

## International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly Peer Reviewed Journal)

Vol. 5, Issue 2, February 2016

# Apparel Merchandiser Skills Requirement Analysis in Branded Ready Made Garment Industry

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**ABSTRACT:** Ready Made Garment industry has an over whelming presence in contributing maximum foreign exchange to Indian economy. The largest consumer group of the readymade garment industry includes the age group of 16-35, which is very brand conscious and gives priority to high quality branded readymade garments. Indian ready garment manufactures have various categories of products and to manufacture such varied products trained and skilled employees are required at the production floor. The study for the research is focused to know the training aspect at merchandiser level of employees of national branded apparels manufacturing units and international branded apparels manufacturing units and to find the differences in their skills. To meet the objectives, three domestic branded trousers and three international branded trouser companies were selected in the region of Delhi, National Capital Region (NCR) for primary data collection. The study is done on primary data. This is an empirical research and data is further analyzed to know the gap in skills of workers at production floor of national brand and international brand manufacturing unit.

**KEYWORDS:** Training, core skills, soft skills, apparel industry, garments, staff members, productivity, merchandisers.

### I. INTRODUCTION

The apparel manufacturing industry contributes significantly towards generation of foreign exchange for Indian Economy. The apparel industry primarily deals with designing and manufacturing of readymade garments for men, women, children and infants. The men's wear available in the Indian markets is either categorised into national brands or international brands and is produced in manufacturing units located in India. With the increase in disposable income of the youth and urban people, the demand and consumption of branded clothes have increased many folds.

Apparel manufacturing industry has varied product range. To manufacture such various categories of products trained work force is required, rather this trained work force runs the entire apparel manufacturing industry from stage one to final dispatch. This workforce or employees are the major role players and the crucial strategic resource to the organization success.

The author [1] had written that development does not start with goods, it starts with 'people' and their education, 'organizing', and 'discipline'. Without these three, all other resources remain latent, untapped potential. Success in any field lies in educating and training people. Technology up gradation alone will not bring the desired results.

The author [2] wrote, training is highly skilled and professional activity which helps in improving the overall performance of the organisation. It is an important tool to develop 'human resource' and 'improve job knowledge and

# International Journal of Innovative Research in Science, Engineering and Technology

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**Vol. 5, Issue 2, February 2016**

skills'. Training is a continuous process where optimum use of '3Ms' (Man, Machine and Material) should be the aim of training programs.

Training for skills learning and enhancement provides an opportunity and broad structure for the development of human resources, technical and behavioral skills in an organization. For an Apparel Industry, training and learning skills helps to compete in the global market and in increasing productivity of the employees that will help further to achieve its long-term goal.

The first and immediate impact of training should be on the ability of participants to do their jobs [3]. A secondary impact and benefit of training is to create an effect on the morale of employee. Trained staff responds well to new responsibilities and they approach to job with enthusiasm as they have to apply skills and knowledge they have acquired. Enterprise is benefited by lower absenteeism, lower labour turnover, higher production levels and more motivated staff.

Ruth E et al. [4] stated that a firm's human resources are major resources for its productivity. People unlike machines become more valuable to firm with time as they become better trained and more experienced. Machine capacity can extend within its limitations, eventually they become outdated and worn out and must be replaced. Employees in apparel manufacturing units are hired on the terms of direct labour, management and support staff.

The work force of a readymade garment manufacturing unit is hired in terms of direct labour, management and support staff. Direct labourers are those employees who work at the production of garment such as cutting, sewing and finishing. They add value to products and convert materials into finished products. Skills augmentation helps work force to compete in the global market and in increasing productivity of the employees. At present, the production rate of the readymade garments has not been able to cater to the rising demand in the domestic and international market. In the past, it has been observed that the training given to the staff members is as an effective tool in increasing the productivity and enhances the quality of the produced garments to meet the quality standards in the domestic as well as the international market. With the process within the apparel manufacturing industry becoming a major industry in the organized sector, there is a need to procure and develop the staff members to enable the organizations to sustain the tough competition within Indian and international brands. The training also increases the enthusiasm among the staff members and reduces the rate of absenteeism and turnover.

The objective of the research study is to explore and analyze the trends of training within the apparel manufacturing industry for Indian and International Brands. It would be a descriptive study. Based on the study, scale would be devised to measure the skills sets in the work force of apparel manufacturing industry and lastly based on the skill sets (core and soft skills) a structural training module would be recommended to the staff members as per requirements of apparel industry for facilitating the development of the human resource in this industry.

Respondents for the study are: Skilled sewing operators, Semi-Skilled operators, Line and quality supervisors, Merchandisers and production managers. The selection from the universe is done based on non-probability sampling from Delhi and National Capital Region (NCR). Data would be analysed by exploratory factor analysis and data factorability.

