

Perspective of Key Challenges in Implementation of 5's in Apparel Industry

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Abstract: 5S is also a popular tool developed in Japan and adopted worldwide for cost cutting, reducing waste, increasing productivity and create a clear visibility of nonconformance at workplace. A study was scheduled, and a detailed survey was carried out at three different apparel industries at Jaipur Rajasthan. For improvement in the apparel sector a sample study was constituted with a team of trained professionals. The methodology which was adopted started with the 5S team and trained them over the 5S concept in detail. After training, an initial audit was conducted and recorded. After having the pictorial evidence on the criterion– Eliminate all forms of Waste, Reduce the lead time of the product, Identifying and highlighting problems, developing improved product & process reliability, Boost employee morale and Continuous Improvement and an action plan was developed to improve the situation. All the recorded observations and changes are observed and the methods to standardize the process were done and implemented in an SOP. The study revealed that the implementation of the 5s concept can improve in compliance and efficient workflow due to improved machine maintenance, improved quality and lower defect rates, reduced inventory and smooth workflow. The tested results are tabulated for further discussions..

Keywords: 5 'S' ,Green Productivity , Waste Management , Lean tool

I. INTRODUCTION

As per the report of garment exporter association Rajasthan (GEAR) *Rajasthan* is one of the top ten apparel exporting area of India , Total export of textile products was Rs.80,000 cores in fy 2022-23. And with recent changes in law showing continuous increasing trend in textile export of Rajasthan. It has a growth of about 10 percent according to garment exporter association Rajasthan (GEAR) *Rajasthan*. But on other hand Rajasthan is in close competition with China, Sri Lanka and Bangladesh. To keep the market in hand it is required to adopt the modern management techniques for cost cutting and profit enhancement. Unfortunately, most of the apparel industries despite of having a very busy and healthy business activities don't look towards business excellence methods. This causing them extra cost, heavy wastages, price increase and quality issues.

To resolve basic problems there are various steps have been taken at both industry and government level to intact private sector updated about the current development around the world. Sustainability, Green Productivity, Bench Marking, Waste Management, deployment of QMS and using technology to perform the entire function in less time and with more productivity are few steps which have been proposed for development of apparel export of India.

Now a days 5S is also a popular tool of cost cutting, reducing waste, increasing productivity and clear visibility of non-conformances at workplace. This tool was evolved in Japan and adopted worldwide to transform the work towards excellence.

Vision

- Implant Pride at our workplace by creating Clean, Sanitary and a Safe work environment.”

Objectives

- Eliminate all forms of Waste.

- Reduce the lead time of the product.
- Identifying and highlighting problems.
- Developing improved product & process reliability.
- Boost employee morale.
- Continuous Improvement.



II. METHODOLOGY

The methodology has 5 major steps each of the step starting with a Japanese word starting from “S” therefore known as 5S. Those steps are as below:

Sort (Seiri) - Segregating wanted and unwanted in the workplace, removing the unwanted and keeping only those necessary. This step ensure that equipment and plant items are properly labeled, maintained, and have clear operating procedures. It provides a clean, positive, and productive work environment.

Set in Order (Seiton)- A place for everything and everything in its place so that anyone can find and use them easily. This step ensure that operators and staff have easy approach to the required tools to complete their jobs.

Shine (Seiso)- Developing cleaning as a habit so that the workplace is maintained in its original state This can be done by clearly labeled shadow boards, and proper marking of all areas.

Standardize (Seiketsu) - Developing Standard work procedures so that Sort, Set in order and Shine are being maintained. This process is usually done by following standard operating procedures for tasks performed regularly.

Sustain (Shitsuke)-This is the last but most crucial step of 5’s technique to ensure that these practices become part of the workplace culture, encourage a clean and un-cluttered workplace, involvement of all staff is very important to sustain the developed method. Here all employees can give their 100% efficiency without any extra efforts.

The above system need to be implemented in-order to get the desired results by any industry for cost cutting and achieving work excellence.

6S Safety is an extension of the 5S methodology, incorporating an additional focus on safety practices within the workplace. In addition to the original five principles, 6S Safety emphasizes the importance of:

Safety (Anzen)*: Implement measures to identify and mitigate potential hazards, ensuring the well-being of employees and promoting a safe work environment. This includes conducting regular safety inspections, providing proper training, and encouraging a culture of safety awareness among all employees.

II. APPAREL INDUSTRY

According to Statistics given by garment exporter association Rajasthan (GEAR) apparel exports of Rajasthan reaches up to..... billion quarterly. Keeping current market competition, it is required to equip the apparel industry with improved technology and best efficient way of production to reduce cost and improved quality.

Apparel industry organization structure and departments-

- Sampling Department

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- Fabric Store
- Accessories Store
- Cutting Department
- Sewing / Stitching
- Finishing/Pressing
- Packing
- Administrative & Office area

It has been observed that mostly industry managements are not serious about 5S and unaware of its outcomes and benefits. They are likely to work with their old and traditional pattern only.

Every industry is bearing a big cost due to non-implementation of 5s at their workplace.

III. RESULTS

It becomes very difficult to follow the path of sustainability if the technology and infrastructure is not developed accordingly. All the further research and study in all the disciplines must be done keeping in mind the concept of sustainability. One of the major challenges is lack of funds and awareness. After studying the research works the following results related to the challenges faced by the fashion industry were extracted.

