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OVERVIEW OF JIT PHILOSOPHY AND ITS SIGNIFICANCE IN EDUCATIONAL INSTITUTES

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Abstract

JIT is a system designed to provide an organization with limited resources to operate efficiently. It also increases performance, decreases stock levels and offers optimum incentive to resolve issues as soon as they arise. JIT can be defined as an organizational waste elimination system. Waste is something that does not directly add value to the product. In India, very large numbers of technical institutes were set up off-late. Various elements of JIT can be applied in these institutes to make them competitive with these academic institutions. Such elements also boost the reputation of the institute.

Keywords: JIT, Waste elimination,

INTRODUCTION

The simple definition of JIT is the production and distribution of finished goods in good time for sale, to assemble subassemblies just in time for transition to manufactured parts. JIT is not simply a method or collection of manufacturing techniques, but is an innovative methodology or theory that incorporates both old and new technologies 7 offers a wide range of advantages through the redesign of existing production process. In short, JIT is a system that manufactures the items needed at the time and in the quantities required. This system leads to contradictory low costs, high quality, flexibility in output and reliability in delivery. JIT is seen as a level of perfection achieved by constantly reducing inefficient use of resources. The long-term priorities for waste disposal in a production process that is so efficient, cost-effective, quality-oriented and sensitive to consumer demands that JIT becomes a tactical resource for increasing profitability

JIT PHILOSOPHY

The first fundamental principle involved in JIT approach is the disposal of waste. In a JIT model, waste is characterized as anything that does not add value to the product associated with the production process. Waste therefore includes quality deficiencies, inventories of all kinds, time spent moving material and time spent setting up the machines. If the consequences of managing waste reduction are examined for the above mentioned categories, it becomes obvious that JIT is interested in all aspects of the production process management.

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JIT's second principle involves people management. JIT philosophy assumes that people can take on more responsibility and are willing to do so. When defective parts made, the production line may be stopped by an individual. Once halted, the blame for solving the problems rests with everyone working on the board.

JIT AND WASTE

JIT defines waste as anything that is not required to produce the material or for example, are beyond the reserve stock to protect faulty parts in production linesor nonlinear construction rates, working hours consumed in the fabrication of defective products, working hours spent reprocessing items because of poor performanceor requests for technological rework and time sp ent in setting up machine tools prior to the manufacturing of components. All this waste of time and material increases the cost of the product and reduces its quality. JIT is a campaign for the reduction of all kinds of waste.It is also a move to automate the production process in order to quickly identify challenges and demand quick solutions

SEVEN WASTES

Shigeo Shingo, the Toyota Motor Company's Japanese JIT authority, described seven wastes as the goals for continuous improvement in production processes. These are as follows:

1. Waste of overproduction: Can be avoided by reducing set-up times changing the design and increasing system work. Allow only what is required to get rid of production.
2. Waste of waiting: Eliminate bottlenecks and balance uneven loads by dynamic workforce and equipment to reduce the waiting time of people, machines and material. Some layout changes can also reduce waiting waste.
3. Waste in Transportation Activities: Modify designs by using the production line 'U' shape, through conveyors and use generic containers to eliminate transportation activities.
4. Waste in processing itself: Ask questions about the processes, reason for existence and then why that process is needed.
5. Waste of stocks: To minimize stock, start purchasing JIT, produce only when necessary quantity of goods. Obey pull style production and reduce all other waste.
6. Waste of motion: Study movement and consistency for economy which improves quality. Enhance the motions first, then minimize or automate. Otherwise, there is risk that the waste will be automated.
7. Waste of making defective products: Reduce the cycle of function. Follow the output pull process. Enable only those things which can be absorbed directly in the next cycle. That's going to give immediate notice about performance defects.