## II. LITERATURE REVIEW

[5] Indian apparel industry is struggling to sustain due to its higher rates of productivity, which is due to elevated wages to the labor. The report denoted that the economic recovery in the western world, led foreign buyers to lean towards Bangladesh's RMG products, placing orders at an enhanced rate. The factors which are associated with productivity levels in apparel manufacturing in India are required to be compared to know the scope of improvement in the productivity to depict the benefits of lower labour turnover, decrease labour ratio and increase in employee motivation. The analysis of data highlighted the factors to increase production and its cost effectiveness in the modular system where employee motivation is also a major contribution. [6] The effect of working conditions on the productivity and the solutions of enhancement of skills by training is suggested in the book 'Social Responsibility in the Global Apparel Industry'. An analysis of the perceptions, and practices prevailed in the professional of apparel industry, introduced best practices and area of improvement, which could be used for garment fit sessions. The authors organised such a session with the industry. The sessions were concentrated on the new improved technologies for

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly Peer Reviewed Journal)

Vol. 5, Issue 2, February 2016

garment fit.[7]There is an existence of enormous gap between the availability of skilled Manpower and the requirements of the industry, particularly in the weaving, dyeing, processing and garment segments.[8]He further has demanded the requirement to bridge the gap by massive expansion and modernization of training institutes/polytechnics across the country.56% apparel manufacturing units trained their work force as they have understood that like all other resources, human resources needed to be properly managed, developed and motivated through training before it can be put into effective use. The remaining 44% of the units did not provide training to their work force, because either they considered training to be unnecessary and high-priced, or even if they realized the benefits of training, they found it to be an expensive proposition.The absenteeism problem in the textiles industry, showed the requirement for the involvement of academics, to improve the performance of apparel industry. The author also laid importance to give academic exposure to the policy makers in order to be able to develop a training program for skill enhancement in the work force of textile industry.

[9]The report said, "No matter the size of your company, having a team of motivated, hard-working employees is crucial to your business success. [10]When people lose their motivation, however, their job performance suffers they become a lesser amount of productive, less creative, a reduced amount of an asset to the company." Garment manufacturing is a work of an art and skill, the industry is full of unskilled and non - artistic workers and nonprofessionals. [11] The commercialization of the occupation handed the art to unskilled people, but the industry is not paying any attention to this.The first major issue identified is the scarcity of technical manpower and the existence of barely 30 programs at engineering (including diploma) levels, graduating about 1000 students, which is insufficient for bringing about technological change in the sector. The second issue [12] is the investment of Indian firms on training to active workforce is very less and there are limitations of skills to existing process. The third issue highlighted [13] was an acute shortage of trained operators and supervisors in India. The investment would require 912,000 supervisors and 2.8million operators in the apparel sector. The real bottleneck to growth is going to be availability of skilled Manpower and investment on training over the hard skills and the soft skills. [14] The hard skills are more "along the lines of what might appear on your resume" whereas soft skills are "cluster of personality traits, social graces, personal habits, friendliness and optimism." Soft skills are not a substitute for hard or technical skills, but they act as harmonizing skills that serve up to unlock the potential for highly effective performance in people even with good hard skills. [15] there was a growing emphasis on an employee's contributions to business success, rather than simply performing their jobs. The business expectations were far more from employees, above technical and generic skills. The emphasis was placed on individual's contributions to the effective, positive perpetuation of the business through the development of professional and work related skills. [16]

the team's culture of business requirement put an additional emphasis on the ability to work effectively within a team environment. To reveal the effective methods of training, experiments with various methods of training, and introduced innovative techniques for training practices has been performed. She introduced a theoretical approach to training, which included the relationship between training design, training implementation and training evaluation.

### III. NEED OF THE STUDY

The review indicates the availability of technical growth in the industry which still lacks the support in the form of skilled man power. Training in readymade garment industry must be practical and directly related to the needs of the enterprise. It must be flexible and must result in a change of behaviour so that job is better performed. The benefits of training reflects in the figures on export sales and profitability, better motivated and skilled staff will provide a higher quality service to customers, develop existing markets. Training is a long term investment in human resources. Although there are direct effects on individual participants, the major impact of training is cumulative, and enterprises should not seek results over a short period.

Benefits of training:

- It improves skills
- It increases morale
- It enhances better export performance
- It increases reputation
- It improves job applications

# International Journal of Innovative Research in Science, Engineering and Technology

*(A High Impact Factor, Monthly Peer Reviewed Journal)*

**Vol. 5, Issue 2, February 2016**

- It provides possible financial support

People have the ability to improve in the right environment. This requires motivation, training, experience and reinforcement. Management is responsible for the leadership, organization, and decision making related to operation of the firm facilities, and production line. The success of hiring depends on the effectiveness of orientation program, training program and follow up with the individual. New employees must know what is expected out of them, the skills they are expected to learn to or bring into job. Skill training prepares an employee for the specific job or task he or she is expected to perform. Operators learn the procedures and procedure against a learning curve until they reach a certain level of competency.

