

Training Needs Analysis for Indian Textile and Apparel Manufacturing Sector

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ABSTRACT

Over the years, the rise of global trade competitiveness has led to the need of essential development of talent in organizations. The dynamic nature of businesses has led to more agile manufacturing. The textile and apparel manufacturing industry is one of highest foreign exchange earners for India. At a global level, India is behind China as a manufacturer. Availability of suitable skills for the textile and apparel manufacturing sectors aggravates the problems of the workforce. Therefore, there is a great need to pay attention to develop the human resources and concentrate on the availability of trained and developed manpower to achieve the organizational objectives. Training Needs Analysis (TNA) helps in assessing any gaps in the current training initiatives and identification of skill sets necessary for employee growth. These gaps can be analyzed and incorporated in the initiatives for effective training in organizations. The research is based on the responses of 40 HR personnel/s from vertically integrated textile and apparel manufacturing organizations based in SAS nagar, Ludhiana industrial regions of Punjab. Structured questionnaire at five point Likert Scale was used as the research tool. Statistical analysis through descriptive statistics and chi-square test was used to analyze the findings. The findings indicated that the respondents agreed that the variables associated with Individual analysis, task analysis and organizational analysis played a statistical significant role in determining Training needs analysis in the surveyed organizations.

Keywords: Training significance, Training needs analysis, individual analysis, task analysis, organizational analysis, Indian textile and apparel manufacturing industry

Introduction:

Business entities need to be well versed with the external factors influencing the trade world across the globe. Successes in businesses today require the understanding of challenges faced due to fast-paced interdependence of global commerce. Globalization has, thus, paved the way for new channels of markets, opportunities, and ideas for higher growth and expansion. The trade commerce gives equal opportunity to all; however, organizations face new

competitors each day. To sustain this competition, organizations need to continuously work for the up gradation of their manpower. Human resource Training and Development (T&D) practices are an area of management concerned with people and the overall dimensions of the organization. Extent of management training in India is low and there are structural differences between the organizations providing training and those who are not training their employees (Sharma, 1992). Employee training is, therefore, an essential

element of manufacturing industry as the current era needs increased competitiveness, informatics, and the talented human resources. The Indian textile and apparel manufacturing Industry is the second largest employer in the Indian economy and, therefore, contributes a lot with respect to human resources. India has the second largest manufacturing capacity globally with the sector employing 30 percent of the non-agricultural workforce in India. At the global level, India is behind only China as the largest textile manufacturer. Indian government through its 'Make in India' campaign movement highlights India as a manufacturing hub at the global level. As per the Ministry of Textiles, Government of India, textiles and clothing sector contributes 14% of industrial production, 12% of total exports, 4% of GDP, and 20% of the labor force in the organized manufacturing sector signifying a prominent role in the Indian economy. However, the major challenges faced by Indian textile Industry are low technology levels, growing skill gaps, unorganized structure, lower efficiencies and negligible attention on product and process developments. Availability of suitable skills for the textile and apparel manufacturing sectors aggravates the problems of the workforce. Therefore, there is a great need to pay attention to develop the human resources and concentrate on the availability of trained and developed manpower to achieve the organizational objectives.

Training Significance:

HR training practices in any organization are the responsibility of four major groups:

- The top management, accountable for the training policy
- The human resources development department, which does the whole planning and is responsible for the establishment and evaluation of the instructional training programs
- Superiors who facilitated the streamlining of the training activities

Training function enabled human capital to unleash their dexterity (Devi & Shaik,

