

Report on
Sahaba Yarn Limited (Knit Dyeing): Focuses on Various
Functional Departments

By
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An internship report submitted to Executive Development Centre, BRAC Institute of Governance and Development (BIGD), BRAC University in partial fulfillment of the requirements for the degree of Post Graduate Diploma in Knitwear Industry Management (PGD-KIM).

Executive Development Centre
BRAC Institute of Governance and Development
BRAC University
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Declaration

It is hereby declared that

1. The internship report submitted is my own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Letter of Transmittal

Mohammad Sirajul Islam
Deputy Director, EDC, BIGD
BRAC University

Subject: Submission of Internship Report on Sahaba Yarn Limited (Knit Dyeing).

Dear Sir,

This is my pleasure to submit my internship report based on my industry attachment with Sahaba Yarn Limited (Knit Dyeing).

I have attempted my best to finish the report with the essential data and recommended proposition in a significant compact and comprehensive manner as possible.

I trust that the report will meet the desires.

Sincerely yours,

Md Altaf Mahmod

Student ID: 24281098

Post Graduate Diploma in Knitwear Industry Management (PGD-KIM)

Executive Development Centre, BIGD, BRAC University

16th November 2025

Non-Disclosure Agreement

This agreement is made and entered between Sahaba Yarn Limited (Knit Dyeing) as the First Party and the undersigned student at Executive Development Centre, BRAC Institute of Governance and Development, BRAC University as the Second Party. The First Party has allowed the Second Party to complete three months long internship in partial fulfillment of the requirements for the degree of Post Graduate Diploma in Knitwear Industry Management. The Second Party will have the opportunity to work closely with the company's officials and access official data and information. Based on work experience and data, data, and information collected during the internship and Party will prepare an internship report. The Second Party will use all sorts of data and information for academic purposes and will not disclose to any party against the interests of the First Party.

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Acknowledgment

I am so happy to Almighty Allah for His blessings which was helped me to finish my internship successfully. I express my respect and gratitude to my esteemed supporting Mohammad Sirajul Islam for providing me with the opportunity to complete my internship and for providing me with the right guidance to complete the work of the Sahaba Yarn Limited (Knit Dyeing) project. Thanks to his constant encouragement and inspiring guidance, I have achieved this prosperity, which enabled me to complete all the steps correctly. I express my gratitude to the management, administration and staff of Sahaba Yarn Limited (Knit Dyeing) for their sincere cooperation. My sincere thanks to Assistant General Manager (Head of Dyeing Unit) Suman Kumar Biswas and Senior Manager (Finishing and Quality) Mohammad Zahirul Islam for their appropriate cooperation during the training period. I would also like to express my gratitude to all the staff and workers of this organization. I would especially like to express my gratitude to all the operators and my department in-charge. Moreover, I would like to thank all the teachers of our university, especially the BIGD (PGD-KIM) department, for their kind sympathy and help. Finally, I would like to acknowledge that I am responsible for the mistakes that have occurred in this report.

Executive Summary

Sahaba Yarn Limited (Knit Dyeing) is the sister concern of Horizon Group. It was a great chance for me to do my internship in this organization. Sahaba Yarn Limited (Knit Dyeing) is a comprehensive manufacturing and exporting company of Bangladesh. I have worked in different department for 3 months as per my internship duration. I have divided my internship task into four chapter. In chapter 1 I have included the company's overview, mission, vision, company's structure, products and clients. In chapter 2 I have learned my full internship task which is very much fruitful for me. Knitting is the most important part of fabric manufacturing process, which made the fabric by interloping of yarn. The internal laboratory also has played a vital role to dye the fabric. According to planning information laboratory make a recipe for bulk fabric dyeing. After confirmation of approval shade, they go to bulk dyeing. Dyeing is also an important part of wet processing technology. According to the buyer requirement, dyeing department dyed the fabrics. All of this process is monitoring by their executives and senior staffs. From unloading the wet fabric their finishing team start to dry the fabric according to standard operating procedure. By the slitting machine, they slit and squeeze the tubular fabric before starting the dry. Stenter machine is the main part for the drying of fabric. After drying the fabric, they need compacting that fabric for smooth surface. It also controls the fabric's GSM, shrinkage and spirality. In this stage, quality team inspected the fabric as per international standard fabric inspection system. 4-point system is the Buyer requirement fabric's inspection system. After completing the inspection that fabrics have allocated as per 5S system. All of those processes are well planned from receiving the fabric to planning, process setup, process follow up, ensuring the fabrics shade & quality control. Then delivery team delivered the fabric for cutting. After cutting & checking the cut panel, it forward to sewing for making the final garments product. In chapter 3 I have added the critical assessment of my internship work. Also added the application of generic and industries specific courses during my internship. Some of my functional departmental assessments are included here. My personal recommendation to develop this company and my individual asset, gathering skill, experience and knowledge. My inter communication skills, practical knowledge and experience will help me to create a top-class leader in knitwear industry. All inter departmental communication and follow up also was my responsibilities. This total process created a great opportunity for my internship and gave me real-world experience.

Keywords:

Fabric Manufacturing, Spectrophotometer, Wet Processing, Marketing and Merchandising, Supply Chain Management, Quality Management System, Standard Operating Procedure, Sustainable Manufacturing, International Labor Organization, Global Organic Textile Standard Organization, International Organization for Standardization.

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List of Acronyms

BCI	Better Cotton Initiative
BIGD	BRAC Institute of Governance and Development.
BKMEA	Bangladesh Knitwear Management and Exporters Association
BSCI	Business Social Compliance Initiative
DPP	Digital Product Passport,
EDC	Executive Development Centre
GSV	Global Security Verification
GOTS	Global Organic Textile Standard
GEN	Global Ecolabelling Network
GRS	Global Recycle Standard
GDP	Gross Domestic Product
GSP	Generalized System of Preference
HR	Human Rights
IE	Industrial Engineering
ISO	International Organization for Standardization
ILO	International Labor Organization
LC	Letter of Credit
OTP	Order Taking Process
OCS	Organic Content Standard
PGD-KIM	Post Graduate Diploma in Knitwear Industry Management
QAD	Quality Assurance Department
QMS	Quality Management System
RMG	Ready Made Garments
SCM	Supply Chain Management
SOP	Standard Operating Procedure
SMV	Standard Minute Value
SYL	Sahaba Yarn Limited
WRAP	Worldwide Responsible Accredited Production
ZDHC	Zero Discharge of Hazardous Chemical

Chapter 1: About Sahaba Yarn Limited (Knit Dyeing)

1.1 Overview of the Company

Sahaba Yarn Limited (Knit Dyeing) started its journey in 2003 as a part of Horizon Group. A group of entrepreneurs established Horizon in 2006. Horizon group has developed a culture of innovation, quality and service. They have no compromise about any quality issue for readymade garments. For developing their productivity, they have lots of supporting stuff in Horizon group. Durability, longevity and value are special feathers of our product. They are committed to achieve their customer satisfaction by quality product. Horizon is 100% export-oriented company with sweater textile and garments sector. Its present position is the outcome of long journey in the arena of textile business. When they started their journey in 2003 as only dyeing Basis Company and gradually, they achieve the vital position in export market of Bangladesh. Afterwards abled to establish a number of export oriented large industries in textile sector and continued contribution in the development process of country through earning of valuable foreign currency. This company has created the working facilities for more than 3000 people. They always tried to maximum efficiency at no extra cost with all their customers. They do have both the technical and commercial expertise and also energetic and smart youngster to deal their customer. Horizon group considers corporate sustainability as an important edifice of its ethics. It gives special importance to all its corporate sustainability activities and compliance issues. It values environmental protection, conservation and realizes that only by being responsible to nature can they truly be responsible to the people and planet. It considers corporate sustainability as an investment for the future, both for business and nature. Horizon has one of the best, dedicated and skilled workforces in the country. These are the people with the best talents, commitments, and expertise with the blend of experience and enthusiasm. They work hard closely with stakeholders and are fully committed to deliver the best results, ensuring their satisfaction underpinned by the Horizon Values (Company website, n.d.).

