Case Study Under ATDC Pro-Up

The competitiveness of Indian Garment Export Industry is aligning production standards with that of competing countries like Bangladesh, China, Turkey etc. Indian Garment Exporters can optimize productivity, can undertake capacity planning of the factory, improve line efficiency, improve production capacity and can undertake skill matrix by proper allocation of duties through the implementation of 5S SAM, improving of Line Efficiency sustaining Production Capacity and application of Skill Matrix in a proper manner.

ATDC under its Technical Vertical Pro-up has undertaken programmes across India and is presenting a case study of the technical upgradation of 72 supervisors. Perceptible results have been recorded after Pro-up technical intervention. **The study has been conducted under the guidance of Dr. Roopali Shukla, Director ATDC.**

The technical report strongly suggests that a continuous improvement programme in line with ATDC's Pro-up is required to be set up in factory particularly in the practical application of the concepts and propagation of the programme for wider benefits.

This research report provides a lucid presentation on categories, range, explanation followed by findings, key skill attributes, actual comparison pre and post ATDC Pro-up training and advantages of the initiative.

Objective of the Study:

ATDC Pro-up had conducted programs across the 3 regions of India - western region, eastern region, and northern region. Based on the collated results of certain factories the technical paper on the up-skilling of supervisors is presented herewith.

Factory	Region	No of Supervisors
Factory 1	Eastern	20
Factory 2	Western	38
Factory 3	Northern	14
Total		**72**

Table 1 : Factory Details

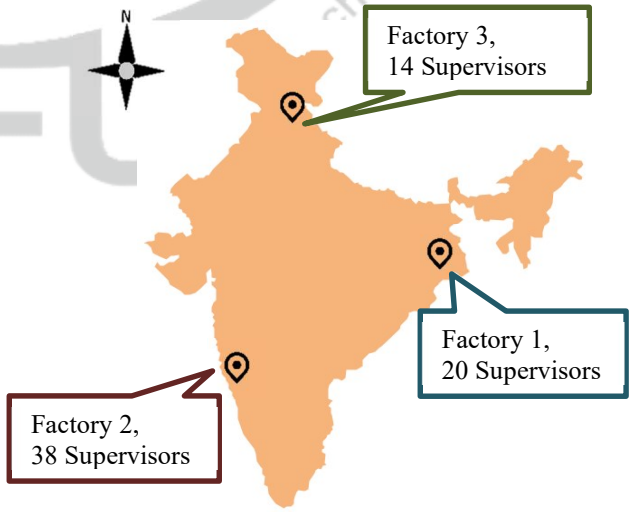


Figure 1: Geographical Representation

ATDC Pro-Up is presenting the data of 72 Supervisors who had been up-skilled through ATDC Pro-up's customized training program. ATDC Pro-Up had undertaken the Diagnostics Assessment Pre-Training (DAP) which provides the diagnostics of skill gaps. DAP was assessed on the basis of general awareness of these concepts and their application at the workplace.

How can the Supervisors be Graded?

In order to comprehensively research and understand the performance of the supervisors before the training and after the training have been distinguished into 5 categories, which have been captured in the legend below:

LEGEND	RANGE	EXPLANATION
Untrained	0% - 19%	The candidates, who can't score more than 19%, come under the "Untrained" category for our case study purpose. This implies that the candidate is unaware of the concepts.
Learning	20% - 40%	The candidates, who score between 20% to 40%, come under the category of "Learning". This implies that the candidate is narrowly familiar with the concepts.
Understanding	41% - 60%	The candidates, score between 41% to 60%, come under the "Understanding" category. This implies that the candidate can understand the concept.
Practical Application of the concept	61% - 80%	The candidates, who score between 61% to 80%, come under the "Practical application of the concept" category. This implies that the candidate can practically apply those concepts successfully.
Propagation	81% - 100%	The candidates, who score between 81% to 100%, come under the category of "Propagation". This implies that the candidate has understood the concept and can train and motivate others to use those concepts.

Table 2: Performance Indicator Legends by ATDC Pro-Up

The legend that is being followed across all the graphs in this study is as follows:

LEGEND	RANGE
Untrained	0% - 19%
Learning	20% - 40%
Understanding	41% - 60%
Practical Application of the concept	61% - 80%
Propagation	81% - 100%

After the completion of the training, a Post-Training Assessment was done and the performance results were calculated to record the changes developed within the program. This report presents the findings of the Pre-Training and Post-Training results.

Findings

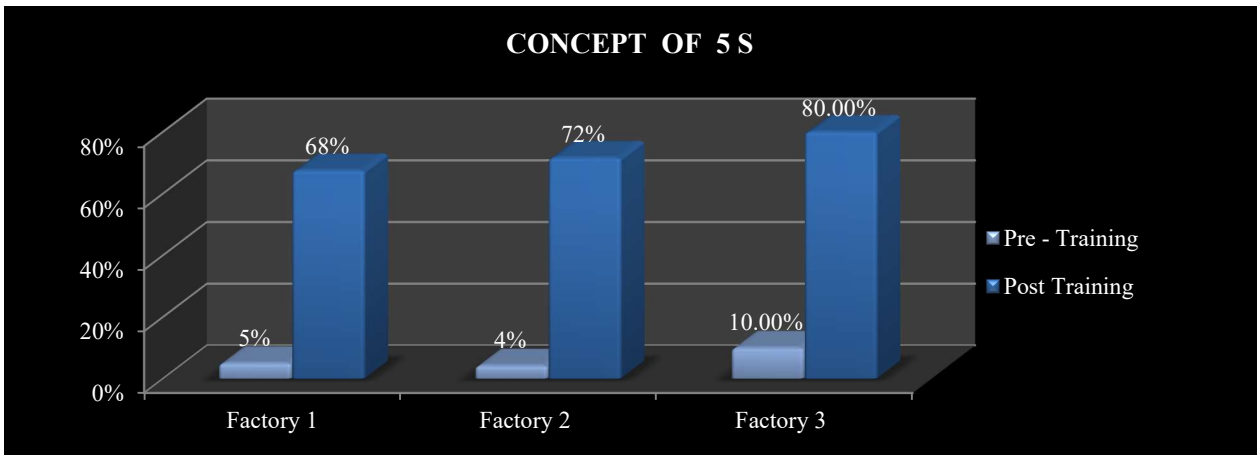
In this study, the comparison is being done on the basis of 5 key concepts that were assessed through Diagnostic Assessment Pre-Training (**DAP)** before training and then after customized teaching the **post-Training** assessment was also done.