2012), however, the relationship between employee productivity and training practices vary for different industries (Singh & Mohanty, 2012). An organized and efficient development program with all required support would help in retaining the experienced and the most valued human resources (Jehanzeb & Bashir, 2013) as training is important in enhancing the productivity and customer satisfaction to face the business challenges (Karthikeyan, Karthi, & Graf, 2010). Existing theories may be used to devise the right approach to training, thereby, designing the appropriate programs aligned with the goals and objectives of the organizations (Milhem, Abushamsieh & Aróstegui, 2014). Training and development practices help in improving technical competence besides improvement in cultural values in an organization (Edralin, 2011). There should be constant evaluation of training programs and techniques (Ugoji & Mordi, 2014; V & Shaik, 2012) that should lead to the overall improvement of trainer and organization (Subrahmanian, 2010). HR/ training professionals have to familiarize themselves with the various methodologies of training measurement using impact measures (Srimannarayana, 2011). The existent training models could be modified by giving its main indicators as per the requirement of organizations (Topno, 2012). Business intelligence tools can be used to improve the measurement of training effectiveness as large expenditures are involved in training the employees (Tripathi, 2012). For training effectiveness, appropriate training program should be developed based on data gathering, problem identification and cause and effect analysis and solution development (Nzozzo, 2011). Effectiveness of training can be based on factors namely learning, reaction, outcome, and behavior (Borate, Gopalkrishna, H.C & Borate, 2014). However, it is difficult to retain the employees without increasing the compensation after training due to increase in their skills and development (Anis, A; Rehman, Ijaz Ur; Nasir, Abdul; Safwan, 2011).

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Training Needs Analysis Significance:

TNA helps in assessing any gaps in the current training initiatives and identification of skill sets necessary for the growth of employees. These gaps can be analyzed and incorporated in the initiatives for effective training in an organization. TNA, thus, helps in performing in-depth analysis for the identification of the training gaps to enable the workforce to hone new skills and competencies. TNA helps in determining the type of training that is required and help in identifying the results or metrics for evaluation further. The assessment of training needs as a process to gather data to identify needs for the development of the type of training within an organization makes TNA to be important for the success of any organization. The organizations that conducted training without any needs assessment may indulge in overdoing of training, too less training or else losing the focus of training. A thorough need analysis based on organization, task, and individual is needed to plan training programs (Brown, 2002) as there are multiple uses of training needs analysis (Iqbal and Khan, 2011). The performance-oriented training program depends upon the needs assessment conducted by the organization. Selection of appropriate terms, searching of web-based databases, followed by relevance based and access-based sample filtering can be used as the methodology. The linkage (forward and backward) between TNA and selected HRM practices was examined in the study. The findings positioned an expanding view by the usage of TNA in highlighting employee development, training plans, learning motivation, etc. Human resource professionals could solve many organizational problems if they understood the concept of TNA and increasing its potential and enhancing the purpose and use of TNA for training and non-training initiatives. Further, work was done on the impact and need of training gap analysis for Indian automobile industry (Tharayil, 2012). Secondary data in the paper was through the literature available, whereas the

questionnaires and direct interviews were used as research tool for the employees. The findings indicated the significance of gap analysis to determine training needs. The analysis of training needs provided significant information for formulation of training programs. The importance of gap analysis was established before the training design to strengthen the workforce in Indian automobile industry that is highly competitive. There was an attempt to find out and analyze the training needs assessment and its importance in the banks based in Bangladesh (Ferdous & Razzak, 2012). Training needs assessment was stated as a prerequisite for training that were effective for sustained growth, thus, the training needs analysis could bring development of banks in Bangladesh. Lack of need assessment before training was found in the practices followed for training needs in Indian banks (Aarti, 2013), thereby, recommending that the corporation should take all the necessary steps to make the employee understand the necessity of training for productivity improvement and customer satisfaction. Most of the respondents agreed with the conduction of gap analysis to finalize the training (Tharayil, 2012). Millions of new jobs would be accelerated by the phenomenal growth in the manufacturing, processing and garmenting sectors of the textile Industry (Chugan and Rawani, 2012). Governmental support for the programs that address the need of professional manpower would enhance their performance in the long run. Acceleration of human resource performance is critical to gain global competitive excellence. Training and management development to be a mixture of activities that aim at the improvement of performance of personnel in organizations so that continuous improvement in productivity can be attained (Oni, Ijaiya and Mohammed, 2013). Human chains keep adding to organizations along with their growth and diversification in their business prospects (Vasanthalakshmi & Ragothaman, 2013). Managing the manpower requires a high level of talent with increase in client