1.2 Vision and Mission

The vision of Sahaba Yarn Limited is “To serves as producing the sustainable quality full product. To increasing their market growth, they all together as diversification. Inspiring the people to work as a best place. To build up customer supplier good relation. Highly effective productivity, effective forecasting and lean basis company build up by well planet. Above all profit maximizing by producing sustainable green product.”

To fulfill the vision the company follows the mission as “To create high-quality and sustainable clothing for consumers, which shows respect for the planet and its inhabitants. Innovation in the fashion industry through new designs, production methods or business strategies. To contribute to the country's economy, especially through job creation and foreign exchange earnings. Creating a positive and respectful work environment for employees and being responsible to society. Worker’s welfare and their rights are strictly maintained also they try to create world class leadership. Achieving a leading position in international markets, achieved through quality, service and innovation.” (Company website, n.d.)

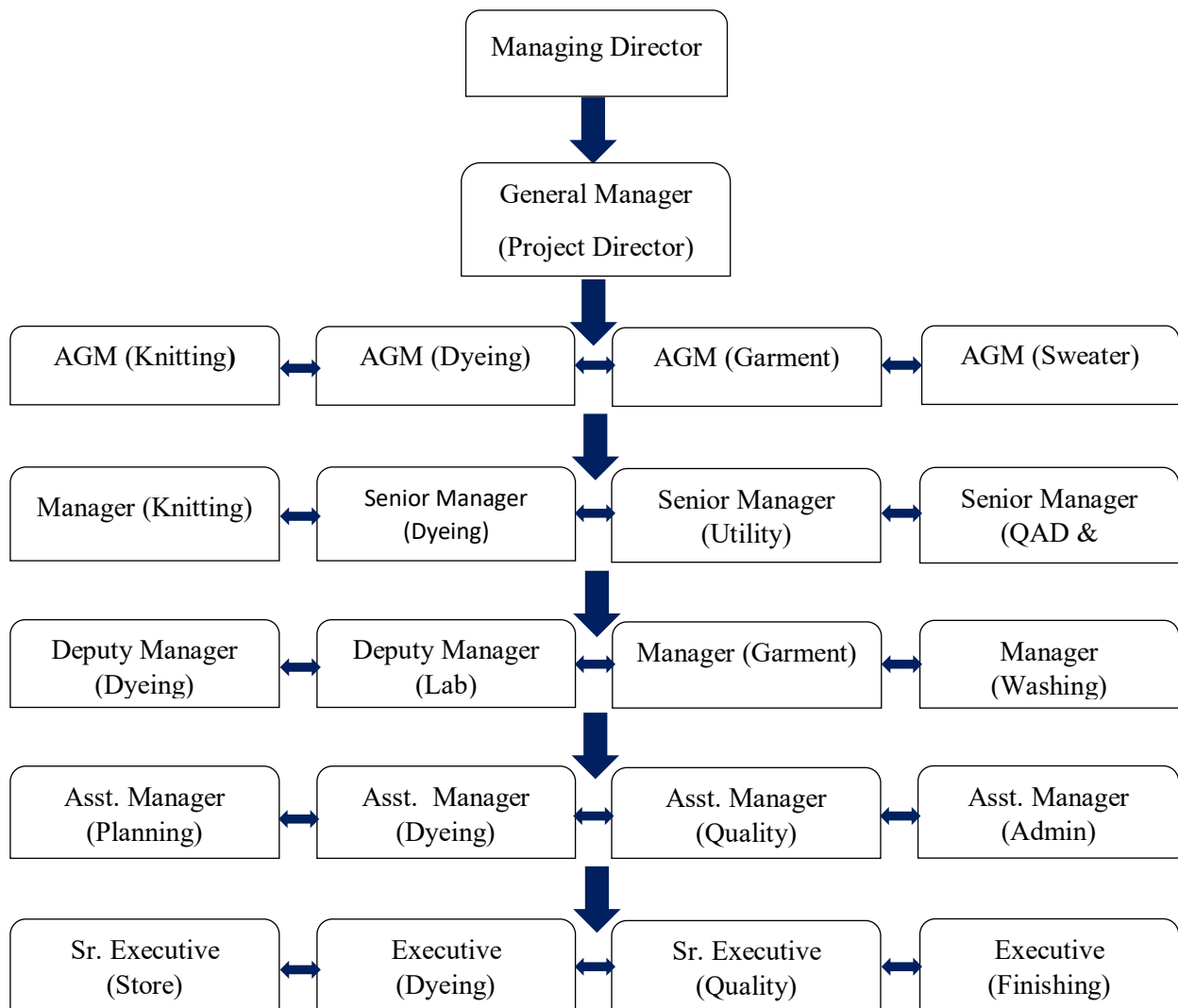
1.3 Goals and Objectives

To produce fashionable and wearable clothing as well as sell the goods in the domestic and foreign markets are the main goal of this company. In addition to generating profits, they create employment and contribute to the country’s economy. Their other objectives include creating high-quality products, meeting customer needs, following sustainable production process and participating in the modernization of the fashion industry (Company website, n.d.)

1.4 Organizational Structure, Organogram, Branches and departments

The organogram is illustrated in Figure-1. Managing Director always works to meet long-term goals and maintain financial support. This includes strategic planning, leading board meetings, communication with clients, protecting shareholder interests, and conducting company operations in accordance with legal and ethical standards. The main tasks of a General Manager are include planning production, controlling production, quality and ensuring that the company's goals are achieved. The manager task is to create and implement production plans, manage and supervise employees, ensure product quality control, maintaining employee safety and hygiene and preparing and analyzing various reports on the production process.

Figure-1: Organogram of Horizon Group



Source: SYL HR Policy, n.d.

This company have different branches including Sahaba Yarn Limited (Knit Dyeing), Sahaba Yarn Limited (Fabric Dyeing), Horizon Fashion Wear Limited (Knitting), Horizon Fashion Wear Limited (Garment), Horizon Sweaters Limited, Horizon Embroidery and Printing Limited, Horizon Lingerie Limited, Horizon Washing Limited. There are many types of departments here as like HR, Admin, Industrial Engineering, Planning, Knitting, Greige Store, Batch Section, Dyeing, Finishing, Quality, Research and Development, Maintenance, Security.

1.5 Key Products of the Company

Based on knit fabric the Horizon Group produces Single Jersey, Lycra Single Jersey, Single Lacoste, Double Lacoste, Polo Pique, 1x1 Rib, 2x2 Rib, Auto man Rib, Terry, Interlock,

Waffle, Fleece, Poptail Rib etc. The company also produced various garments items such as T-Shirt, Polo Shirt, Panty, Boxer, Sweater, Leggings, Brief/Shorts, Suit Shirt, Kami, Crop, Long Dress and Skirt. Department wise products of Horizon Group are given in Table 1.