A. Findings on Concept of 5 S

Concept of 5 S:

- *5S is a system for organizing work spaces so that the operations can be performed efficiently, effectively, and safely. This system focuses on putting everything where it belongs and keeping the workplace clean, which makes it easier for people to do their jobs without wasting time or risking injury. The 5S pillars are* ***Sort, Set in order, Shine, Standardise and, Sustain****.*

- ***Advantage of 5 S*** *is it decreases waste while optimizing productivity through maintaining an orderly workplace and using visual cues to attain more consistent operational results.*



Graph 1: Factory wise Pre-training and Post-training Performance in the Concept of 5S

Factory	No of Supervisors in Batch	Pre- Training Scoring Range	No of Supervisors who Scored the highest	Average Percentage of 5 S Knowledge in the Batch Pre-Training	Post- Training Scoring Range	No of Supervisors who Scored the highest	Average Percentage of 5 S Knowledge in the Batch Post-Training
Factory 1	20	0 - 40%	1	5%	30 - 100%	4	68%
Factory 2	38	0 - 60%	1	4%	0 - 100%	10	72%
Factory 3	14	0 - 80%	1	10%	60 - 100%	4	80%
Total	**72**	**0 – 80%**	**3**	**6%**	**0 – 100%**	**18**	**72%**

Table 3: Factory wise Pre-training and Post training performance range and data collected and analyzed for the concept of 5S by ATDC Pro-Up

Factory 1:

- The batch comprised of ***20 supervisors***.
- In 5S, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***5%*** and ***after the training***, the average score percentage of the batch came out to be ***68%***.
  Hence the average score percentage ***improved from 5% to 68%***.
- ***Before training***, the supervisors scored in the range of ***0-40%***, where only 1 supervisor scored the highest (40%). ***After training***, the range of scoring came out to be ***30-100%*** where ***4 supervisors out of 20 scored 100%.***
- Hence, after the training, the range also ***improved from 0-40% to 30-100%.***

Factory 2:

- The batch comprised of ***38 supervisors***.
- In 5S, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***4%*** and ***after the training***, the average score percentage of the batch came out to be ***72%***.
  Hence the average score percentage ***improved from 4% to 72%***.
- ***Before training***, the supervisors scored in the range of ***0-60%***, where only 1 supervisor scored the highest (60%). ***After training***, the range of scoring came out to be ***0-100%*** where ***10 supervisors out of 38 scored 100%.*** 1 supervisor hadn't attended the 5S session; thus, he scored null in the 5S topic.
- Hence, after the training, the upper limit of the range ***improved from 60% to 100%.***

Factory 3:

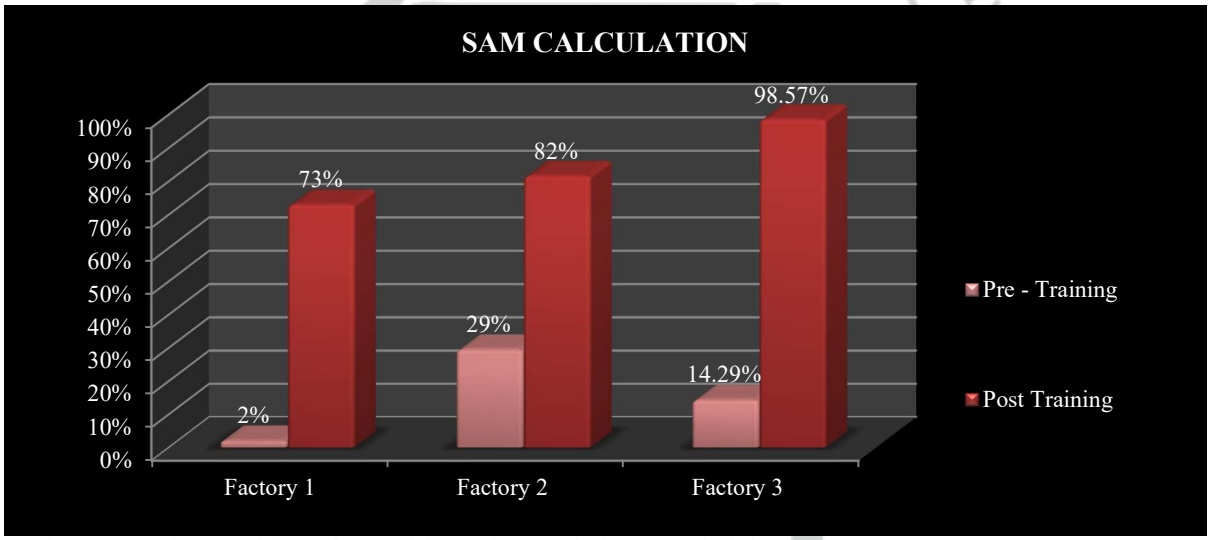
- The batch comprised of ***14 supervisors***.

