

# SKILLS REQUIREMENT ANALYSIS AT THE PRODUCTION FLOOR IN READY MADE GARMENT INDUSTRY

Neelam Agrawal Srivastava<sup>1</sup>, Anandita Chatterjee<sup>2</sup>

<sup>1</sup> Fashion Design Department, Asian School of Fashion, Noida,

<sup>2</sup> Faculty of Management Studies, Manav Rachna International University, Faridabad,  
INDIA.

<sup>1</sup> [neel040776@gmail.com](mailto:neel040776@gmail.com)

## 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 operator 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, skills, Apparel Industry, Branded Apparels, and Production floor employees.

## INTRODUCTION

The Indian apparel industry has an overwhelming presence in the economic life of the country. In recent years; the readymade garment segment has seen vertical growth. It accounted nearly Rs. 20,000 crores which shows a growth rate of 20 % .The largest group of the readymade garment includes the age group of 16-35, which is very brand conscious and gives priority to high quality branded readymade garments. This segment only covers the 21% of the readymade garment industry.

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.

E. F. Schumacher (2001) 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.

Premi (1997) writes, training is highly skilled and professional activity which helps in improving the overall performance of the organization. It is an important tool to develop ‘human resource’ and ‘improve job knowledge and 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 behavioural 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 (Hiba, JC, ILO, GENEVA, 1998). 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. Glock and Grace I Kunnj (2007) states 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.

Direct labours are the employees of production level, who work directly on the products being produced such as cutting, sewing and finishing operators. They add value to products and convert materials into finished products.

All three areas are essential to the operation of a firm. There must be a fit between the job requirements and the employee's abilities. Expectations of both the firm and the hired person must be compatible if the relation is to prosper. Firms evaluate applicant's skills and abilities, and the applicants evaluate the job descriptions, wages and employment opportunities to determine whether their expectations are compatible.

### **Semi Skilled and Skilled Operator (Worker) At Production Floor**

Skilled operator is the category of labours that have acquired the skills of certain operation for specified garment and has attained the level of perfection. Operations performed in making garment are graded on the basis of:

- i. Critical and non critical operation
- ii. Skill level required to perform an operation,
- iii. Machine used, such as Single Needle Lock Stitch, over edge, semi-automatic machine or Flat Lock machine.
- iv. Area of operation in the garment.

### **Workers Are Graded In Categories A and B**

The category A represents the skilled operators and category B represents Semi Skilled operators.

The Workers of A category have skills of :

- i. Operating on single needle lockstitch machines, flat lock machines and over lock machines.
- ii. They undertake difficult operations like collar fixing, pocket attachment and placket making.

- iii. Quality of operation is most important for the operators to achieve fast communication, and easy understanding of buyer's requirement is also important with production output per hour.
- iv. They are able to handle little break down of machines.
- v. Operators should possess multi skills with good communication, ability to handle difficult operations, meet the prescribed quality standard in production and produce more garments per hour.

The Workers of B Category have Skills of:

- i. They are specialize in only a particular sewing operation and cannot handle critical operations.
- ii. They can handle operation of thread cutting and passing on the packets.
- iii. They lack leadership qualities and good communication skills.
- iv. This category has operators with the capability of becoming skilled on specified training subsequent to improvements in a few critical areas of their job profile.
- v. Function until being trained as they are not capable of decision taking because they do not poses subject or subject work knowledge.

For example: workers involved in packing, putting straight seams only or workers involved in putting bar tacking only. This category is unable to perform any other function. The research is empirical and study is focused to know the existing skills in skilled workers and semiskilled workers, employed in domestic brand trouser manufacturing unit and international brand trouser manufacturing unit. Research will also focus to study the skill gap in the shop floor workers of both the manufacturers.

## LITERATURE REVIEW

Singh (2002) stressed the fact that though garment manufacturing is a work of art and skill, the industry is full of unskilled and non – artistic workers and no n professionals. The commercialization of the occupation handed the art to unskilled people, but the industry is not paying any attention to this.

Dr. Jatinder S Bedi (2009) currently, there is a massive gap between the availability of skilled manpower and the requirements of the industry, particularly in the weaving, dying, processing and garment segments. To bridge this gap requires massive expansion and modernization of training institutes/polytechnics across the country.

Dr. Sri Ram Khanna and IBC Research team (2001) studied to identify the trends in US textile and Clothing Imports. The report shows the rank of India in terms of value and volume for textile and clothing in various categories for women, men and kids wear. The results support the increasing demand and consumption of branded products (Textile Outlook International).

