Job re-designing for improving productivity: A case study of Aboni knitwear limited

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Background of the Case
Aboni knitwear limited (AKL) started its journey near Dhaka in 2003 as a sister concern of Babylon group. Although its present production lines are 40, it started with only 5 production lines in 2003. Having relentless growth target in mind, the authority of the company emphasized in recruiting and training sewing machine operators, line-supervisors and other support workers. Besides recruiting more workforces, it also started setting up a new line in almost every other three month.

The Products
The company usually produces Polo Shirts, T-shirts, Shorts, Pyjamas etc. for Men, Ladies, and Children. The company has skilled designers and workers to produce high quality and sophisticated Polo shirts and Pyjamas for men and women which have made AKL to be a strong and dependable supplier for its niche market segment to the European buyers.

The Customers
Mostly, the Polo Shirts, T-shirts, Shorts, Pyjamas are supplied to the European and American buyers as a B2B business. However, there some B2B customers from Africa, Brazil and Japan but their order quantity is small and those markets are in nascent phase for AKL. When the company receives fewer orders from overseas buyers which are not enough to occupy all lines and workers and are causes of idle time of workers, then it takes some sub-contract orders from local companies.

The Process and Activities of Production
The company has presently 40 lines of production although it started with only five lines of fully operational production capacity. The production process in AKL may be termed as batch production process as opposed to mass or continuous production system which are not mostly applicable in RMG sector. Most RMG factories use batch
production process due to the nature of orders and quantity by buyers. Actual production in the sewing lines begins after about two months of getting order confirmation from buyers. After getting order confirmation, the merchandising department arranges accessories and fabrics from local and foreign suppliers. Then the orders are scheduled to production in sewing floor. The first step of garment production is the making of efficient marking design in the CAD (Computer Aided Design) section. After receiving design from CAD section, the cutting section cuts the fabrics into required parts and delivers to sewing floors.

Sewing section starts sewing the parts as per the design and sends the completely sewed ones to the finishing section for ironing, packing and filling in cartons. As soon as the finishing section completes the tasks, it puts garments into cartons as per the buyers packing instructions. Then the completed cartons are shipped out after some pre-determined inspection by buyers’ nominated representatives.

**Inventory**

Due to the handling of complex and various stylish garments, AKL has a big warehouse for storing raw materials and finished goods. The warehouse has hundreds of designated areas/cells for different types of accessories. Almost 100% of the foreign fabrics are imported and 50-60% of the local fabrics are brought into the company’s warehouse before production starts. And the same principle goes for accessories such as threads, buttons, labels, polythene bags, cartons etc. All finished garments are stored at designated places in the finishing section while Work-In-process (WIP) garments are kept in their respective sections such as cutting and sewing sections.

**Quality Management System (QMS)**

The company has its full set up to ensure global standard quality of its garments. It usually maintains 140-160 employees in the QMS against one thousand production workforce which signifies of having a strong quality management team. The QMS consists of two departments: Quality Control (QC) and Quality Assurance (QA). QC inspectors randomly pick up pieces of garments from different processes and workstations and check against the pre-set standard. When more complex garments are sewed, QC inspectors check garments from each and every workstation to prevent producing defective items. At the end of each production line, there are tables of QC inspection where randomly selected garments from the corresponding lines are checked to ensure buyers’ required quality. QA inspectors check from randomly selected items of finished goods which are previously checked by QC team. QA inspectors usually a statistical quality checking instrument of Average Quality Level (AQL) set by different buyers.

**Industrial Engineering (IE) Department**

IE is one of the important departments for each strategic business units (SBU) of Babylon group. The main office of IE is located at the headquarters and nominated IE engineers or trained IE team members are placed for each factory. Thus AKL has two IE engineers who regularly conduct time studies for each new order and fix up the production target for each process and total production on an hour base. IE department also suggests layout and planning for production for weekly and monthly basis. This department also carries out some R&D activities such as how to apply lean...
manufacturing tools, time and motion study, layout planning and scheduling tools that can be applied to improve productivity and quality of AKL.