- In 5S, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***10%*** and ***after the training***, the average score percentage of the batch came out to be ***80%***.
  Hence the average score percentage ***improved from 10% to 80%***.
- ***Before training***, the supervisors scored in the range of ***0-80%***, where only 1 supervisor scored the highest (40%). ***After training***, the range of scoring came out to be ***60-100%*** where ***4 supervisors out of 14 scored 100%.***
- Hence, after the training, the range also ***improved from 0-80% to 60-100%.***

B. Findings on Concept of SAM Calculation

SAM Calculation:

- *The concept of Standard Allowed Minutes is used to measure the work content of a garment, so the time taken for an operator or machine to complete a specific task when working at 100% efficiency.*
- ***Advantage of SAM Calculation*** *is, it helps in capacity planning of the factory, calculating the requirement of machinery and even helps to estimate the cost of making and to identify bottlenecks.*



Graph 2: Factory wise Pre-training and Post-training Performance in the SAM Calculation

Factory	No of Supervisors in Batch	Pre- Training Scoring Range	No of Supervisors who Scored the highest	Average Percentage of SAM Calculation Knowledge in the Batch Pre-Training	Post- Training Scoring Range	No of Supervisors who Scored the highest	Average Percentage of SAM Calculation Knowledge in the Batch Post-Training
Factory 1	20	0 - 20%	2	2%	40 - 100%	4	73%
Factory 2	38	0 - 100%	7	29%	0 - 100%	28	82%
Factory 3	14	0 - 100%	2	14.29%	80 - 100%	13	98.57%
Total	**72**	**0 – 100%**	**11**	**19%**	**0 – 100%**	**45**	**83%**

Table 4: Factory wise Pre-training and Post training performance range and data collected and analyzed for the concept of SAM Calculation by ATDC Pro-Up

Factory 1:

- The batch comprised of ***20 supervisors***.
- In SAM Calculation, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***2%*** and ***after the training***, the average score percentage of the batch came out to be ***73%***.

Hence the average score percentage ***improved from 2% to 73%***.

- ***Before training***, the supervisors scored in the range of ***0-20%***, where only 2 supervisors scored the highest (20%). ***After training***, the range of scoring came out to be ***40-100%*** where ***4 supervisors out of 20 scored 100%.***
- Hence, after the training, the range also ***improved from 0-20% to 40-100%.***

Factory 2:

- The batch comprised of ***38 supervisors***.
- In SAM Calculation, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***29%*** and ***after the training***, the average score percentage of the batch came out to be ***82%***.
  Hence the average score percentage ***improved from 29% to 82%***.
- ***Before training***, the supervisors scored in the range of ***0-100%***, where 7 supervisors scored the highest (100%). ***After training***, the range of scoring came out to be ***0-100%*** where ***28 supervisors out of 38 scored 100%.***5 supervisors hadn't attended the SAM Calculation session; thus, 4 supervisors scored null and 1 supervisor didn't attempt the question in the SAM Calculation topic
- Hence, after the training, the no. of supervisors scoring 100% ***increased from 7 to 28 out of 38.***

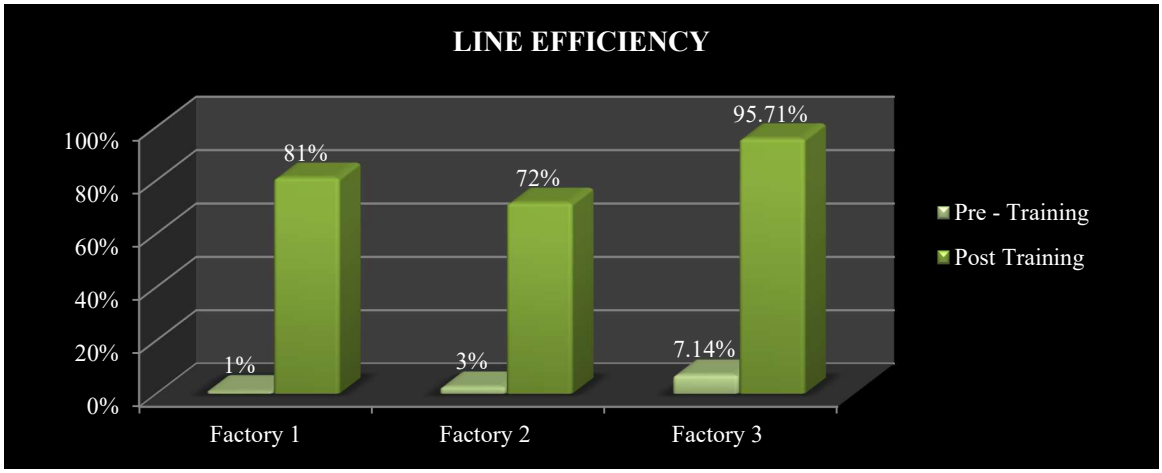
Factory 3:

- The batch comprised of ***14 supervisors***.
- In SAM Calculation, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***14.29%*** and ***after the training***, the average score percentage of the batch came out to be ***98.57%***.
  Hence the average score percentage ***improved from 14.29% to 98.57%***.
- ***Before training***, the supervisors scored in the range of ***0-100%***, where only 2 supervisors scored the highest (100%). ***After training***, the range of scoring came out to be ***80-100%*** where ***13 supervisors out of 14 scored 100%.***
- Hence, after the training, the range also ***improved from 0-100% to 80-100%.***