Dr. Rajesh Bheda and Vinod Shanbhag (1999) conducted a study on technological up gradation needs of readymade garment industry for the increase in production and improvement in work culture. The study focused on adaptation of technology in domestic market apparel manufacturing factories to the export apparel manufacturing Industry. This supports the need of training for improvement.

ATDC (2008) launched integrated training program SMART, (skills, manufacturing, apparels through research and training). It's a project to provide upgrade skills in the remote areas of

geography. It concentrates to provide skilled workforce to textile and apparel hub. ATDC is educational centre from AEPC.

Sripirabaa B, Sridevi K (2010) revealed that the training practices were effective and demonstrated how training could be made effective. New methods could be adopted considering the trainees feedback and innovative methods could be launched. A theoretical model was proposed that explored the relationship between training design, training implementation and training evaluation. . Analysis comprised of descriptive statistics, one way analysis of variance, and correlation analysis and model validation.

Marsha Dickson (2009) in the book Social Responsibility in the Global Apparel Industry reflects the effect of working conditions on the productivity and also suggests the solutions to its which include enhancing training skills.

A Newsletter from ALL BUSINESS concentrated on the motivation factors and ways to find the methods to increase in production keeping withhold the work force benefits. The report says “No matter the size of your company, having a team of motivated, hard-working employees is crucial to your business success. When people lose their motivation, however, their job performance suffers they become less productive, less creative, less of an asset to the company”.

Pankaj Chandra (2006) has mentioned three issues:

- a. There is a scarcity of technical manpower – there exist barely 30 programs at graduate engineering (including diploma) levels graduating about 1000 students – this is insufficient for bringing about technological change in the sector.
- b. Indian firms invest very little in training its existing workforce and the skills are limited to existing processes (Chandra 1998).
- c. There is an acute shortage of trained operators and supervisors in India. It is expected that Indian firms will have to invest close to Rs. 1400 bn by year 2010 to increase its global trade to \$ 50 bn. This kind of investment would require, by our calculations, about 70,000 supervisors and 1.05mn operators in the textile sector and at least 9112,000 supervisors and 2.8mn operators in the apparel sector (assuming a 80:20 ratio of investment between textiles and apparel). The real bottleneck to growth is going to be availability of skilled manpower.

Apparel industry is labour intensive employing labour from all classes of the society for manufacturing of various readymade garment products, which a work of skill. Textile education is imparted at various levels through more than 200 institutes or training centres in the country (Gupta 2002). The fact that garments manufacturing is work where skills are required and with commercialization of the readymade garment industry, the requirement for skilled man power has increased many folds.

Dr. Navneet Bawa (2002) , resulted that, 56% apparel manufacturing units train their work force as they understood that like all other resources , human resources needs to be properly managed, developed and motivated through training before it can be put to effective use. He remaining 44% of the units did not provide training to their work force because either they considered training to be unnecessary and expensive or even if they realized the benefits of training, they found it to be an expensive proposition.

Moving the training program beyond the technical level to education for personnel advancement and life skills is a major commitment made by some US firms. These firms realize the values of developing the whole person and see the corresponding long range

benefits to the company. Some firms are reluctant to invest in this type of training. Such firms create opportunities for employees to take classes toward earning a high school degree and/or continuing education classes in computer technology, communication skills and so forth. The education committee of AAMA, 1994, stress on continuing education.

### **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:

1. It improves skills
2. It increases morale
3. It enhances better export performance
4. It increases reputation
5. It improves job applications
6. 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.

### **OBJECTIVES**

The main objectives of the study are:

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.

### **METHODOLOGY**

To fulfil 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:

- I. General information of the factory
- II. Departments
- III. Number of work force
- IV. Basic education
- V. Details of core skills
- VI. 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.

### **Parameters Applied For Measuring Skill Level for Semi Skilled and Skilled Sewing Operators and Shop Floor Helpers**

- a. Experience (E) in any garment or specific garment like trouser.
- b. Experience in any garment and specific garment like trouser both.
- c. Certified training (CT) from institute in specified garment like trouser as well as any other garment with and without experience.
- d. On the job training (OJT) taken for specified garment like trouser with and without experience.
- e. On the job training taken for specified garment like trouser and have training for any other garment than trouser with and without experience.
- f. On the job training taken for any other garment than trouser with and without experience

- g. Non-certified training (NCT) and only experience in specific garment like trouser.
- h. Non-certified training and only experience in garment other than trouser.
- i. Non-certified training and only experience in specific garment like trouser as well as any other garment.

**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. The data for study was collected from three domestic brand companies and three international brand companies. Each domestic company has total 500 skilled operators and 1000 semi skilled operators. The study was conducted on 150 skilled sewing operators and 300 semi skilled operators. Similarly, each international brand company had more than 1000 semi skilled operators and 500 skilled operators. The study was conducted on 300 semi-skilled operators and 150 skilled operators.