Emerging Issues
In the beginning of 2004 with the growth mind-set, the authority hired Mr Anis, an industrial engineer, as the head of the quality department and coordinator of the production department. After joining, Mr. Anis conducted a study and concluded that there are three main problems that are hindering to achieve Babylon-group-standard productivity and quality. Since the factory is a new set up, it had to hire most of its workforces and have less than 20% of transferred workforce from its parent, Babylon group, organization. The workforces who are transferred from Babylon group already know the quality requirements and productivity target in the company culture. However, the rest 80% of the workforces who are hired are mostly from low quality factories or sub-contracting factories. Those workers are not much aware of higher quality standards set by this company and the quality standards those are required by famous European and American buyers. As a result, most of the hired workforces are not capable of producing the quality products that should be an everyday requirement in AKL.

The IE department at AKL conducts studies and sets target for each new style before their start of production in lines. This standard practice of Babylon group culture created coping up problems for the newly hired workforces. Most of the hired workforces faced the same problems in quality development as that in productivity achievement. This quality issues were more vulnerable for any complex styles rather than simple ones. Buyers randomly place orders for simple styles and complex styles without following a regular pattern. Thus complex orders cannot be allocated in new lines or in all lines. Only few production lines can handle complex styles with required productivity and quality.

Although the productivity and quality problems can be caused from raw materials, machineries and other issues, unskilled newly hired workforces were the chief problem for AKL. However, these two problems can be categorized as 1) comparatively unskilled workers who are unable to achieve target productivity while having required quality and 2) new production lines which are unable to handle complex styles.

Job Designing and Training
There seems to have a considerable inconsistency with newly hired workers and their skill deficiencies at workplace. The range of skills needed at various levels of production process and availability of those skills are vital for increasing productivity and changing the pattern of production. Fresh recruitment and job designing strategy, therefore, need to address increasing productivity. Workers also need support and on-the-job training to maintain required standard and variation of product. In fact, fresh recruitment has a number of difficulties such as, competition, identifying required skill, training new workers across a wider range of production, enabling new management style and others.

Considering the existing recruitment and productivity challenges, AKL may choose to explain and verify existing tasks. It means administering the area of job design including
job specialization, rotation, work breaks and job sharing. Designing job emphasizes on training people so that employees become well aware of what their job demands and how it is to be done, apparently reduces the cost of labor and expedites the production. Each worker can narrowly define task of broader range of tasks and ultimately it will economize the cost because workers will be freed from burden of performing multiple tasks. A well-defined job will make it interesting and satisfactory for the employees. Assigning multiple tasks, workers will become more expert and, in contrast, the employer will have weaker bargaining power because each of the workers will acquire the knowledge of entire production process. Job design also may influence workers in external opportunities. This argument of job designing can cause inefficiency and role conflict in the organization’s production process. So, the company should address clear understanding of workers’ role within the team and provide employee orientation, lecture to ensure employees are aware of their role.

Financial Assumption
Table-1 is a comparative analysis of cost and benefits between on-the-job and off-the-job training of a production line which produces basic T-shirt. Employee proportion of new venture is 20% existing skilled workers from sister concern, 30% semi-skilled and 50% newly hired are considered with no significant skills.

<table>
<thead>
<tr>
<th>Nature of the workers</th>
<th>Actual production</th>
<th>Standard production</th>
<th>Net loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled and in-house trained workers (20%+30%)</td>
<td>1300</td>
<td>1500-1300</td>
<td>200x$.50=$100</td>
</tr>
<tr>
<td>Zero skilled workers, while training outside</td>
<td>900</td>
<td>1500-900</td>
<td>600x$.50=$300</td>
</tr>
<tr>
<td>100% skilled workers</td>
<td>1500</td>
<td>1500</td>
<td>(1500-1500)x $0.50=0</td>
</tr>
</tbody>
</table>

Table 1: effect of skilled and unskilled workers’ on production

Mr. Anis discussed above issues several times with top management but didn’t work out as the company does not have any formal training policies and procedures to train so many new workforces at a time, nor can it wait for allowing the workforce that will eventually learn through experience. At this stage, he believes that implementing training, orientation and work designing would help to ensure so that employees understand well their job and it will increase employees’ motivation and productivity. Mr. Anis is also planning to send a proposal to top management as a remedy in this regard.

Questions
1. Briefly explain the production process of AKL with a flow chart
2. Mr. Anis has noticed there have been some issues of training and orientation in the company. Discuss key issues and techniques of training.
3. Explain and relate the concepts of job designing with the help of table-1 to improve productivity and quality.
4. How is team work among production, quality, human resource and industrial engineering department needed to sort out the existing problems?