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pressure; cost limits, productivity issues etc. Training has its impact on individual, organizational, and industry skill development (Kennett, 2013). Three models, namely team development, organizational development and individual development, and their effect on employee turnover are important. Higher employee turnover was a result of individual development with employees getting lesser opportunities to grow and more growth externally. Team development resulted in lesser employee turnover if aligned with high performance work practices. The organizational development model contributed to higher turnover of the employees with an absence of role clarity and poor commitment of the employees towards the organization. Training efforts need to meet the long and short term requirement of any organization. The need of training, the kind of training and where to hold the training become important parameters in training design. There was a demonstration of linkages between human resource practices and the employee performance especially for Delhi and National Capital Region, India (Mittar and Mathew, 2014). Significant relationship is there, between HRM practices and employee performance including training and there is a strong influence of training on efficiency of the employees.

The need of the hour is an excellent learning environment attuned with the goals and objectives of the organizations. The understanding of appropriate training practices that can help organizations in achieving their objectives is extremely important in the changing dynamics of businesses all around.

Objectives:

- To establish the significance of Training needs analysis (TNA) in Indian textile industry
- To determine the training needs in terms of individual, organizational and task based analysis

Research Methodology:

The descriptive study presented in this paper is based on primary and secondary resources. The variables in the study were measured with the help of a structured questionnaire on five-point Likert scale such as very significant (V Sig), somewhat significant (Sw Sig), neutral, somewhat not significant (Sw N Sig) and not significant (N Sig). The demographics comprised of age, gender, length of service, etc. Such an analysis highlighted the diverse reactions of various segments of respondents to the numerous variables measured. The field visits to around 27 textile and apparel companies based in the industrial region of Punjab were the source of primary data. Secondary data was collected from annual reports, published journals, etc. The number of respondents contacted that were taking care of the human resources activities in these organizations was 40. Out of the 40 HR personnel, 31 agreed that training needs analysis was carried in their respective organizations. All the valid responses of these 31 HR personnel were coded and the data is presented in the form of tables with the help of SPSS version 23. Chi-square was used in case of categorical variables and to see the deviation of the observed data from the expected data.

Results and Discussion:

A demographic analysis was done and based on questionnaire following responses were received from the respondents.

Table 1.1: Tabulation of Gender of HR personnel/s

	Frequency	Percent
Male	31	77.5
Female	9	22.5
Total	40	100.0

The responses indicate presence of more males as HR personnel/s as compared to females indicating the significant presence

of males in the textile and apparel industries of Punjab, India.

Table 1.2: Tabulation of Age of HR personnel/s

	Frequency	Percent
20-29 years	13	32.5
30-39 years	18	45.0
40-49 years	6	15.0
50-59 years	3	7.5
More than 60 years	--	--
Total	40	100.0

Out of 40 HR personnel/s, 31 were in the age category below 39 years, indicating the

presence of younger workforce in these industries.

Table 1.3: Tabulation of Service length of HR personnel/s

	frequency	percent
0-2 years	10	25.0
3-5 years	15	37.5
6-10 years	9	22.5
11-15 years	3	7.5
More than 15 years	3	7.5
Total	40	100.0

As per the collected data, 25 out of 40 respondents had served their organizations for less than 05 years. This indicates

requirement of appropriate strategies for talent retention in these organizations.

Table 1.4: Tabulation of Education of HR personnel/s

	Frequency	Percent
Certificate in HR	3	7.5
Degree in HR	18	45.0
Others	19	47.5
Total	40	100.0

As per Table 1.4; 18 HR personnel/s out of 40 had degrees in human resources. 19 had others as qualification that includes respondents who were graduates, undergraduates in arts, commerce, science, etc.

The survey was done as per the three kinds of analysis proposed by Moore and Dutton (1978) based on extensive literature review. A questionnaire consisting of 5 point Likert Scale was drafted based on the variables. The questionnaire had variables to understand the Training Needs Analysis in the specified organizations.