## IV. OBJECTIVE

1. To gather information of existing skills sets required performing various functions at production floor in the manufacturing units of Indian Brand and International Brands.
2. To study the required skills sets.
3. To compare the existing skills at national and international brands manufacturing engaged workers.
4. To find out the gap in the existing skill sets.

## V. METHODOLOGY

To fulfill the requirements of the objectives of the study, selection of manufacturing units producing domestic and international branded trousers serving domestic market was done on the following parameters:

1. Location of the factory
2. Involvement in the Branded trouser manufacturing
3. Organization structure
4. Number of employees
5. Work level of employees
6. Skill level of employees

To collect the above mentioned data, two major sources of data collection were utilized – Primary sources and Secondary sources. The apparel manufacturing units supplied the primary data, whereas secondary data pertaining to the national level values of above mentioned parameters was collected by referring to various published and unpublished reports of both government and non-government organizations

The sample was selected from the list of national brands and international trousers located in Delhi NCR. The list of all such brands was obtained from an authenticated source “Franchisee India Fashion report 2009-10”, [www.indiamirror.com](http://www.indiamirror.com) and “Third eyesight”. It could list 12 national men trouser brands in Delhi NCR. Thus, an interview schedule was formulated for obtaining the relevant information about the knowledge of core skills utilized in the production processes. It was administered by the heads of the respective departments and General Manager of the factory.

A detailed study of the skills aspects of the employees and workers at the production floor level of apparel manufacturing unit was required and so to collect the relevant data required for the study.

The final interview schedule covered the following areas:

1. General information of the factory
2. Departments
3. Number of work force
4. Basic education
5. Details of core skills
6. Type of training

Thus, an interview schedule was formulated using dichotomous questions for obtaining the relevant information. The sampling method used for research work was simple random sample method.

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly Peer Reviewed Journal)

Vol. 5, Issue 2, February 2016

## VI. DATA ANALYSIS AND FINDINGS

Study was conducted in factory engaged in the manufacturing of branded bottoms for men at Noida, Phase II, Gurgaon Udhyog Vihar, in Delhi NCR region.

### Exploratory Factor Analysis

Exploratory Factor Analysis is a general name denoting a class of procedures primarily used for data reduction and summarization [17]. Exploratory Factor Analysis allows researchers to condense a large set of variables or scale items down into a smaller, more manageable number of factors or components.

In this research, Principle Component Analysis (PCA) is a key method in the Exploratory Factor Analysis process used to explore the underlying structure of the Skills of Merchandisers and their correlations in the data obtained. In which the original scale items are transformed into a smaller set of linear combinations, with all variance in the data being used. The following data and factor analyses were conducted within the Exploratory Factor Analysis process:

### Data Factorability

The first data analysis in the Exploratory Factor Analysis process is the assessment of its suitability (factorability). Two statistical measures: Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) can be used to investigate the factorability of the data. Table as attached in Annexure A.

KMO is a sampling adequacy index (range from 0 to 1), with high values (between 0.6 and 1.0) indicating that Exploratory Factor Analysis is appropriate [18]. Since, the KMO sampling adequacy of this research data is high at 0.870 and the significance of Bartlett's Test of Sphericity is appropriate, thus the test results provide sufficient evidence to support the appropriate use of Exploratory Factor Analysis for Skills of Merchandisers scale items.

After the standards indicate that data is suitable for factor analysis, Principal Components Analysis (PCA) was employed for extracting the data, which lets determining the factor underlying the relationship between numbers of variables. The total variable Explained box was suggesting that it extracts one factor accounts for 72.23% of the variance of the relationship between variables. In order to 'extract' factors from the data, components that have an eigenvalue of 1 or more have to be identified from the Total Variance Explained extracted using Principle Component Analysis. This determines the number of factors extracted from the data [19]. The screen plot is an alternative method of identifying the number of factors to extract via factor analysis [20] as it displays the sharpest drop in the eigenvalues of the factors, which highlights that further factors would not explain a significant amount of the variance of scale items. Rotation is necessary when extraction technique suggests there are two or more factors. The rotation of factors is designed to give an idea of how the factors initially extracted differ from each other and to provide a clear picture of which item load on which factor. There are only five factors, each having Eigen value exceeding 1 for merchandisers. The Eigen values for five factors were 6.135, 3.728, 2.926, 1.897, and 1.318 respectively. The percentage of total variance is used as an index to determine how well the total factor solution accounts for what the variables together represent. The index for present solution accounts for 70.27% of the total variations for end users. It is pretty good extraction as it can be economize on the number of factors (from 34 it has reduced to 5 factors) while we have lost 27.77% information content for factors for Skills of Merchandisers. The percentage of variance explained by factor one to four for factors for Skills of Merchandisers is 18.509, 16.838, 13.968, 13.835 and 9.086 respectively. It means 70% of the variance of variable 1 is being captured by the four extracted factors together. The proportion of variance in any one of the original variables, which is being captured by the extracted factor, is known as communality [21]. The Components Matrix is the output of the Exploratory Factor Analysis process that lists the loadings of each of the scale items on each of the four components. Valid components having scale item loadings of 0.5 and above [30] and scale items with the highest loading on that component [22]. This Components Matrix is subsequently rotated using Varimax Rotation to assist interpretation of its results [23] displaying only loadings of 0.5 and above.