Department	Production/Month
Knitting Production	200 Ton/Month
Yarn Dyeing Production	100 Ton/Month
Fabric Dyeing Production	300 Ton/Month
Finishing Production	500 Ton/Month
Cutting Production	2M-2.5M Pcs/Month
Sewing Production	3M-3.5M Pcs/Month
Finishing (Garment) Production	3.5M Pcs/Month

Table-1: Department Wise Production of Horizon Group

According to table-1 information, the highest production of this company is 500 ton for finishing and the lowest production is 100 ton for yarn dyeing. Also noticed that, the highest garments production is 3.5M and lowest production is 3M.

1.6 Different Clients/Buyers of Horizon Group

The company manufactures based on orders receive from various buyers such as Clover Collection, Fashion UK, George UK, Handcraft, Inditex, LC Waikiki, Marco Polo, NTD, Primark, Sainsbury, Sports Direct, Vert Baudet, Walmart Canada, Zara.

Chapter 2: Description of Task Accomplishment

I have divided my internship duration into some departmental areas which is given bellow.

Area of Internship work	Duration
Knitting	12
Batch	5
Laboratory	10
Dyeing	12
Dyeing Finishing	12
Quality Assurance Department	12
Marketing & Merchandising	5
Total	68

Table-2: Working areas of Internship Work

This internship is a managerial progress so we need to learn practically for our better knowledge. It will be more effective and helpful to increase our professional life.

2.1 Knitting

From the start of my internship, I have learned about knitting. Knitting is a fabric manufacturing process by which the interlacing of one or more yarn through a series of loop. Yarn is the main raw materials of fabric manufacturing. The length wise columns of stitches, corresponding to the warp in woven cloth are called Wales. The cross wise rows of stitches, corresponding to filling in woven cloth are called courses. Their knitting master informs to me that, there are two types of knitting. Such as Warp Knitting, Weft Knitting.

Warp Knitting: In this structure each loop form in the horizontal direction from different thread. For example- Sweater is made by this form.

Weft Knitting: In this structure a horizontal row of loops can be made by using one thread and the thread runs in the horizontal direction. Most of the knitted fabrics are made by this design.

Knitting Machine: A knitting machine is the most important part to produce the knit fabric. By this machine we can create different types of knitted fabric with semi-automatic or fully automatic. There are numerous types of knitting machine in the textile industry. There are different parts of knitting machine. Such as Needle, Sinker, Cam/Cam Box, Creel, Yarn Guide,

Feeder, Dial, Cylinder, Needle Gauge, Wheel, Expander, Stop Motion, Fabric Detector, Air Blow Gun, Lubrication System.

Yarn: Yarn is one kind of filament. It is the main raw materials of fabric manufacturing. It may be natural or synthetic. Filament is a long substance of fiber. We get yarn from twisting of together one more fiber. Yarn can be made from various natural or synthetic fiber and it have different types, colors, thickness, thin also depending on intended use.

Yarn Count: Yarn count is a numerical expression which means the yarn's fineness or coarseness. It also defines as the relationship between length and weight of the yarn. It determines the fabrics gsm, quality, strength, comfort and price. There are two types of way to determine the yarn count. Such as Direct count, indirect count.

Knitting program and fabric manufacturing process are presented in Table 3 and Figure 2 respectively.

Function Name	Applied component
Buyer Name	George UK
Work order/Tracking number	98404
Yarn count	26'S Combed
Yarn lot/Brand	605 MSA
MC Dia x Gauge	38x24
Required Width (open)	78"
Color Name	Dark
Required GSM	160
Stitch Length	2.90
Fabric Type	Single Jersey
Fabric Composition	100% BCI Cotton

Table-3: Knitting Program of Fabric Manufacturing

Knitting Program → Yarn Package form → Yarn Creeling → Feeding the Yarn → Set Machine Design (Cam Setting, Needle setting) → Knitting → Fabric Take up/Rolling → Fabric Weighting/Unload → Fabric Quality Inspection → Fabric Delivery

Figure-2: Fabric Manufacturing Process Flowchart

I have been more aware of knitting process when I have gathered the manufacturing process, different function of knitting machine and different kinds of defect. Every kind of defects are so much harmful for all quality products. For quality full product, all producing fabric should be faultless. Defects also responsible for less production and efficiency. Some of the knit fabric's defects are given bellow. Example: Knitting Hole, Sinker Mark, Star Mark, Patta/Barrie, Contamination, Needle line, Needle Brocken, Oil Spot, Dia mark, Missing Yarn/Lycra out, Slub/Knot, Wheel Mark, Fly yarn/Foreign fiber, Thick & Thin, Uneven Tension.

Grey Fabric Inspection: In this stage quality team inspect the fabric for quality confirmation. Quality means a special feathers of any product. There is a standard system for determination of fabrics quality. It is ISO standard 4-point system fabric inspection. By using this system knitting quality department determinate the fabrics defect.

Penalty point Assigned	
Length of Defects	Penalty Points
Up to 3 Inches	1 Point
3-6 Inches	2 Point
6-9 Inches	3 Point
Over 9 Inches	4 Point
Any Hole	4 Point

Table-4: Penalty point calculation system

Roll length in Yds	Fabric Roll Weight X 39.37 X 39.37 X1000
	Fabric Width (Inch) X Finish GSM
Grade Point	Total Penalty Point X 100 X 36
	Roll Length (Yds) X Fabric Width (Inch)

Table-5: 4-Point Calculation Formula

Acceptable grade for 4-point system

01-20 points = A Grade, 21-28 points = B Grade, above 28 Points = Reject

The value obtained from the 4-point system formula must be less than 28 points. If it is more than 28 points, the fabric will not acceptable

2.2 Laboratory

Dyeing lab is a vital pre-section of Dyeing department. The success of dyeing section depends on lab section. The main objective of lab section is color matching. Firstly, lab section receives an approval buyer standard swatch or pantone number from merchandiser. Then they start to match the shade as per recipe calculation. Their technician informs me, they collect the pretreatment fabric as per buyer requirement such as gsm, fabrication, yarn count and composition. Then they continue their process from stock solution to dyeing. After completing their process, lab team submit the closer shade to concern merchandiser for approval. If this shade is approved, they create the full recipe with a proper LD number. In this LD number have all details for proper documentary. Finally, they provide the final recipe for bulk production.

I have also learned about the calculation of shade percentage, recipe calculation, dyes and chemical calculation. Every dye and chemical have different function. Here I have attached some dyes and chemicals. Different types of reactive dyes- Remazol Yellow RR, Remazol Yellow RGB, Remazol Yellow 3GL, Remazol Yellow 4G, Remazol Red RR, Remazol Red RGB, Remazol Blue RR, Remazol Blue RSPL, React bond Yellow MD, React bond Yellow SDS, React bond Yellow LW, React bond Yellow X3RS, React bond Red MD, React bond Red LW, React bond Red X3RS, React bond Blue MD, React bond Blue BB, React bond Blue LW, React bond Blue G133.

Different types of Chemical and Auxiliaries- Caustic soda, Hydrogen per oxide, Detergent, sequestering agent, foaming agent, anti-creasing agent, Stabilizer, levelling agent, fixing agent, softening agent etc.