- i. Name of the organization
- ii. Email address
- iii. GENDER: a) Male b) Female
- iv. AGE in yrs: e.g. for 29years 05 months, mark (a) :
 - a) 20-29 years
 - b) 30 -39 years
 - c) 40-49 years
 - d) 50-59 years
 - e) > than 60 years

v. LENGTH OF THE SERVICE WITHIN THE ORGANIZATION in yrs: e.g.: for 02 years 06 months, mark (a):

- a) 0-2 yrs
- b) 3-5 yrs
- c) 6-10 yrs/
- d) 10-15 yrs
- e) more than 15yrs.

vi. EDUCATIONAL BACKGROUND:

- a) Certificate Course in HR
- b) Degree in HR
- c) Others (pls specify)

vii. The average number of Training days per full time employee on an annual basis would be (Total number of training days divided by the number of employees):

- a) 0-3 days
- b) 3-6 days
- c) More than 6 days

viii. Do you assess Training Needs prior to development of Training programs? (If yes, kindly proceed to next question)

- a) Yes
- b) No

ix. In your experience when you analyze the need of Training, please mark the significance given to each of them:

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Questions/Statements	Not significant at all	Somewhat Not significant	Neutral	Somewhat Significant	Very Significant
1. Organizational goals and objectives.	1	2	3	4	5
2. People leaving due to retirement, turnover, etc.	1	2	3	4	5
3. Skills inventory	1	2	3	4	5
4. Strikes, turnover, absenteeism, productivity, accidents, customer complaints, etc.	1	2	3	4	5
5. Difference between actual performance and expected performance.	1	2	3	4	5
6. Changes in system and subsystem e.g. New or changed equipment may present training problem.	1	2	3	4	5
7. Exit interviews	1	2	3	4	5
8. Customer survey	1	2	3	4	5
9. Reviewing literature about the job (research in other industries, Professional journals, Ph.D. theses)	1	2	3	4	5
10. Training committees or conferences	1	2	3	4	5
11. Performance data and appraisals	1	2	3	4	5
12. Employee attitude surveys (morale, motivation etc)	1	2	3	4	5
13. Employee rating scales	1	2	3	4	5

The collected data was analyzed and useful information is tabulated as given below. The

tables given below presents the statistical analysis of the data collected.

Table 1.5: Frequencies of Training needs analysis

	N Sig	Sw N Sig	Neutral	Sw Sig	V Sig	M (N=31)	SD
<i>Organizational analysis</i>							
Organizational goals and objectives	-	3	3	12	13	4.13	0.957
<i>percent</i>	-	7.5	7.5	30.0	32.5		
People leaving due to retirement, turnover etc	-	8	10	8	5	3.32	1.045
<i>percent</i>	-	20.0	25.0	20.0	12.5		
Skills Inventory	-	2	7	14	8	3.90	0.870
<i>percent</i>	-	5.0	17.5	35.0	20.0		
Strikes, turnover, absenteeism, productivity, accidents, customer complaints etc	2	3	9	10	7	3.55	1.150
<i>percent</i>	5.0	7.5	22.5	25.0	17.5		
Difference between actual performance and expected performance	1	3	3	14	10	3.94	1.063
<i>percent</i>	2.5	7.5	7.5	35.0	25.0		
Changes in system and subsystem e.g. changed or new equipment may present training problem.	-	1	6	10	14	4.19	0.873
<i>percent</i>	-	2.5	15.0	25.0	35.0		
<i>Task analysis</i>							
Exit interviews	2	2	7	11	9	3.74	1.154
<i>percent</i>	5.0	5.0	17.5	27.5	22.5		
Customer survey	-	-	4	20	7	4.10	0.597
<i>percent</i>	-	-	10.0	50.0	17.5		
Reviewing literature about the job (research in other industries, professional journals, Ph.D. theses)	1	1	7	13	9	3.90	0.978
<i>percent</i>	2.5	2.5	17.5	32.5	22.5		
Training committees or conferences	1	1	4	16	9	4.00	0.931
<i>percent</i>	2.5	2.5	10.0	40.0	22.5		
<i>Individual analysis</i>							
Performance data and appraisals	-	2	7	13	9	3.94	0.892
<i>percent</i>	--	5.0	17.5	32.5	22.5		
Employee attitude surveys	5	26	-	-	-	1.84	0.374
<i>percent</i>	12.5	65.0	-	-	-		
Employee rating scales	-	1	5	15	10	4.10	0.790
<i>percent</i>	-	2.5	12.5	37.5	25.0		