C. Findings on Concept of Line Efficiency

Line Efficiency:

- *The efficiency is the work output from an operation, divided by work input from the same operation, and expressed as a percentage. The general formula for calculating efficiency is: (Work output /work input) X 100. It benefits the production line that produces only good parts, as quickly as possible, with zero downtime which enables it to* ***produce in a given lead time.***
- ***Advantage of Line Efficiency*** *is, it enables in quantifying and analyzing the work output and work input of the production line.*



Graph 3: Factory wise Pre-training and Post-training Performance in the Concept of Line Efficiency

Factory	No of Supervisors in Batch	Pre- Training Scoring Range	No of Supervisors who Scored the highest score	Average Percentage of Line Efficiency Knowledge in the Batch Pre-Training	Post- Training Scoring Range	No of Supervisors who Scored the highest score	Average Percentage of Line Efficiency Knowledge in the Batch Post-Training
Factory 1	20	0 - 20%	1	1%	40 - 100%	8	81%
Factory 2	38	0 - 80%	1	3%	0 - 100%	24	72%
Factory 3	14	0 - 60%	1	7.14%	60 - 100%	12	95.71%
Total	**72**	**0 – 80%**	**3**	**3%**	**0 – 100%**	**44**	**79%**

Table 5: Factory wise Pre-training and Post training performance range and data collected and analyzed for the concept of Line Efficiency by ATDC Pro-Up

Factory 1:

- The batch comprised of ***20 supervisors***.
- In Line Efficiency, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***1%*** and ***after the training***, the average score percentage of the batch came out to be ***81%***.
  Hence the average score percentage ***improved from 1% to 81%***.
- ***Before training***, the supervisors scored in the range of ***0-20%***, where only 1 supervisor scored the highest (20%). ***After training***, the range of scoring came out to be ***40-100%*** where ***8 supervisors out of 20 scored 100%.***
- Hence, after the training, the range also ***improved from 0-20% to 40-100%.***

Factory 2:

- The batch comprised of ***38 supervisors***.
- In Line Efficiency, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***3%*** and ***after the training***, the average score percentage of the batch came out to be ***72%***.
  Hence the average score percentage ***improved from 3% to 72%***.
- ***Before training***, the supervisors scored in the range of ***0-80%***, where only 1 supervisor scored the highest (80%). ***After training***, the range of scoring came out to be ***0-100%*** where ***24 supervisors out of 38 scored 100%.*** 8 supervisors had scored nil in Line Efficiency topic; out of 8, 5 supervisors solved the numerical but calculation was wrong and 3 supervisors didn't attempt the question.
- Hence, after the training, the upper limit of the range ***improved from 80% to 100%.***

Factory 3:

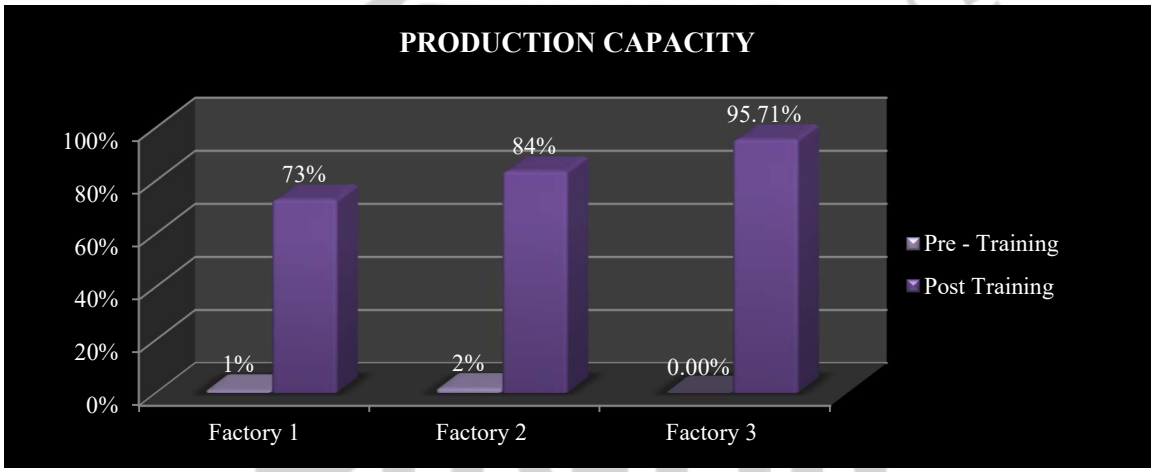
- The batch comprised of ***14 supervisors***.

- In Line Efficiency, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***7.14%*** and ***after the training***, the average score percentage of the batch came out to be ***95.71%***.
  Hence the average score percentage ***improved from 7.14% to 95.71%***.
- ***Before training***, the supervisors scored in the range of ***0-60%***, where only 1 supervisor scored the highest (60%). ***After training***, the range of scoring came out to be ***60-100%*** where ***12 supervisors out of 14 scored 100%.***
- Hence, after the training, the range also ***improved from 0-60% to 60-100%.***

D. Findings on Concept of Production Capacity

Production Capacity:

- *Production capacity is defined as the maximum production or output, which can be produced in a factory with the help of available resources. The capacity is calculated over days, weeks, or months. This metric is important because it informs a* ***manufacturer's critical business decisions in both the near and long term.***
- ***Advantage of Production Capacity*** *is, it is important for supervisors to know their respective line production capacity because it informs both administrative, in-facility decisions, enabling businesses to maximize their production efficiency.*



Graph 4: Factory wise Pre-training and Post-training Performance in the Concept of Production Capacity