After collection of data, out of 150 skilled workers (operators) in domestic brand company, it was observed that 40 % of skilled operators have acquired skills on previous jobs, to sew general garment and has learnt specific operations and obtained expertise. They do not possess any certificate for the same. They have not taken any training from an educational institute. However, 21% of skilled operators are those who have taken certificate from educational institute and have also acquired on the job training to learn certain specific skills to expertise. Figure 1, below gives percentage of core skills operator have.

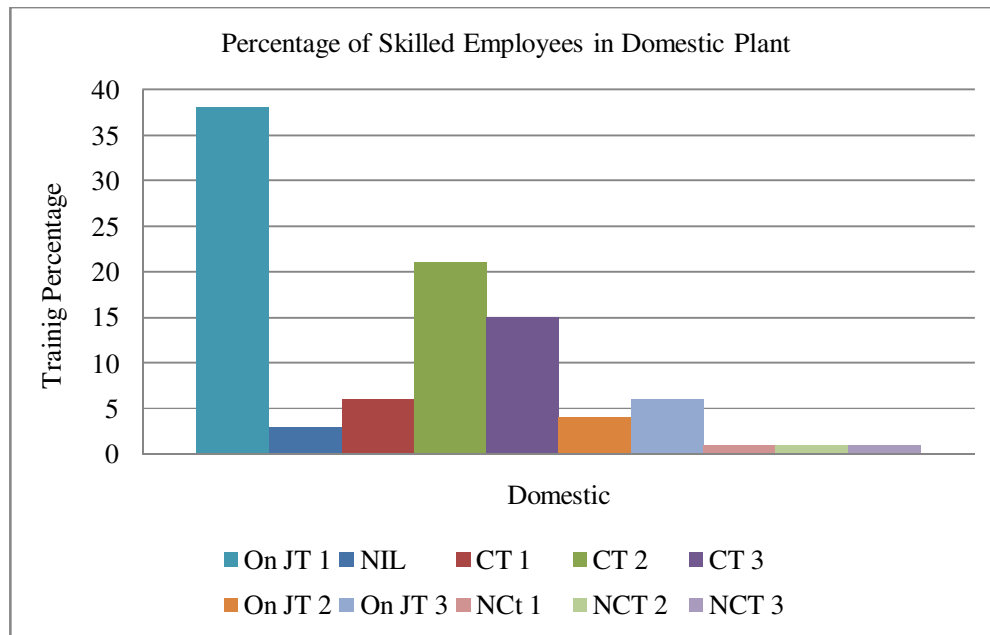


Figure 1. Plotting of percentage of type of training of skilled operators in domestic brand company

Observation from the data of 150 skilled operators from international brand company depicted that 40% of skilled operators were having training for specified garment and all other types of garment but do not possess any certificate from any educational institution. They all had taken on the job training for specific operations. However, 30% skilled operators were those who had certificate of sewing machine operators from an institute or school. They have developed skills for specific garment as well as all other type of garment.

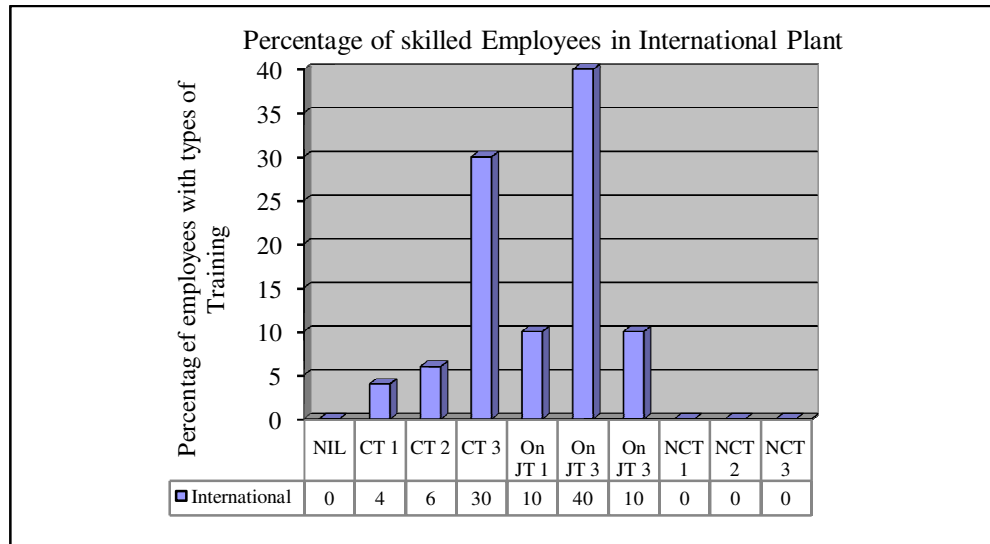


Figure 2. Plots the percentage of type of training in skilled operators of international brand company  
The histogram clearly depicts, in domestic brand company, maximum skilled operators have acquired on the job training for specific operations, whereas, international brand company has maximum number of skilled operators have institutional training and along with it they have taken training on the job to enhance the skills for specific operations.