Figure 3 shows the process flowchart of dyeing lab and Table 6 presents salt/soda using data according to dyes percent %.

Work order/Swatch receive → Entry in register sheet → Prepare work sheet → Trial Recipe for matching swatch → Shade check and submit matching swatch → Prepare recipe for bulk → Fabric Quality Inspection → Fabric Delivery

Figure-3: Process flowchart of dyeing lab

Shade type	Color percent %	Salt (G/L)	Soda (G/L)
Light color	0-0.5%	12-16	3-4
Medium color	Above 0.5%-2%	20-48	5-12
Deep color	Above 2%-4%	60-80	15-20
Extra deep color	Above 4%-6%	80-100	20-25

Table-6: Salt/soda using data according to dyes percent

Data Color Report: Data color is a color measuring tools by which new recipe formulation, color measurement and quality control. At first need to save the data for different brands dyes as different ratio. Then we select the dyes to get a proper color. As a result, we get the dyes combination. Data color also shows how much the shade obtained by dyeing with created recipe differs from the standard shade. At this case data color does the following when compared to standard shade contained in the data color if shows whether the shade pass or fail with standard shade with how much point. Also measured the metamerism conditions of shade. Sometimes dyeing team to take the help of data color for small topping. With the help of data color it is known how much more or less of red, yellow, black there is to match the standard shade and how much more or less it needs to be added on how much lighter or darker the shade needs to be. There are some guidelines for understanding the CMC report. If data color shows the point 0-0.75 it means pass, if shows above 0.75-1.0 it means warning and if shows above 1.0 it means fail. In CMC report there are two graph such as stone graph and another is shade graph. The details are given in Table 7.

Light Source	CMC Decision	CMC DE	DL	Da	Db	Dc	DH	Metameric Index
D65	Fail	1.48	-1.06	0.94	0.21	-0.31	0.92	1.0
TL84	Fail	1.01	-0.50	-0.39	0.93	-0.85	-0.54	1.59
A Light	Fail	1.51	-0.97	-0.90	0.57	-0.36	-1.0	1.91

Table-7: CMC report measuring sample table

2.3 Batch Section

Batch section is also a subsection of dyeing department. This is called batching section. The main function of this section is ensuring consistent dyeing according to order, color and weight. Also maintain the production efficiency, reduce production cost, reduce defect, nozzle wise fabric loading, to avoid yarn lot and count mixing, controlling dyeing machine capacity and to help equal levelling dyeing. There is another part of this section which is heat setting. Before dyeing all spandex or Lycra fabrics need to heat set at 180-200°C temperature by a Stenter dryer machine. The main objective of heat setting is to fit the dimensional stability, controlling of fabric gsm, controlling the fabric shrinkage and reduce the fabrics hairiness.

Figure 4 provides the process flowchart of batching

Receive the batch card → Determine dyeing priority → Read the batch card according to specific requirement → Receive fabric from greige store → Record fabric weight → Fabric turning → Arrange the fabric according to nuzzling → Sign the batch card and record production.

Figure-4: Process flowchart of Batching

According to this flowchart I have attempted to understand the batching process. Their batch in-charge inform to me at first, they receive the batch card from their seniors as per planning instruction. After that they have received the quality pass fabric from greige store. Then they weighing the fabric as per requirement. They divide the full quantity of fabric nozzle wise as equally. Finally, they make the record with batch card signing. Nuzzling is an important part of a dyeing machine. The inside of a dyeing machine fabric moved through a reel which call nozzle. There is an entering gate in every nozzle of dyeing machine by which fabric entered into the dyeing machine.

2.4 Dyeing

Dyeing is a process by which fiber, yarn and knit fabrics are dyed. During my internship I have attempted to understand the dyeing process. Any kinds of fabric dying we need minimum temperature, stream and suitable water. For cotton fabric dying need minimum temperature 80°C and for polyester or synthetic fabric dyeing need minimum temperature 130°-140°C.

Their dyeing master informs to me every knit fabric dyeing have three processes such as pre-treatment, dyeing and after treatment. Pre-treatment process means ready to dyeing by suitable process. By this process they complete the fabric with scouring, bleaching and enzyme process. For scouring process they use sequestering agent, caustic soda (NaOH), anti-creasing agent and antifoaming agent. For bleaching process, they use hydrogen peroxide (H₂O₂) stabilizer, peroxide killer, neutralization, acid and enzyme chemical. For dyeing process they use leveling agent anti-creasing agent, sequestering agent, antifoaming agent, salt, soda, color or dyes. At after treatment stages they use neutralization or acid treatment, soaping chemical, fixing agent, softening agent. Different types of dyes used for knit fabric dyeing. Such as reactive dyes, acid dyes, Sulphur dyes, vat dyes, direct dyes, basic dyes, disperse dyes, mordant dyes, pigment dyes and mineral dyes.

Basic properties of reactive dyes: Reactive dyes are so much suitable for cotton fabric dyeing. These dyes have some basic properties and good function. Reactive dyes easily create covalent bond with reactive group fiber by which this bond easily can color fixed with fiber, yarn and fabric. This dye is soluble in water. Its use for cellulosic and protein fiber dyeing. This dye is famous to get all types of shade. It has good wet fastness, brightness and rubbing fastness are comparatively good. It's available to find and cheaper than another dyes. It's also an anionic dye.

Different types of dyeing machine and its parts: There are different types of dyeing machine used in textile industries. Such as Hussong loose cotton dyeing machine, Jagen barg dyeing machine for fiber dyeing machine. Hank dyeing machine, package dyeing machine, Cop dyeing machine for yarn dyeing. Jigger dyeing machine, Winch machine, Beam dyeing machine, Garment dyeing machine used for knit fabric dyeing. Another dyeing machine used for large volume of continues fabric dyeing. Such as Pad steam machine, Airflow dyeing machine, Padding mangle machine etc. Every dyeing machine has different parts. Such as main vessel, chamber heat exchanger, pump and motor, nozzle, j-box, winch or reel, control unit, processor, chemical dosing tank, fabric platter, tension system, reserve tank, utility line, filter etc.

Figure 5 presents the process flowchart of Dyeing

Fabric loading → Scouring → Cold wash → Acid Hot → Enzyme Wash → Cold Wash → Leveling and Color → Cold Wash → Normal Hot → Cold Wash → Chemical Hot → Cold Wash → Fixing → Cold Wash → Softener → Unload

Figure-5: Process flowchart of Dyeing

I have learned the full dying process from this flowchart. Every cotton fabric must be pretreatment before dying otherwise the dying will not take the desired color during dying. Also dyeing fabric without pretreatment can causes different problems, such as uneven, running shade. Not only that but many others problem can arise if fabric are not scouring properly. After completing the scouring process dyeing process will begin by adding dyes and colors. If any difficulties arise during the dying process various additional process have to be performed such as stripping, topping, re-dyeing, addition and padding. After completing dyeing process when the right shade is achieved some process need to be done which called after treatment process. Such as acid wash, fixing, softening. When after treatment process is complete the fabric is unload.

Different types of defects from dying section: The dyeing process is completed through three important process such as pretreatment, dyeing and after treatment process. If any of these processes are faulty then many problems can arise in the fabric. If the pretreatment process is not correct the fabric will not be able to hold the color properly, if the dyeing process is not correct the expected shade will not be obtained. If after treatment process is not accurate the surface different color fasteners and Fabric hand feel will not be good. In addition, various types of problem may occur such as running shade, uneven, color spot, dyeing crease mark, dyeing hole, chemical spot, rub mark, softener spot, friction mark, poor strength, hairiness, poor levelling, color migration.