Factory	No of Supervisors in Batch	Pre- Training Scoring Range	No of Supervisors who Scored the highest	Average Percentage of Production Capacity Knowledge in the Batch Pre-Training	Post- Training Scoring Range	No of Supervisors who Scored the highest	Average Percentage of Production Capacity Knowledge in the Batch Post-Training
Factory 1	20	0 - 20%	1	1%	40 - 100%	5	73%
Factory 2	38	0 - 40%	1	2%	0 - 100%	31	84%
Factory 3	14	0 - 0%	0	0%	60 - 100%	12	95.71%
Total	**72**	**0 – 60%**	**2**	**1%**	**0 – 100%**	**48**	**83%**

Table 6: Factory wise Pre-training and Post training performance range and data collected and analyzed for the concept of Production Capacity by ATDC Pro-Up

Factory 1:

- The batch comprised of ***20 supervisors***.
- In Production Capacity, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***1%*** and ***after the training***, the average score percentage of the batch came out to be ***73%.***
  Hence the average score percentage ***improved from 1% to 73%***.

- ***Before training***, the supervisors scored in the range of ***0-20%***, where only 1 supervisor scored the highest (20%). ***After training***, the range of scoring came out to be ***40-100%*** where ***5 supervisors out of 20 scored 100%.***
- Hence, after the training, the range also ***improved from 0-20% to 40-100%.***

Factory 2:

- The batch comprised of ***38 supervisors***.
- In Production Capacity, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***2%*** and ***after the training***, the average score percentage of the batch came out to be ***84%***.
  Hence the average score percentage ***improved from 2% to 84%***.
- ***Before training***, the supervisors scored in the range of ***0-40%***, where only 1 supervisor scored the highest (40%). ***After training***, the range of scoring came out to be ***0-100%*** where ***31 supervisors out of 38 scored 100%.*** 5 supervisors had scored nil in Production Capacity topic; out of 5, 3 supervisors solved the numerical but calculation was wrong and 2 supervisors didn't attempt the question.
- Hence, after the training, the upper limit of the range ***improved from 40% to 100%.***

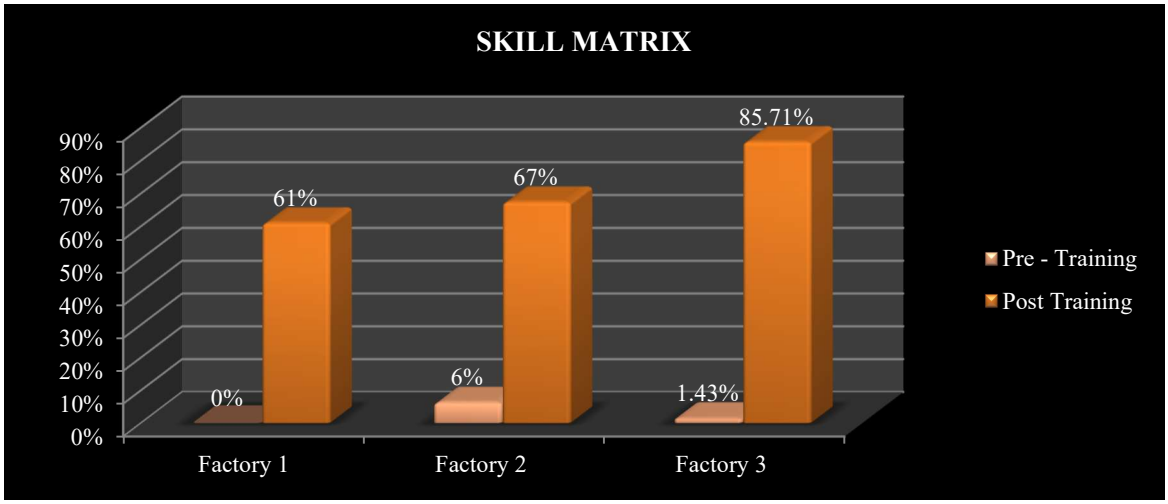
Factory 3:

- The batch comprised of ***14 supervisors***.
- In Production Capacity, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was ***0%*** and ***after the training***, the average score percentage of the batch came out to be ***95.71%***.
  Hence the average score percentage ***improved from 0% to 95.71%***.
- ***Before training,*** all supervisors ***scored 0***. ***After training***, the range of scoring came out to be ***60-100%*** where ***12 supervisors out of 14 scored 100%.***
  Hence, after the training, the range also ***improved from 0-0% to 60-100%.***

E. Findings on Concept of Skill Matrix

Skill Matrix:

- *A skills matrix pinpoints the skills that a team has or needs in order to do their job effectively. By creating a skills matrix, organizations can easily identify where employees are succeeding and where they need to improve.*
- ***Advantage of Skill Matrix*** *is, It helps in allocating the right person for the right job, increasing productivity, achieving desired performance level, balanced layout model by proper allocation of workers and mitigating the impact of absenteeism.*



Graph 5: Factory wise Pre-training and Post-training Performance in the Concept of Skill Matrix

Factory	No of Supervisors in Batch	Pre- Training Scoring Range	No of Supervisors who Scored the highest	Average Percentage of Skill Matrix Knowledge in the Batch Pre-Training	Post- Training Scoring Range	No of Supervisors who Scored the highest	Average Percentage of Skill Matrix Knowledge in the Batch Post-Training
Factory 1	20	0 - 0%	0	0%	40 - 100%	1	61%
Factory 2	38	0 - 60%	1	6%	0 - 100%	10	67%
Factory 3	14	0 - 20%	1	1.43%	60 - 100%	7	85.71%
Total	**72**	**0 – 60%**	**2**	**4%**	**0 – 100%**	**18**	**69%**