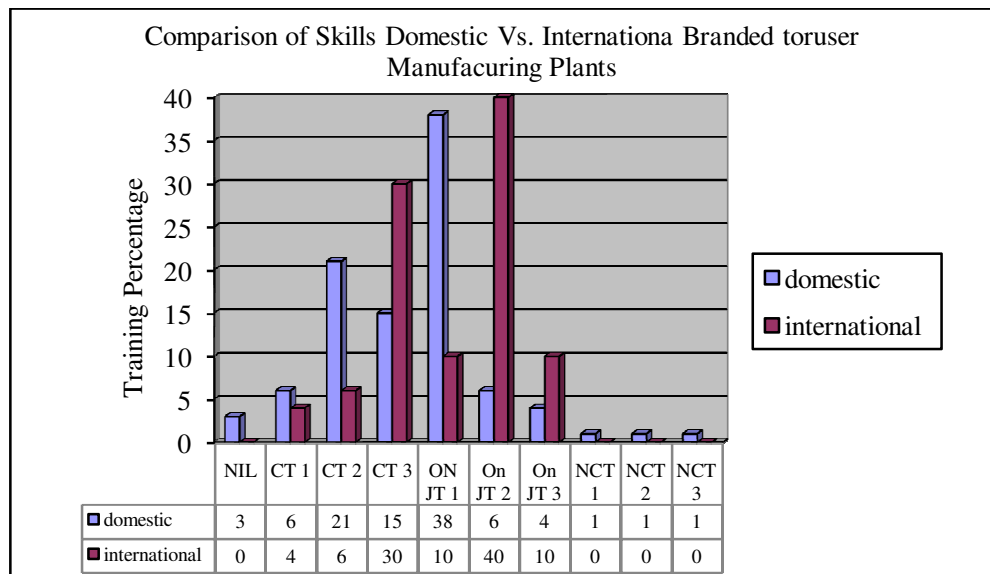


Figure 3. Plotting of Comparison of Skills of workers at Production Floor, Domestic Vs. International



Table 1. Legends for training type for skilled and semi skilled operators

Comparison chart in % skills of skilled and semiskilled operators of domestic brand company and international brand company									
Certified Training /On Job Training /Non Certified Training	Experience	Experience/ Training on - Specified Garment/Other	% skilled operators /150 of domestic brand company	% skilled operators /150 of international brand company	% Semi Skilled operators /300 of domestic brand company	% Semi skilled operators /300 of international brand company			
1	Nil	1-20 yrs Specified Garment + other	3	0	55	0			
2	CT	1-20 yrs Other than trouser	6	4	0	3			
3	CT	1-20 yrs Specified Garment	21	6	0	0			
4	CT	1-20 yrs Specified Garment + other	15	30	0	20			
5	On JT	1-20 yrs Other than trouser	38	10	0	0			
6	On JT	1-20 yrs Specified Garment	4	40	0	20			
7	On JT	1-20 yrs Specified Garment + other	6	10	20	55			
8	NCT	1-20 yrs Other than trouser	1	0	0	0			
9	NCT	1-20 yrs Specified Garment	1	0	0	2			
10	NCT	1-20 yrs Specified Garment + other	1	0	25	0			

Data collected from domestic brand company for semi skilled operators showed a highest percentage of 55. These operators have no prior certificate but had acquired skills for different operations during experience of job. They have not been trained in the company they are working but have skills from previous job experience. However, only 20 percentages have learnt the skills on the job and 25% of the operators had no certificate for the training they have but they do possess skills, which they have learnt from non educational institute.