2.5 Dyeing Finishing

After dyeing, various steps are followed to finish the fabric. At first, squeezer/slitting then dry the fabric by Stenter/dryer machine. Later, the fabric is compacted to enhance its shine and beauty. Through this process, the shrinkage, dia and GSM of the fabric are also maintained. During my internship, I have tried to learn and understand all of the topics properly.

Squeezer/Slitting: This machine is used to remove water from clothes and also opened the fabric according to needle mark. Squeezer machine use for tube fabric and slitting machine use for open width fabric. Additionally, the shade of the fabric can be changed with the help of the peader in this machine and there is also the option to use chemicals if necessary.

Dryer/Stenter: One of the main machines for finish the open fabric is the Stenter machine. This machine acts as a squeezer and a dryer at the same time. The squeezed fabric is dried by

using a Stenter machine. This machine has two padder that work to remove the water from the fabric and help to match the shade with approval. The machine has several chambers inside which some burners are adjusted. The fabric enters the chamber through chains on both sides of the machine and comes out through the output roller. For dry the fabric parameters (temperature, overfeed, speed) are set based on the shade and structure of the fabric. With the help of these parameters, the fabric diameter, GSM, shrinkage can be controlled.

Compacting: Compacting machine is the last machine of the finishing process. The main function of this machine is to iron through which the brightness, shine and the beauty of the fabric are brought. Moreover, this machine controls the fabric's diameter, GSM, and shrinkage. If there have shade problem of the fabric, the shade can be improved through parameter settings on this machine.

Figure 6 presents the process flowchart of finishing

Dyeing Unload Fabric → Squeezing/Slitting → Drying/Stentering → Inspection → Folding/Packaging → Delivery to store

Figure-6: Process flowchart of Finishing

According to this flowchart we can dry and finish the dyed fabric. Firstly we will squeeze the water out from the dyed fabric. Then this fabric have dried by using specific parameters and chemicals. To enhance the shine and beauty of the dried fabric, the compacting process have done. While drying the fabric, it is checked for defects and a quality report is prepared as per 4-point system. If the inspected fabric quality passes, it is delivered for the next process.

Finishing Defects: Sometimes we have found different types of defects which come from finishing section. It is so much harmful for production and company's efficiency. Some of these defects are rectifiable and some are non-rectifiable which increase the company's rejection. Some rectifiable defects are dia uneven, GSM variation, oil spot, chemical sport, dirty sport, color spot, insect spot, wheel mark, yellow spot, padder crease mark, stop mark problem, shining mark, crinkle mark, line mark. Some un-rectifiable defects are heating setting problem, lycra looseness problem, side cut problem, lycra burn problem, hole problem etc.

2.6 Quality Assurance Department

There is no alternative of quality department for the development of finish fabric. I have attempted to know those important terms through this course that have made significant contribution to my internship and workplace. Quality means the best service for buyer satisfaction. Quality Control and Quality assurance are different terms. Quality control refers to control a desired products on the contrary Quality assurance is a process control with proper analysis. According to buyer requirement inspection is required to determine the quality of the fabric. The quality of dyed fabrics is controlled in two ways. Such as lab quality control and finishing quality Control.

Fabric Inspection System: First, the shade check of the dyed fabric to see that its correctly matches or not match with original swatch. If the shade is not a perfect match, then attempt to match it by setting the parameters through the finishing machine. If finally the shade is not matched correctly even after setting the appropriate parameters, the fabric return to the dyeing department for re-matching. The fabric diameter and GSM must be checked at every stage of fabric drying. If the fabric diameter and GSM are not correct according to the buyer's requirements, the shrinkage will not be correct either. Then the fabric is checked for any defects through an inspection table or inspection machine. The most common rule for fabric inspection is the International 4-Point system fabric inspection.

Defect Calculating: The quality of each defect found in the fabric is determined according to its size. If defect size is up to 1inch we count 1-point, for 3-6 inches equal 2-point, 6-9 inches equal 3-point and 9 inches over equal 4-point. The formula of calculating of fabrics roll lengths is $\text{Roll Length} = (\text{Roll weight} \times 39.37 \times 39.37 \times 1000) \div (\text{Fabric width} \times \text{Finish GSM})$. The grade point calculating formula is $\text{Grade point} = (\text{Total penalty point} \times 100 \times 36) \div (\text{Roll length} \times \text{Fabric width})$. Acceptable grade for 4-point system 01-20 points = A Grade, 21-28 points = B Grade, above 28 Points = Reject. The value obtained from the 4-point system formula must be less than 28 points. If it is more than 28 points, the fabric will not acceptable.

Figure 7 presents the process flowchart of fabric inspection

Dyeing Unload Fabric → Shade check → Follow batch card instruction → Data input for Inspection → Fabric inspection as per 4-point system → Shade Grading → Package Making → Maintain Documentation → Report Handover to delivery

Figure-7: Process flowchart of fabric inspection

From this Fabric inspection standard operating procedure flowchart, we can understand that firstly checked the shade of the dyed fabric. Then all instructions on the batch card are followed up, all data is input into the 4-point system book for inspection. Once the fabric passes inspection, shade grading is done and the package is prepared and handover for delivery.

ISO standard: ISO means international organization for standardization. It is the world largest independent development voluntary organization. Quality management system standard is ISO 9001: 2015. From this policy we can learn about the fabric inspection process and standard quality requirement. Textile industries need some standard certificate for Global business that's are GOTS, WRAP, SEDEX, OCS, BSCI, GSV, ZDHC, GRS, RCS, BCI etc. There have also some physical test and chemical test for textile testing.

2.7 Marketing and Merchandizing

Marketing and merchandising are the most valuable term for Bangladesh RMG industry. The company's profit and losses are also depended on their activities. Most of the companies both of the team are working together. They work tirelessly from booking an order to shipping. During my internship I have tried to understand their working process and procedure.

Marketing: Marketing is the most important thing for the growth of any organizational business. Marketing is a long-term strategy by which promoting the product with approximate interest. It focusses on frontline, product development, costing and capacity selling. Marketing also refers the management process by which identifies, anticipates, suppliers and customer requirement efficiently and profitability. Marketing team works to build up a profitable relationship with the customer and suppliers. In this organization marketing and merchandising team are working together.

Merchandising: Merchandising refers the relation between buyers and organizations. From receiving any order to shipment merchandiser smoothly works as a correspondence of a buyer. They deal with buying and selling products for the company's profit. Merchandising may always supportive, production execution, logistics and capacity utilization. There first work is pricing which contains the profit of an organization that depends on sales and marketing. Pricing structure includes raw material cost, accessories cost, packaging cost, financial cost, logistic cost, QAD and testing cost, profit margin.

Figure 8 presents the process flowchart of order taking

Inspiration collaboration → Product development → costing and Negotiation → Order confirmation → Bulk booking → Fit/PP approval → PPC (Planning Production and Control)

Figure-8: Process flowchart of order taking

According to this flowchart we can say that firstly a merchandiser contract with the buying house for getting order. Then they try to develop their product as for buying house instruction. After product development process they make a costing report and negotiation with buyer. The order is confirmed, after the costing meet up and negotiation are complete.