Table 6: Factory wise Pre-training and Post training performance range and data collected and analyzed for the concept of Skill Matrix by ATDC Pro-Up

Factory 1:

- The batch comprised of ***20 supervisors***.
- In Skill Matrix, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was ***0%*** and ***after the training***, the average score percentage of the batch came out to be ***61%***.
  Hence the average score percentage ***improved from 0% to 61%***.
- ***Before training,*** all supervisors ***scored 0***. ***After training***, the range of scoring came out to be ***40-100%*** where ***1 supervisor out of 20 scored 100%.***
  Hence, after the training, the range also ***improved from 0-0% to 40-100%.***

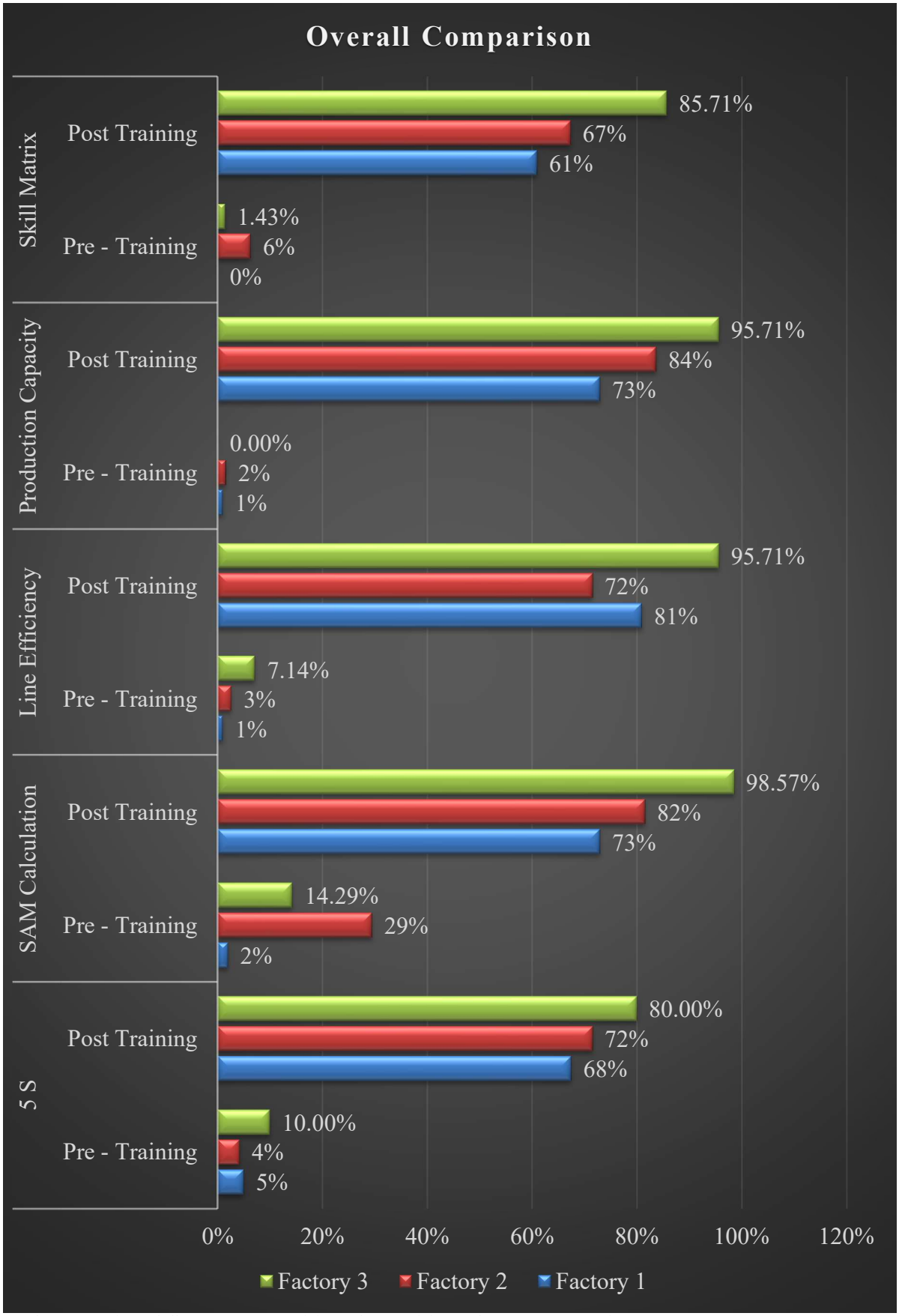
Factory 2:

- The batch comprised of ***38 supervisors***.
- In Skill Matrix, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***6%*** and ***after the training***, the average score percentage of the batch came out to be ***67%***.
  Hence the average score percentage ***improved from 6% to 67%***.
- ***Before training***, the supervisors scored in the range of ***0-60%***, where only 1 supervisor scored the highest (60%). ***After training***, the range of scoring came out to be ***0-100%*** where 10 supervisors scored 100%. 3 supervisors hadn't attended the Skill Matrix session; thus, 1 supervisor scored nil and 2 supervisors didn't attempt the question
- Hence, after the training, the upper limit of the range ***improved from 60% to 100%.***

Factory 3:

- The batch comprised of ***14 supervisors***.
- In Skill Matrix, prior to our data collection through ***DAP before training***, it was found that the average score percentage of the batch was only ***1.43%*** and ***after the training***, the average score percentage of the batch came out to be ***85.71%***.
  Hence the average score percentage ***improved from 1.43% to 85.71%***.
- ***Before training***, the supervisors scored in the range of ***0-20%***, where only 1 supervisor scored the highest (20%). ***After training***, the range of scoring came out to be ***60-100%*** where ***7 supervisors out of 14 scored 100%.***
  Hence, after the training, the range also ***improved from 0-20% to 60-100%.***