Table 1.5 indicates the frequencies pertaining to each of the parameters of TNA based on organizational analysis, task or role analysis and individual analysis. The *organizational analysis* comprised the study of the entire organization based on its objectives, and resource utilization. The important parameters to be taken care are the analysis of the objectives, analysis of resource utilization, organizational climate analysis, and environmental scanning. The *task or role analysis* involved the detailed examination of any job, its various operations, its various components, and the conditions under which this specific job can be performed. The *individual analysis* focused the individual in a given job based on the performance of the employee for a specific job, and the specific areas where the employee needs training. The highest mean was attained by *changes in system and*

subsystem e.g. changed or new equipment may present training problem (M=4.19, SD=0.873) indicated the need of training at the time of technological changes in the organization. As the data is collected from the textile and apparel industry that can sustain only being concurrent to the latest technology in their fields, hence, the need of training arises the most at the time of technical changes in the organizations. The lowest mean was attained by *Employee attitude surveys* (M=1.84, SD= 0.374) indicating the least importance given through the surveys to know the training needs of the organization. As the study was done to understand whether the respondents generally agree/ disagree with the variables given, hence, the variables were tested accordingly.

Table 1.6: Chi square test of the significance given to each variable to analyze the need of training

	N=31	Observed N	Expected N	Residual	Significance
<i>Organization analysis</i>					
Organizational goals and objectives	Generally disagree	6	15.5	-9.5	$\chi^2(1) = 11.645^{***}$
	Generally agree	25	15.5	9.5	
People leaving due to turnover, retirement, etc	Generally disagree	18	15.5	2.5	$\chi^2(1) = .806$
	Generally agree	13	15.5	-2.5	
Skills Inventory	Generally disagree	9	15.5	-6.5	$\chi^2(1) = 5.452^*$
	Generally agree	22	15.5	6.5	
Strikes turnover, absenteeism, productivity, accidents, customer complaints, etc	Generally disagree	14	15.5	-1.5	$\chi^2(1) = .290$
	Generally agree	17	15.5	1.5	
Difference between actual performance and expected performance	Generally disagree	7	15.5	-8.5	$\chi^2(1) = 9.323^{**}$
	Generally agree	24	15.5	8.5	
Changes in system and subsystem e.g. changed	Generally disagree	7	15.5	-8.5	$\chi^2(1) = 9.323^{**}$

or new equipment may present training problem	Generally agree	24	15.5	8.5	
<i>Task analysis</i>					
Exit interviews	Generally disagree	11	15.5	-4.5	$\chi^2(1) = 2.613$
	Generally agree	20	15.5	4.5	
Customer survey	Generally disagree	4	15.5	-11.5	$\chi^2(1) = 17.065^{***}$
	Generally agree	27	15.5	11.5	
Reviewing literature about the job (research in other industries, professional journals, Ph.D. theses)	Generally disagree	9	15.5	-6.5	$\chi^2(1) = 5.452^*$
	Generally agree	22	15.5	6.5	
Training committees or conferences	Generally disagree	6	15.5	-9.5	$\chi^2(1) = 11.645^{***}$
	Generally agree	25	15.5	9.5	
<i>Individual Analysis</i>					
Performance data and appraisals	Generally disagree	9	15.5	-6.5	$\chi^2(1) = 5.452^*$
	Generally agree	22	15.5	6.5	
Employee rating scales	Generally disagree	6	15.5	-9.5	$\chi^2(1) = 11.645^{***}$
	Generally agree	25	15.5	9.5	