Production Processing Procedure: During my internship I have noticed that after getting order they start to make a plan. Firstly they give the fabric booking that means yarn procurement, knitting, dying, AOP. Then they give the TAVA booking that includes trims, accessories, print, embroidery and wash. They make some sample for PP approval which need to go the bulk production. Bulk production is a rangy process which is including cutting, embellishment, sewing, washing, finishing. Finally they go to finish the product and packaging with required accessories for shipment. After shipping every merchandiser has another important task that is customer feedback. The customer feedback can be different types such as product feedback, pricing/ costing feedback, development feedback, approval feedback, shipping feedback, market feedback. A skilled merchandiser can work like this to make the company profitable. I am so much satisfied about their skill activities during my internship.

Chapter 3: Critical Assessment of Internship Work

In real life, sometimes seen huge mismatch between academic education and practical education, but the post graduate diploma in knitwear industry management is an exceptional managerial course. I was able to learn a lots of practical process and procedure through this course. Which has helped me to make a lot of contributions in our daily working life. A realistic analogy can be found in the combination of academic education and managerial industry specific course. As a result, it has helped me to make a major contribution and enrich my knowledge to my daily work. This internship was a new experience for me although I have worked there before, it tasks out that things which are not understood as a worker or as a management. I have noticed some strength, weakness, opportunities and threats of this company. All of their employees work together for better production. Which contains their big strength. The most weakness point are identified communication problem, understanding problem and irregularities of workers. Unskilled workers are the big challenge for this company. During my internship I have learned how to manage this problem. I think this learning makes me to become a great management and how to deals this problem. Based on our institutional curriculum, some fruitful topics of real workplace have discussed.

3.1 Critical assessment of various functional departments

The garment industry has been making a major contribution to the economic development of Bangladesh. Sahaba Yarn Limited (Knit Dyeing) is one of the export factories in Bangladesh. While interning at this institution, I got a good idea about the garment industry in Bangladesh. I have some critical assessment about this institution.

Assessment of Fabric Manufacturing Department: The fabric production capacity of the knitting section of this company is quite good, but the important thing is that they are not sufficiently aware of research and development issues. Due to the lack of sufficient equipment for research and development, various testing cannot be done here. Despite having skilled technicians and skilled operators, the fabric defects are very high. The inspection system after fabric production is not adequate and there is not enough storage. I have suggest here to improve their fabric inspection procedure.

Assessment of Fabric Dyeing Department: There is a major weakness in the dyeing lab section that most companies have automatic recipe calculation machines in their dyeing lab which they do not have. Although the efficiency is much better manually through their skilled technicians. This company's production capacity is much more than the demand, but unfortunately their shade matching system is manual. Due to the manual shade matching system, the company's rejection and reprocess have increased. If digital machine vision systems are introduced, their production capacity will increase further and rejection will also decrease. Digital spectrophotometer shade matching inspection systems are much more reliable than manual shade matching systems. This will increase the company's production capacity, reduce production costs, and increase the technical knowledge of workers. It will be easier to survive in the competitive market. This company supplies very good quality chemicals and dies but the management system and arrangement system of the chemical store is not good. These hazardous chemicals can cause accidents at any time.

Assessment of Dyeing Finishing Department: The finishing process system of this company is quite good. They need to be made more aware of machine operating systems and the proper use of chemicals. Experience in fabric defect prevention and machine maintenance is required. The quality inspection system as identifying the defect by 4-point system of the fabric is also very good. Both quality and finishing teams should be trained to implement 5S, KAIZEN and others Lean tools. However, the workers need to be trained in advanced technology to maintain their standards.

Assessment of Garments Production Department: From the cutting of the garment department to the finished product, the Compliance Department ensures the health care and all surrounding services of the workers in accordance with ILO guidelines. However, it is unfortunate that overtime is worked in the printing and embroidery departments. The Industrial Engineering Department have worked smoothly by implementing standard SMV calculation. They also needs to work more actively to further increase the company's production capacity. The company's marketing and merchandising departments are very well-equipped and work as a team. Everyone involved in the company's supply chain, from yarn procurement to delivery, works as a team. Their kind of teamwork and motivation system has encouraged me even more. Above all, to sustain the global garment business, green manufacturing products must be produced so that the garment industry continues to contribute.

Opportunities of this Company: Some critical reports were published considering the overall condition of the company. Some of the strengths of this company are their good environmental location, they get more workers at lower costs, they have good electricity and gas support, their transportation system is also quite good. HR, Compliance, Industrial engineering and planning teams work everywhere with team work and cooperation. The economic zone is quite suitable and the environmental facilities are many.

Risk of this Company: Some of the weaknesses are unsatisfactory forecasting, in-educate modern machineries, improper infrastructure, lake of marketing strategy, lack of research and development center, lake of digital transformation system, lack of training organization, lack of culture program, older version procedure follow, dependency of political stability.

Challenges of this Company: Challenges of this factory are unskilled worker, political and financial instability, high competition in textile industries, raw materials cost increasing, import material price increasing, risk of order cancellation and shipment delay, research and development challenge, maintaining social compliance, safety and welfare of workers, increase green manufacturing.

Recommendation to develop this Company: To improve this company they need to develop some infrastructural system such as establish digital research and development center, training center. Also they need install some digital transformation system such as Robotic system install like AI, Textile testing equipment, shade matching system development, internet of things installation. For business sustainability they need to target and implement more tools as like Net Zero carbon target setup, digital product passport system, sustainable supply chain management, strategic business plan, lean tools implementation for continuous improvement, collaboration and relationship with buyer, diversification of product and sustainable green product.

3.2 Application of generic and industry-specific courses during Internship

During my academic period I have learned both generic and industrial course. By completing this course, I have able to learn lots of knowledge and skills about organizational function, business skill, problem analysis skill, communication skills industrial activity and carrier development knowledge.

Application of generic course during internship

The post graduate diploma in knitwear industry management course was 3 consecutive semesters with each three months duration. Every course was some vital things to learn and know for our career growth. Those courses have directly impact on our work force including our internship program. We had four subjects in our first semester. It was designed by our interpersonal skills development program. By completing all of this course, I am able to gather some technical knowledge, skills, experience. I think it will be more helpful to achieve a top-level managerial capability.

KIM101 HR Skills and Competencies

By learning this course, I am able to take some basic tools which has made an important contribution to my workplace. During internship I have tried to apply my practical knowledge which I have learned through this course.

Leadership: leadership is a working ability by which how we influence our juniors, peers and our bosses to work willingly to achieve companies' goal. A good leadership have some good qualities to become a great leader. A good leader should focus on future, being good and also being able to expert driver. A great leader always works by setting a goal and target and continue his work with strategic theory. He works through his creativity, innovation and also manage his organization. Sustainable leadership takes a long-term perspective in making decision, faster innovation to increase customer value, develop skill and highly engaged in workforce also offers quality products, service and solution.

Team Work: Teamwork is the collaboration effort, contact and influence of each other to achieve a common target of an organization. A team is more effective when they work together to fulfil the organization goal, satisfies to survive with team member and their wellbeing. We can also make a team design and team development on team performance to make a good teamwork. During my internship I did not see any team bonding in this organization, also good leadership was not observed and they are only busy with their own departmental work.