Large communalities indicate that a large number of variance has been accounted for by the factor solution. Varimax rotated factor analytic results for factor training. The four factors shown in rotation table have been derived from Rotation.

### Interpretation of Factors

Each factor needs to be assigned a name or label to characterise it and aid its interpretation [24]. Each of the Skills of Merchandisers factors that have been extracted via Principle Component Analysis in the Exploratory Factor Analysis



# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly Peer Reviewed Journal)

Vol. 5, Issue 2, February 2016

process of this research data is displayed. The names allocated to each factor are a result of the interpretation of its Skills of Merchandisers factor scale items and are discussed in the following sub-sections.

## Technical skills

The first factor with the highest Total Variance Explained value has been interpreted as Technical *skills* due to its inclusion of scale items identified and adapted from academic literature surrounding Skills of Merchandisers Technical skills, as displayed in table below

Production and Processing - Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.	.554
Quality Control Analysis - Conducting tests and inspections of products, services, or processes to evaluate quality or performance	.758
Operations Analysis - Analyzing needs and product requirements to create a design.	.877
Operation Monitoring - Watching gauges, dials, or other indicators to make sure a machine is working properly	.870
Systems Analysis - Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes	.819
Systems Evaluation - Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	.866
Active Learning - Understanding the implications of new information for both current and future problem-solving and decision-making	.824
Learning Strategies - Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things	.803
Production and Processing - Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.	.618

## Analytical skill

The second factor with the highest Total Variance Explained value has been interpreted as *Analytical skill* due to its inclusion of scale items identified and adapted from academic literature surrounding Skills of Merchandisers Analytical skill, as displayed in table below

Design - Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models	.661
Coordination - Adjusting actions in relation to others' actions.	.751
Management of Personnel Resources - Motivating, developing, and directing people as they work, identifying the best people for the job.	.746
Social Perceptiveness - Being aware of others' reactions and understanding why they react as they do	.736
Complex Problem Solving - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions	.676
Persuasion - Persuading others to change their minds or behavior	.711
Negotiation - Bringing others together and trying to reconcile differences	
Instructing - Teaching others how to do something	.729
Writing - Communicating effectively in writing as appropriate for the needs of the audience	
Service Orientation - Actively looking for ways to help people	.772

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly Peer Reviewed Journal)

Vol. 5, Issue 2, February 2016

## Mechanical skills

The third factor with the highest Total Variance Explained value has been interpreted as Mechanical skills due to its inclusion of scale items identified and adapted from academic literature surrounding skills of merchandisers Mechanical skills , as displayed in table below

Mechanical - Knowledge of machines and tools, including their designs, uses, repair, and maintenance.	.768
Active Listening - Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times	.774
Speaking - Talking to others to convey information effectively	.744
Reading Comprehension - Understanding written sentences and paragraphs in work related documents.	.884
Judgment and Decision Making - Considering the relative costs and benefits of potential actions to choose the most appropriate one	.610
Monitoring - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action	.743
Writing - Communicating effectively in writing as appropriate for the needs of the audience	.725

## Personnel skills

The fourth factor with the highest Total Variance Explained value has been interpreted as personnel skills due to its inclusion of scale items identified and adapted from academic literature surrounding skills of merchandisers is personnel skills, as displayed in table below

Mathematics - Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications	.762
Personnel and Human Resources - Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems	.734
Education and Training - Knowledge of principles and methods for curriculum and production manager design, teaching and instruction for individuals and groups, and the measurement of production manager effects	.742
Clerical - Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology	.833
Public Safety and Security - Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions	.735
Critical Thinking - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems	.644
Time Management - Managing one's own time and the time of others	.698

## Administrative skills

The fifth factor with the highest Total Variance Explained value has been interpreted as Administrative skills due to its inclusion of scale items identified and adapted from academic literature surrounding skills of merchandisers is Administrative skills , as displayed in table below

Administration and Management - Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources	.757
Customer and Personal Service - Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.	.766
Computers and Electronics - Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming	.706

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly Peer Reviewed Journal)

Vol. 5, Issue 2, February 2016

Administration and Management - Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources	541
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Vol. 5, Issue 2, February 2016

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