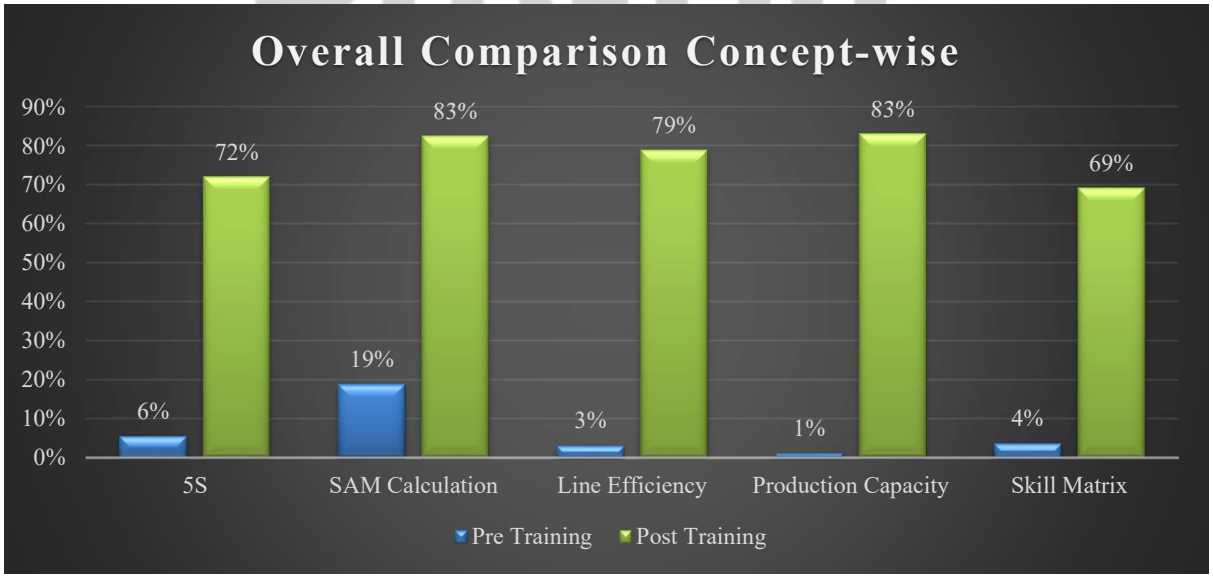
Findings overall



Graph 6: Comparison of all 3 Factory's Pre-training and Post-training Performance Concept wise.

				Factory 1	Factory 2	Factory 3	AVERAGE
Concepts	*5 S*	*Pre - Training*	**Percentage**	5%	4%	10%	**6%**
			Indicator	Untrained	Untrained	Untrained	**Untrained**
		Post Training	**Percentage**	68%	72%	80%	**72%**
			Indicator	Practical Application of the concept	Practical Application of the concept	Practical Application of the concept	**Practical Application of the concept**
	SAM Calculation	*Pre - Training*	**Percentage**	2%	29%	14.29%	**19%**
			Indicator	Untrained	Learning	Untrained	**Untrained**
		Post Training	**Percentage**	73%	82%	98.57%	**83%**
			Indicator	Practical Application of the concept	Propagation	Propagation	**Propagation**
	Line Efficiency	*Pre - Training*	**Percentage**	1%	3%	7.14%	**3%**
			Indicator	Untrained	Untrained	Untrained	**Untrained**
		Post Training	**Percentage**	81%	72%	95.71%	**79%**
			Indicator	Propagation	Practical Application of the concept	Propagation	**Practical Application of the concept**
	Production Capacity	*Pre - Training*	**Percentage**	1%	2%	0%	**1%**
			Indicator	Untrained	Untrained	Untrained	**Untrained**
		Post Training	**Percentage**	73%	84%	95.71%	**83%**
			Indicator	Practical Application of the concept	Propagation	Propagation	**Propagation**
	Skill Matrix	*Pre - Training*	**Percentage**	0%	6%	1.43%	**4%**
			Indicator	Untrained	Untrained	Untrained	**Untrained**
		Post Training	**Percentage**	61%	67%	85.71%	**69%**
			Indicator	Practical Application of the concept	Practical Application of the concept	Propagation	**Practical Application of the concept**

Table 8: Comparison of all 3 Factory's Pre-training and Post-training Performance Concept wise along with overall average collected and analyzed by ATDC Pro-Up.



Graph 7: Comparison between Pre-Training and Post Training performance average of all 3 Factories across different Concepts.

5 S Concept:

- We can observe that ***before training,*** the supervisors ***almost knew nothing*** about the 5-S concept.
- They were unaware of its application and the importance of the concept in an organization.
- The Batch of 72 supervisors were coming under the category of ***"Untrained"*** indicator since their overall average in the knowledge of 5S was ***about 6%.***

- ***After the training,*** the overall average ***improved from 6% to 72%,*** thus now the batch falls under the Category of ***"Practical Application of the Knowledge."***
- This indicates that now not only they are aware of the concept but can also apply it practically in the factory benefitting the production floor altogether.

SAM Calculation:

- We can observe that ***before training***, the supervisors ***knew SAM Calculation.***
- But there were unable to use SAM Calculation practically in the factory.
- The Batch of 72 supervisors were coming under the category of ***"Untrained"*** indicator since their overall average in the knowledge of SAM Calculation was ***about 19%.***

- ***After the training,*** the overall average ***improved from 19% to 83%,*** thus now the batch falls under the Category of ***"Propagation."***
- This indicates that now they are master in the concept of SAM Calculation and they can also train others efficiently and correctly.