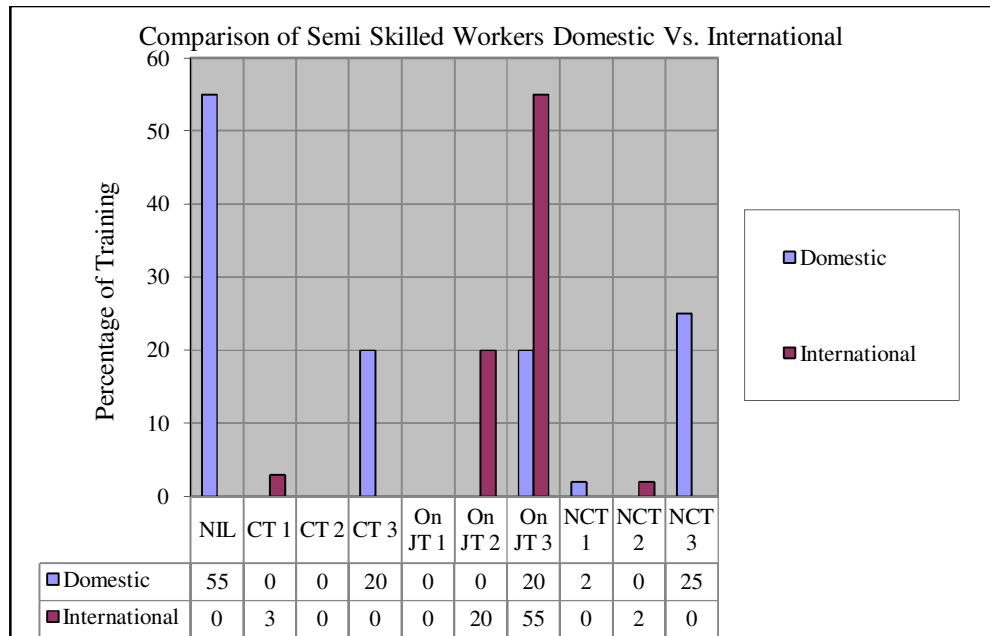


Figure 4. Plots the comparison of training of semi skilled operators of domestic brand trouser manufacturing and international brand trouser manufacturing unit

The data collected from international brand company for semi skilled operators depicted that highest of 55% operators had no certified training which they have taken from non educational institution and they have learnt skills from their previous job experiences. However, 20% of semi skilled operators have taken skills from the company they are presently working. Rest 20% operators had certificate for the skills from educational institute and also, they learnt skills in their previous jobs.

**CONCLUSIONS**

**To Gather Information of Existing Skills Sets Required Performing Various Functions at Shop Floor in the Manufacturing Units of Indian Brand and International Brands**

Analysis of the data revealed that in the manufacturing unit of domestic brand trouser, highest percentage that is 38% of the skilled operators were found with experience between 1 to 20 years and all these were trained on the job for garment other than trouser. Next higher percentage consists of the sewing operators having experience between 1 to 20 years and also having certificates for sewing operators on trouser manufacturing.

In the manufacturing unit of international brand trouser manufacturing unit, highest percentage were of skilled sewing operators, have been trained on the job for trouser manufacturing operations and had experience between 1 to 20 years. Next higher percentage was of the skilled operators having certificates for the trouser manufacturing as well as was capable for manufacturing of other garments.

Analysis of the data collected for semi skilled operators of domestic brand trouser manufacturing unit, revealed the fact that, maximum of the operators were not having any type of training but have learnt the skills during the job of 1 to 20 years. These were the operators having no formal or informal training. Next high rate of operators were having informal training, or non certified training on trouser manufacturing. In the international brand trouser manufacturing unit were running with semi skilled operators, have taken on the

job training for specific operations of trouser manufacturing. They all were having experience between 1 to 20 years but do not have any type of informal and formal training.

### **To Study the Required Skills Sets And to Compare the Existing Skills at National and International Brands Manufacturing Engaged Workers.**

The study revealed the difference in skills of skilled operators of domestic brand trouser manufacturing company and international brand trouser manufacturing company. International brand company has more of operators been trained on the job for the operations required for the specific garment. This improves on the skills of the operators for better performance. Domestic Brand Companies were lacking in this and the gap can be filled with a training module for specific operations.

International Brand Company had a good number of operators who had taken certificate training courses for trouser manufacturing from educational institutions. This was quite less in number in domestic brand companies. It is recommended to domestic brand trouser manufacturing company to hire and train the skilled operators to further enhance the quality and time saving in production process.

### **Gap in the Existing Skill Sets**

International Brand Company had maximum operators falling under the category of skills acquired on the job in the company they are presently working. However, very less number of operators does this in domestic brand company. No such training program is adopted by domestic brand trouser manufacturing company to train the operators on trouser manufacturing.

Domestic brand companies had maximum operators who possess no training in any specific operations neither from educational institute nor from any non educational institute. They had skills acquired during their previous job experiences. This category was totally nil in international brand company. Domestic Brand Company has another category of semi skilled operators who had taken training from non educational institutes for certain garment operations.

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