- **Constant Demand for Unique Products:** Due to the fast-changing fashion trends there is a constant demand for unique products. Every consumer wishes to wear outfits that are not common in the market, and this leads to more production and more waste.
- **Frequent Change:** There is a frequent change in the fashion, this can be due to the change in the season or change in the occasion or change in the geographical location. But fashion keeps on changing very frequently and so the old clothes and accessories are being dumped creating more wastage.
- **Availability of Wide Range:** Every clothing or accessories that is available in the market must be made in a variety of designs and patterns, as every consumer has their own set of choices and preferences. The designs and patterns that are widely accepted are being used by the consumers, the others are again thrown to the dump yards.
- **More Production:** As there is a constant demand in the fashion world for new clothing and accessories more production must be done to meet this demand. More production houses are being established for this purpose. This leads to more air and water pollution.
- **Lack of Awareness Amongst the Consumers and Society:** Society as a whole is not well aware of the sustainable goals and the ways of achieving it. It is very difficult for a common man to incorporate the habit of sustainability in their daily life routine if they are not well educated and made well aware about the sustainable development.
- **Lack of Reusing, Recycling, and Refurbishing the Fabrics and Garments:** Not enough technology, awareness, and acceptance has been developed amongst the industries, retailers, wholesalers, and the consumers regarding the reuse, recycle, and refurbishing of the garments and fabrics and so the used articles are directly dumped.
- **Lack of Awareness related to Sustainable Manufacturing and Marketing:** The modern fashion industries and fashion marketing is not aware of the various ways in which production and marketing can be done in a sustainable manner. They are still following the conventional ways of manufacturing and advertising their products that are consuming a lot of energy, resources, and time.
- **Rigid Mindset of the Labors:** The labour that is working in the fashion industries is not well educated and trained for following the new sustainable ways of manufacturing. Their mindset and working pattern are age old which are very time consuming and less productive.
- **Shortage of Sustainable Raw Materials:** There is a very little awareness regarding sustainability and sustainable raw materials in the market. So, there is a very little amount of raw material available in the market that is sustainable, and this little amount is not sufficient to meet the demand of the fast-growing fashion industry. Also, the machinery and labour are not apt for this sustainable raw material.

- Lack of Interest of Entrepreneurs and Investors: Majority of the investors and entrepreneurs are busy making business and profit with their fashion houses. They are not much interested in bringing a positive reform in the fashion world by incorporating sustainable techniques and methods in their business.

IV. DISCUSSION

As attaining sustainability is the only way left for the current and future generations for their survival, few ways of achieving sustainability in the day-to-day life of human race are discussed.

Raising Public Awareness: Every individual should be aware of the choices they make. Their choices should be sustainable and for that they should be aware of what exactly sustainability is all about. These aware individuals can then enforce the government and society to implement the rules of sustainability. Awareness amongst the individuals can be spread through verbal and written media, speeches, rallies, and movements.

Conserving the Resources and Eliminating the Waste: The natural resources are getting exhausted and polluted. Air, water, and soil pollution is increasing with the increase in the human development. These natural resources need to be conserved for the future and the best way to conserve them is to reduce waste and reduce the consumption of unnecessary products and services. Thus, constructive measures must be taken for the conservation of the natural resources.

Increasing the Business and Government Investment: Humans can develop modern technologies and infrastructures in a sustainable manner. These technologies and infrastructure can be developed in a way that they utilize less resources and produce less waste and cause less harm to the environment. This is only possible when the government imposes such laws and rules on the society. This is also possible when the big business houses and the government together invest in developing such sustainable and eco-friendly technologies and infrastructures.

Promoting Education: Government should strictly follow the act of right to education. Equal education rights should be given to the girl and boy child, to the poor and the rich, and to the rural child and the urban child. Educated youth can make the right choice of choosing the sustainable path and bringing about a positive change in the society. It is only through education that the world gets creative, productive, and well-informed citizens that can shape the world into a greener and healthier place to live in.

Re-evaluating the Values: Bringing positive changes in the human behaviour and actions is the need of the time. This will help in providing a better and healthier future to the youth with ample number of natural resources for their survival and development.

V. CONCLUSION

The present world is progressing in all the streams, but this progress is harming nature and the environment. This is leading to non-reversible problems like climate changes, global warming, water, soil, and air pollution. To slow down these problems or stop them the world needs to follow the sustainable path of development. New technologies and infrastructure must be evolved for the production of raw materials and to reuse, recycle, and refurbish the old materials. This will be very helpful to future generations. Humans should try to reduce pollution by reducing waste and reusing it. This can be achieved by using locally made organic materials. Durable and sustainable materials need to be circulated in the fashion market so that used materials are dumped less, in return this will bring an economic balance in society. Reduction of the production of products must be done so that the labor is not forced to exert themselves for nominal wages, this will bring a social balance in the society. And lastly it can be concluded by stating that giving back to nature and society is being sustainable. Every individual should donate a part of the earned profit to societal welfare, be it education or health or civic purposes. There are very many challenges that the modern fashion industry is facing in following sustainability, but small and affirmative steps can be taken by each designer, industrialist, retailer, and the consumer as well towards a sustainable tomorrow.

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