Line Efficiency:

- We can observe that ***before training***, the supervisors ***aren't fully aware*** of Line Efficiency.
- They didn't know about the calculations done to find out the efficiency so that they could apply in their supervising lines.
- The Batch of 72 supervisors were coming under the category of ***"Untrained"*** indicator since their overall average was ***just 3%.***

- ***After the training,*** the overall average ***improved from 3% to 79%,*** thus now the batch comes under the Category of ***"Practical Application of the Knowledge."***
- This implies that now they can use Line Efficiency concept practically, can do calculations and can give inputs associating with Line efficiency.

Production Capacity:

- ***Before training,*** the suggestive data shows despite the use of term Production Capacity on daily basis, the supervisors were ***unaware of the concept*** and the proper usage.
- The Average of the knowledge base of the whole batch of 72 came ***only 1%*** which comes under the ***"Untrained"*** category.

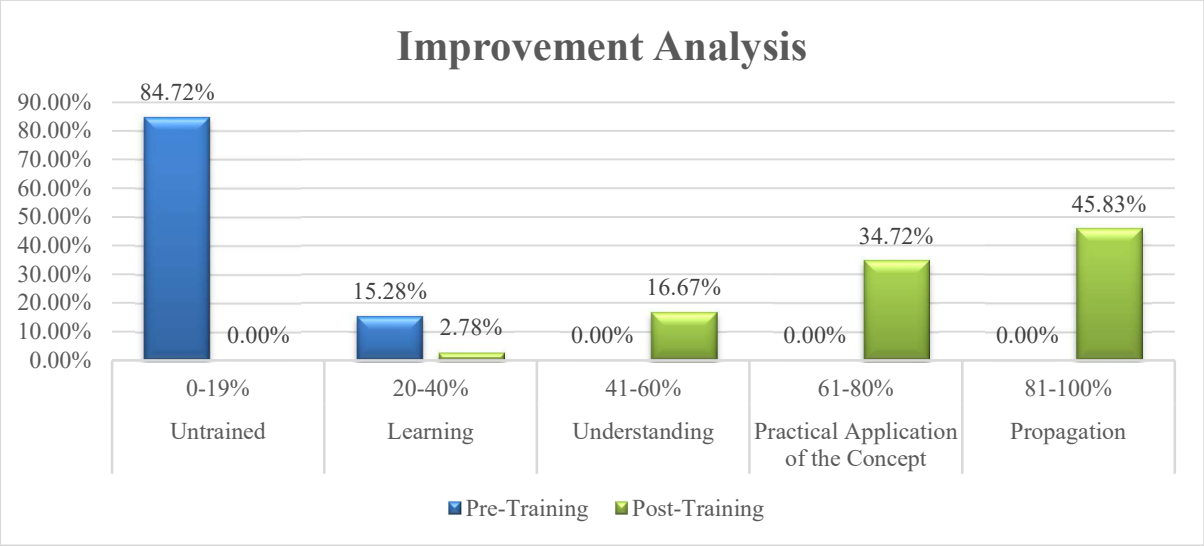
- ***After the training***, the overall average ***improved from 1% to 83%***, thus now the batch falls under the Category of ***"Propagation."***
- This indicates that now they are the master in the concept of Production Capacity and they can also train others efficiently and correctly. Now they know how to calculate the capacity and likewise can work on targets.

Skill Matrix:

- ***Before training,*** only some supervisors ***had heard*** about the Skill Matrix.
- They were unaware of its application and the importance of the concept in an organization.
- The Average of the knowledge base of the whole batch of 72 came ***4%*** which comes under the ***"Untrained"*** category.

- ***After the training***, the overall average ***improved from 4% to 69%,*** thus now the batch falls under the Category of ***"Practical Application of the Knowledge."***
- This indicates that now not only they are aware of the concept but can also apply it practically in the factory benefitting the production floor altogether.
- Now they can develop floaters which eventually improves the performance of the assembly line.

Performance Indicator-wise Analysis



Graph 8: Comparison between Pre-Training and Post Training Indicator wise improvement.

Legends	Untrained	Learning	Understanding	Practical Application of the Concept	Propagation	Total
	0-19%	20-40%	41-60%	61-80%	81-100%	
Pre-Training	61	11	0	0	0	72
Post-Training	0	2	12	25	33	72

Table 9: Comparison between Pre-Training and Post Training Indicator wise improvement data collated by ATDC Pro-Up

Pre-Training:

- 61 supervisors out of 72 supervisors were under Untrained category which was 84.72% of the whole batch.
- 11 supervisors were under Learning category which was 15.28% of the whole batch.
- Thus, before training the batch was in the range of 0%-40%.

Post-Training:

- 2 supervisors out of 72 supervisors were under Learning category which was 2.78% of the whole batch.
- 12 supervisors out of 72 supervisors were under Understanding category which was 16.67% of the whole batch.
- 25 supervisors out of 72 supervisors were under Practical Application of the Concept category which was 34.72% of the whole batch.
- 33 supervisors out of 72 supervisors were under Propagation category which was 45.83% of the whole batch.
- Thus, before training the batch was in the range of 20%-100%.

The garment export industry would greatly benefit if they prepare a dashboard for Supervisors of 5S actual SAM, Line Efficiency, Production Capacity and Skill Matrix as per their needs so that corrective actions can be taken immediately in order to save cost of production and offer a competitive price to the buyer.