Motivation: Motivation is the human psychological factor that inspires the people to work and provides enthusiasm for work and makes individual behavior to achieve a common goal. Organizational motivation can change the company's economic growth by employee's performance, trusted and younger employee's satisfaction. We can assets the employee's motivation by engagement, commitment, satisfaction and consider employee's needs. Every employee firstly needs their psychological needs then safety and security needs, social needs, esteem needs and self-actualization needs. I think getting promotion, winning rewards for performance reputation among peers can easily motivate to an employee. In this company there have some motivational system. These kinds of motivational reward systems really motivate them to work hardly.

KIM 102 Analytical Skills and Competencies

This is a mathematical course which contribute to any research and statistics. By this course we can easily calculating the present value, future value and continuously compounded interest rate. For any statistics research and developing method for collecting, analyzing, interpreting and presenting empirical data, we can apply the statistics formula. I have learned about the standard deviation and correlation of a data table, probability research question and hypothesis. Also, I have learned another important thing by this course which cost benefit analysis. It's playing a vital component of project management because it measures the project financial feasibility and helps the company avoid losses. There have no available research and development center in this organization for process and product development. But they always follow their previous theory for better productivity.

KIM 103 Communications Skills

Communication is way to exchange of information with each other. To exchange ability of information ideas and feeling through speaking, reading, writing and listening are called communication skills. Communication may various types such as visual communication, verbal communication, nonverbal communication and written communication. Visual communication involves graphic design, photography, illustration, art, advertisement and many others visual messaging such as image, icons, shapes, charts, videos, campaigns, animation. Verbal communication refers to share by using words. It is the two-way communication and may both spoken and written communication. Nonverbal communication is explained by body language, facial expression, eye contact, gestures, postures and the tune of voice. It is the most powerful and emotional expression to convince others.

Written communication means the information exchanging process through written word. It is the most crucial skill of modern communication. At present Email communication is most commonly used for exchanging various information for official and business transaction. Every day we communicate with other to engage multiple connection and links. But we have faced complicated network of possibilities and options with a number of typical challenges. Sometimes various negative information spreads within the company which is very dangerous and bad news for the company and employee's individual life. Therefore, before publishing's false and negative news one must know the information correctly. Also, even after hearing any negative news we must try to present in a positive way, so that it does not create depression the employees.

KIM 104 Business operation skills

This course is very important for any kinds of business organization. Business means the maximization of profit. Every business needs some foundational operations such as business strategy, marketing, management operations, finance, accounting and regulatory requirement. I have tried to compare the business strategy with this organization during my internship. Market position, product development, technological, improvement, employee and management, social responsibility are the major objective of business. I have gathered some managerial function through this course which is very important to sustain any business. A well management should continuously process, result oriented science, multidisciplinary in nature, individual on group activity, professional approach and dynamic in nature. There are six primary functions of management such as forecasting, planning, organizing, commending, coordinating and controlling. Some strategic planning required to sustain business. Among them PESTEL analysis, product life cycle analysis, internal environment analysis, BCG matrix and corporate appraisal SWOT analysis is more fruitful. Every organization have some strength, weakness, opportunity and some threats. To sustain their organization, need to implement different strategy planning.

KIM 201 Introduction to Garments Industry

I have learned about a full garment's product producing from yarn to garments item through this course. To make garments product need some basic components such as fiber, yarn, fabric, dyeing and finishing, threads and accessories and final garments. Some important manufacturing processes are carried out to obtain the final product from raw materials. These process are yarn manufacturing, fabric manufacturing, dyeing and finishing, cutting, sewing and garments finishing.

Sustainable Green Manufacturing: Green manufacturing is a production process by which using the fewer natural resource, reduce pollution, recycle and reuse of material and moderate emission the process. In green manufacturing strategy to reduce the environment risk and ecological sacrifices the sustainable development without degrading the environment. If the organization can implement the green concept, it will benefit our economic, social and environmental pillar will growth as well. So, to achieve the sustainable green manufacturing we should be socially responsible and long-term thinking.

Costing Challenge: Costing is very challenging term for an organization because every company want to maximize the profit but costing plays an impact important role to making the profit. Again, costing can be a major obstacle to becoming profitable. There are some challenges of costing which including, utility costing, investment cost, cost center and accounting, responsibility, technical knowledge, management focus, cost of costing, fair and transparent, team work, presentation, lack of incentive policy and QC circle.

KIM 202 Industrial Engineering

Industrial Engineering is a vital course that plays an important role in profitability of any organization. The main task of industrial engineering is to increase production and reduce the cost which is a pre-requisition for an organization to be profitable. Through this course I have able to learned these important things that I also compared during my internship.

Standard Minute Value (SMV): SMV means standard minute value it is the time required for a qualified worker to complete the task properly. It contains determining labor cost, production target, analyzing efficiency levels. This is the most important tools for garments productivity. A qualified worker can achieve his KPI by applying SMV. Management can easily take decision for line balancing by these tools.

Bottleneck: Bottleneck is a low production area in which the flow of production is reduce. In bottleneck point the production output is low with compare to previous and next operation. To improve the productivity firstly need identify actual bottleneck point. Then implement the bottleneck elimination techniques. Some bottleneck eliminating techniques are method improving, better operator allocation, machine speed on calibration, work place improvements, work aids and specialized machine, work sharing, quality problem, adding additional manpower and machines, line balancing etc.

Lean Tools: Lean is a continuous improvement process by which increase productivity and reducing wastage. Lean and six sigma work together which called is lean six sigma. Some effective lean tools are Kaizen, value stream analysis, 5S system, KANBAN, POKAYOKE, SIPOC diagram, GEMBA, SMED etc. Above all of lean tools 5S, Kaizen and GEMBA are widely used in different organization. 5S contains short, set in order, Shine, standardize and sustain. Kaizen is a Japanese word Kai refers change and Zen refers well it combined means change for the better. It is a strategic business philosophy for continuous improvement of an organization.

Digital Transformation: Digital transformation is the process of bringing some technological changes of any business organization that makes all the activities of the organization easier how the industry is designed, manufactured and delivered. This transformation tools make our workplace so much easier and more beautiful. It contains the innovation, automation and project development process. Here are some digital transformation trends, sustainable manufacturing, green practice, digital twins, internet of things (IoT), artificial intelligent (AI), cellular economy, waste redaction, transparent supply chain, traceability, near shoring, industry 4.0, robotic automation.

KIM 203 Production Management and Merchandising

I have learned about fast fashion, marketing and merchandising during my internship period by this course. I have also gathered some basic knowledge about production management by academic stages. These knowledge and skills help me to my internship program and workplace.

Fashion Design: Fashion is a popular style of clothing and fashion design refers the application of design and the natural beauty of clothing. Fashion design can be supportive team for merchandising. Designer use creativity to create a new design and provide accurate design according to buyer requirement. Designer creates the presentation for buying meeting and continuously provide the accurate information about new trends. Socio cultural design influence and encourage the customer and most of the customer accept this cultural requirement. Fast fashion is one of them.

Fast Fashion: Fast fashion is describing the clothing design that more quickly spreads from catwalk to store to meet the new trends and market. Fast fashion easily connected to the customer for the new trends. It becomes common trends because of cheaper clothing. It is so much challenging for new fashion market because it introduces new products as multiple time in on way to stay on trend. It makes good relationship and speedy collaboration in supply chain management among the manufacturers and customers. ZARAH is the leader of fast fashion.

