appraisal systems should concentrate more on identifying needs for employee development than salary revisions or promotions. Hence, it is further recommended that industries in Punjab should use different performance appraisal methods in combination or in an integrated manner. In order to ensure successful implementation of the appraisal, study recommends that top management should be supportive enough to accept constructive feedback and not become defensive. Furthermore, it is recommended that self-appraisal be made a part of the main appraisal process in order to reduce subjectivity and perceived injustice.

With an increased awareness of career management at the workplace, organizations can design and implement strategies which align business objectives with individual visions of career success. Career development process should aim at succession planning at highest levels along with both horizontal and vertical development of employees. In addition, career counseling activities should be carried out for all the employees, as an intervention of human resource department. If implemented effectively, the process can facilitate workforce adaptation to change and increase in motivational levels among employees. Further, we recommend that the organizations should continue motivating their employees by planning their careers. This will prevent delay in the process of filling vacant posts and an inappropriate use of the money allocated to training and development programs.

Employees intend to build a skill base nowadays to remain employable. At the same time organizations have realised and accepted that it is the performance of their human resources that can lead to success or failure. Hence importance of training and development as a HRD intervention is ever increasing. Top management should ensure that there is proper linkage among organizational, operational and individual level training needs. Training should be looked upon as investment rather than expenditure. Further, a training manual and policy should be prepared by training department and communicated to all levels in the organization. We further recommend investment of time and resource in training of the trainers programme as this helps in overcoming the resource persons constraints. If implemented effectively, HRD interventions facilitate development of a strong culture in an organization which further helps in building a competitive edge.

5. References

1. Ahluwalia, I. J., (1985), *Industrial Growth in India: Stagnation since the Mid-Sixties*, Oxford University Press, Delhi, p.23.
2. Armstrong, M. and Baron, A. (2002), *Strategic HRM: The key to improved business performance*, CIPD, London.
3. Bhatia, S. K., (1986), *Training in Public Enterprises: Future Directions*, Indian Management, AIMA, New Delhi, p. 29.
4. Chandra, R., (2005), *Education and Challenges of Globalization*, Kalpaz Publication, Delhi.
5. Clingingsmith, D. and Williamson, J. G., (2005), *India's Deindustrialization in the 18th and 19th Centuries*, Harvard University.
6. Gupta, V. K., (1997), *Human Resource Development and Training in a Corporate Enterprise (A Case Study of BEL)*, Deep and Deep Publications, 3, New Delhi.
7. Jacobs, R. L. and Washington, C., (2003), *Employee Development & Organizational Performance: A Review of Literature and Directions for Future Research*, *Human Resource Development International*, 6(3), pp. 343-354.
8. Pareek, U., (1997), *Evaluating Human Resource Development*, Jaipur Research Foundation, Jaipur.

9. Patel, M. K., (2005), Case studies on HRD practices, Anmol Publications Pvt. Ltd., New Delhi.
10. Purang, P., (2006), HRD Climate: A Comparative analysis of Public, Private and Multinational organizations, *Indian Journal of Industrial Relations*, 41, pp.407-419.
11. Kilam, I. K. and Kumari, N., (2012), Career Planning & HRD Climate - A Major HR challenge for public sector banks in India, *Asian Journal of Multidimensional Research*, 1(7).
12. Kuznets, S., (1948), *The Study of Industrialisation* U.N. Department of Social Affairs, (Mimeographed).
13. Rao, T. V., (1999), *HRD Audit: Evaluating the Human Resource Function for Business Improvement*, Response Books, New Delhi.
14. Renapurkar., R. M., (2012), A Study on HRD Climate with Special Reference to National Geographic Research Centre (NGRI), *International Journal of Research in Computer Application and Management*, 2(9), pp. 116-121.
15. Singh, L., (2006), Deceleration of industrial growth and rural industrialization strategy for Indian Punjab, Munich Personal RePEc Archive Online at [http://mpra.ub.uni-muenchen.de/799/MPRA Paper No. 799](http://mpra.ub.uni-muenchen.de/799/MPRA_Paper_No._799), posted 07. November 2007 / 01:16
16. Sriyan, D. S., (1997), Human Resources Development for Competitiveness: A Priority for Employers. ILO Workshop on Employers' Organizations in Asia Pacific in the Twenty First Century, Turin, Italy.
17. Swanson, R. A. and Holton. E. F., III, (2001), *Foundations of Human Resource Development*, Berrett-Koehler, San Francisco.
18. Tripathi, P.C., (1997), *Human Resource Development*, Sultan Chand and Sons, Educational Publishers, New Delhi. 117-118.