***p < 0.001 **p < .01, *p < .05

The HR personnel/s more frequently agreed that the TNA could be performed through variables as per the organizational, individual and task analysis in their respective organizations. 81% of HR personnel agreed that *organizational goals and objectives* had more significant role in assessing the need of training for their organizations ($\chi^2(1) = 11.645$, p < 0.001). 71% of HR personnel agreed that *skills inventory* had more significant role in assessing the need of training for their organizations ($\chi^2(1) = 5.452$, p < 0.01). 77% of HR personnel agreed that difference between *actual and expected performance* had more significant role in assessing the training needs ($\chi^2(1) = 9.323$, p < 0.01). 77% of HR personnel/s agreed that *changes in system and subsystem* e.g. changed or new equipment may present training problem had more significant role in determining training needs ($\chi^2(1) = 9.323$, p < 0.01). 87% of personnel agreed that *customer survey* had

more significant role in assessing the need of training for their organizations ($\chi^2(1) = 17.065$, p < 0.001). 71% of HR personnel agreed that *Reviewing literature about the job* (research in other industries, professional journals, Ph.D. theses) had more significant role in assessing the need of training for their organizations ($\chi^2(1) = 5.452$, p < 0.01). 81% of HR personnel agreed that *Training committees or conferences* had more significant role in assessing the need of training for their organizations ($\chi^2(1) = 11.645$, p < 0.001). 63% of HR personnel agreed that *performance data and appraisals* had more significant role in assessing the need of training for their organizations ($\chi^2(1) = 5.452$, p < 0.01). 81% of HR personnel agreed that *employee rating scales* had more significant role in assessing the need of training for their organizations ($\chi^2(1) = 11.645$, p < 0.001).

Conclusion:

Indian textile and apparel Industry is facing a considerable change in terms of changing economic conditions such as increasing competition and open economy. In the given scenario, it becomes essential to invest in appropriate learning environment through effective training programs that are well designed post a thorough assessment of need and gap analysis. The era of computerization and automation does not undermine the significance of skilled workforce as the apparel manufacturing is a labor oriented industry with a high labor turnover. Formulation of structured need based training programs helps in the long term sustenance of any organization with a growing talent. Assessment of training needs from a strategic perspective is an essential step for designing a training program. As discussed in the results, most of the HR personnel/s agreed that organizational goals and objectives, skill inventory, difference between actual performance and expected performance, changes in system and subsystem had more significant role in determining training needs. Based on these variables for organization analysis, training programs can be formulated keeping the organizational objectives with utmost importance. For task based analysis to formulate training programs, significant variables are customer survey, reviewing literature about the job and training committees or conferences have more significant role to play. The significant variables associated with Individual analysis are performance data and appraisals and employee rating scales. As the data is collected from the textile and apparel industry that can sustain only being

concurrent to the latest technology in their fields, hence the need of training arises the most at the time of technical changes in the organizations. As per the data presented in this study, most of the HR personnel agreed that the variables associated with individual analysis, organizational analysis, task analysis had important role to play in assessing the training needs in an organization. It could be seen that the variables like people leaving due to retirement, turnover etc., strikes turnover, absenteeism, productivity, accidents, customer complaints etc., exit interviews does not have much significance in determining the need of training in these textile and apparel organizations.

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The study had concentrated on the significance of Training needs analysis and the various parameters associated with the same. Most of the HR personnel/s agreed on the organization, task and individual analysis to formulate the training needs that can help them in structuring their training programs. Training incur lot of expenses to any organization, the formulation of right kind of training program customized to an organization needs to greater training effectiveness. The study reflects the significance of organization, task and individual analysis in analyzing the training needs. As the study is based on the perceptions of HR personnel/s, further in-depth analysis can be done as to the difference between these perceptions. The limitations of the study included restricting the collection of data to only textile and apparel industry and also the geographical region of Punjab. More researches of similar kind can be done on other manufacturing industries and other regions of India.

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