KIM 204 Quality Management

It is necessary to know important things while working in quality department. There is no alternative to quality department for the development of Bangladesh RMG industry. I have attempted to know those important terms through this course that have made significant contribution to my internship and workplace.

Quality Management System: Quality means the best service for buyer satisfaction. Quality Control and Quality assurance are different terms. Quality control refers to control a desired products on the contrary Quality assurance is a process control with proper analysis. A quality management system is a business process by which to achieve quality policy and objectives by documents processing, maintain procedure and implement managerial command. The company will be well benefited if implement the quality management system. Benefit of implementation of quality management system are product controlling, competitive pricing, reduce rejection rate, customer satisfaction, increase market share, supplier and partner relationship growth, mutual understanding, increase employee job satisfaction, better working condition, improve health and safety, reduce environmental impact. I have gathered some clear guideline, standard require for quality management system and certification process.

Sustainable Supply Chain Management: Supply chain management is a process of product planning and management activities of product sourcing from raw materials to final products. It also includes the procurement, coordination, collaboration with partners, customers and suppliers in textile industries. Supply chain management facing some challenge for reduction of price and increasing the cost of making garments. To cop up this challenge industry needs to take some efficient measures of business function from raw materials to the final products. By applying supply chain strategy, company will be more benefited as right fashion products to market, lowest cost fasted speed and achieve the maximum profit. An effective supply chain strategy has some logistic drivers' facilities, inventory, transportation and some product driver's information, sourcing, pricing. Sustainable supply chain means development on the needs of present without compromising the ability of future generation to meet their own needs. Sustainability is a pillar of social, environmental and economic. Social issues include human rights and impact on local communities. Environmental pillar can be recognized as reduction emission, reduction the harmful substance from environment. If we can continue sustainable supply chain management by applying supply chain management it will be more effective.

3.3 Suggestion for Industry Improvement

Sahaba Yarn limited is a popular factory for his environment and productivity. Employees of this factory are always satisfied for getting their values, salaries and wages. I am so happy for getting opportunity to be an intern at this company. While working here I have faced many obstacles which on kind of positive learning experience that will help me in creating great management in future. However, I have some suggestions to development of this company. Firstly, they need to train up their unskilled workers. Training will be more helpful to increase their skill. To create great leadership, need to strongly motivate their employees. To increase the productivity, need to implement proper managerial skills and good quality management system. Strictly follow up the standard SOP for reducing idle time. Improve teamwork and collaboration for bottleneck production. To introduce about the continuous improvement system like lean, Kaizen, 5S, six sigma etc.

During my internship, I noticed that their grey store have no available space. If the store space was increased, their production capacity would increase. In knitting section need to install some auto stop motion system. The dyeing lab section does not have sufficient equipment for research and development, modern equipment needs to be installed so that research and development can be increased. I noticed that there has no automatic recipe calculation system. If they install recipe calculation system and IoT system it could be reduced the idle time. In the dyeing section, a digital spectrophotometer machine should be installed for shade matching, which will practically help increase dyeing production. To avoid accidents in dyeing chemical stores, harmful chemicals should be kept separate and awareness should be raised about the use of personal protective equipment. To increase the production of Stenter machines, operators should set targets. To prevent waste of time in the garment department, line balancing should be done according to SMV. It is necessary to introduce a company reward system to increase the company's productivity and keep workers focused on their work. To prevent environmental pollution, must stay away from the use of harmful chemicals and increase the production of sustainable green products. Should be ensure the workers' health and safety with the considering of environmental needs. Implement the digital transformation system for continuous production improvement. Different material handling tools should be added for better improvement. Adopting of the digital transformation tools like artificial intelligent (AI) for innovation and automation. Need to take some technical skills and knowledge to develop company's productivity. Above all, teamwork must be created through the collective efforts of everyone to achieve the company's objectives and goals.

.3.4. Learning for self-improvement

My internship has given me the opportunity to enter act and work together with different department. Through this internship I have gained some experience and some accurate knowledge. My academic knowledge and internship knowledge are combined had a positive impact on my workplace. During my internship, my industry supervisor gave some important guidance and I tried to work according to that guidance, which played an effective role for helping me gain practical experience. I have strived to adhere to industry policies, rules, and procedures while demonstrating personal competency for advancement in the workplace, increasing professionalism and punctuality. I have assigned different functional department to improve my skill. I have set a specific target for my work and officials have provided sufficient support to achieve my goals. I have learned how to be a good leader and how to overcome the organization obstacles. I have gathered some versatile knowledge to encourage the employees through teamwork, motivation, collaboration, cooperation and coordination. I am able to get some business strategy and business management operation skills.

Some communication skills have impressed me greatly. Especially e-mail communication skill for connecting and build up relationship. Through this course I was able to learn how research planning work within a project work. I have learned to sustain a business how to do the marketing management. The most important term of garments business industry is costing and how to work to following the SMV. I have learned some techniques to elimination of the bottleneck production. Another important part merchandising is a relationship process within the buyer and suppliers. Fast fashion can improve our business strategy which is the part of merchandising. Implementing the quality management system and supply chain management to satisfied the buyer. Sustainable quality product reduces the environment pollution by reduce emission, zero carbon, eco-friendly product. It also encourages to implement the cycle product that means recycle and reuse. Green manufacturing strategy reduces the environment risk and improves our environment. Other topics that have played a significant role in my skills acquisition are communication strategy, business strategy, analytical skills and strategic business plan, product promoting, order taking process, continuous production improvement, fast fashion, visual merchandising, incoterms, various testing methods and sustainable green production. I believe above all of my learning terms will be impact on my career. I think if we continue our sustainable green production management, it will be well benefited for RMG industry of Bangladesh.

Chapter 4: Conclusion

The course was very important for me to improve my knowledge. Through this course, I worked with different functional departments and gained some practical experience. However, completing this course was very challenging for me, especially as I gained real-world experience working with different functional departments during my internship. There is no alternative to the collective efforts of everyone to achieve the company's objectives by working together. How to solve any problems encountered in implementing the company's objectives. Especially how to motivate workers to focus on their work through teamwork and how to create a good leader. I have been able to gain practical experience in cost-benefit analysis and research analysis. Through communication skills, I learned some technical things that changed my life. I have learned about business skills, marketing, product promoting, strategic planning and some analysis skills for company development. How garment companies manage operations from order booking to shipment.

I learned all the technical aspects of a company's income and expense accounts and how to make a profit. I received sound advice on the company's strategic plan for development and production process growth and the process of implementing it. Using the correct method of evaluating the work of company officials and workers. I learned about the technological development of the company through the correct use of digital transformation. How to build good relationships between customers and suppliers. There is no alternative to fast fashion for today's garment companies to survive. I can learn about various ISO-accredited certificates and quality management systems to maintain the quality of any product. I am learning about the process of producing sustainable green manufacturing products to survive in a competitive business.

Above all, I have tried to contribute in some way to realizing the initiatives taken by BIGD for the survival of garment companies in Bangladesh. I am hopeful that their contribution to Bangladesh's garment companies, utilizing local talent, will be unforgettable.

References

Horizon Groep, n.d. about us. Retrieved from <https://www.horizongroup.com.bd/wp-content/uploads/2022/10/1.pdf>

Sahaba Yarn Limited, n.d. Retrieved from Human Rights Policy