MANAGEMENT COMMITMENT TO JIT

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JIT can be viewed as a kind of spirituality. It has its leaders, inspiring and guiding, and implementing and following its believers. Like a religion, it takes both groups. A manufacturing company will have to walk on the edge of the catastrophe for a long time after setting up a JIT program. With less, its workers will do more. We will find out errors and issues as soon as we arise, if there is a problem, they will interrupt a production line and not restart it until the problem is solved.

For a longer time, the company must stick to single stock manufacturers and refrain from buying the cheapest parts at all times. All of these acts require the support of management for a strong commitment. Management in any organization is a very important force. Their approval of the JIT systems is needed right from the start. With time; the findings of the JIT would show that the business is doing the right thing. While there are no drastic changes, it will be important for everyone, including the managers, to continue. Ultimately, the managers would win by showing that the JIT process works and that the company and its customers will win as well.

COMMITMENT AT ALL LEVELS

One of the problems facing companies when thinking about introducing a JIT program is that they are afraid to think about more effort and less output. Most industrial organizations run with old-fashioned concepts that disagree with JIT values. For example, second source suppliers were always assumed to be good for backup in manufacturing. It was also believed that inventory stocks guaranteed flexibility in achieving production schedules and that except in a matter of life and death, the production line must never be halted. Eventually, for the sake of production output, addressing quality issues was usually delayed, probably believing that time and volume would take care of the issue.

The JIT method needs to be fully adopted by middle management, front-line managers and staff or it won't work. The question is how a company makes believers of these people? Probably using training and participation is the only way to achieve this goal. The organization will begin the training program for the people involved in the program immediately. It is also important that they engage in identifying and executing the priorities of the JIT. This participation is crucial to the system's success. The company should therefore not try to save training time and money. When it achieves full participation in the JIT process, the bonus will show later.

HUMAN RESOURCE MANAGEMENT IN JIT

Implementing the JIT on a full scale requires a major redesign of the production system. This has caused a major shift in the positions of the staff. An important requirement for full implementation by JIT is to increase the level of technical skills and mobility of employees. Multi-skilled workers are expected to use team technologies and manufacturing cells. Based on

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the cell's output requirements, workers must be allocated to different machines within a cell or to a different cell. Several authors have researched the effect of JIT characteristics on employee responsibilities and HRM activities. Workers in JIT systems sometimes need to be able to set up their own machines to help set up certain machines that need more than set up by service.

It is expected that employees will be familiar with their machines and equipment, understand their activities and procedures, and be able to carry out regular, simple inspection and maintenance. A JIT employee with excellent communication and interpersonal skills wants to be a team player. Every employee must work in harmony with other employees. The job practices were mainly organized by the collective change of the workers, rather than the use of direct supervision.

It allows the employee to communicate and cooperate. The emphasis is therefore on collaboration, not competition. JIT attaches great importance to the discipline of the worker. A worker who often needs to operate more than one machine and sometimes switch in a tightly controlled loop from one machine to another. This requires multiple technical skills and may result in time and action restrictions on the worker.

JIT therefore greatly expands the roles and responsibilities of the employee. There is little room for the workers to make mistakes, with emphasis on minimum inventory and zero defects. Therefore, workers must perform very well all the time. There is significantly less room for absenteeism, poor performance etc.

Substantial changes in JIT's workplace position have consequences for a variety of human resource management concerns, policies and practices, specifically in the areas of employee engagement, recruitment, education and workforce growth, pay and reward systems. JIT is assumed to boost the employee's curiosity and participation in their job, as this provides a dramatic break with the monotony of task specific jobs and applies a broader range of tasks, abilities and obligations to their work.

This greatly improves the motivation of employees. However, there is another facet of JIT. Several workers at Nissan's Tennessee plant complained that the rate of production practically burns them out. So, there is clear evidence to date to assess the impact of JIT on the morale of employees. Therefore, the problem needs to be investigated further.

Training and development in a JIT environment plays a key role. Change of attitude and improvement of skills is required. Next, workers in the company at all grades will recognize the need for JIT reform and support it. The management must start this process. Figure 3.1 shows attitude changes in implementing JIT.

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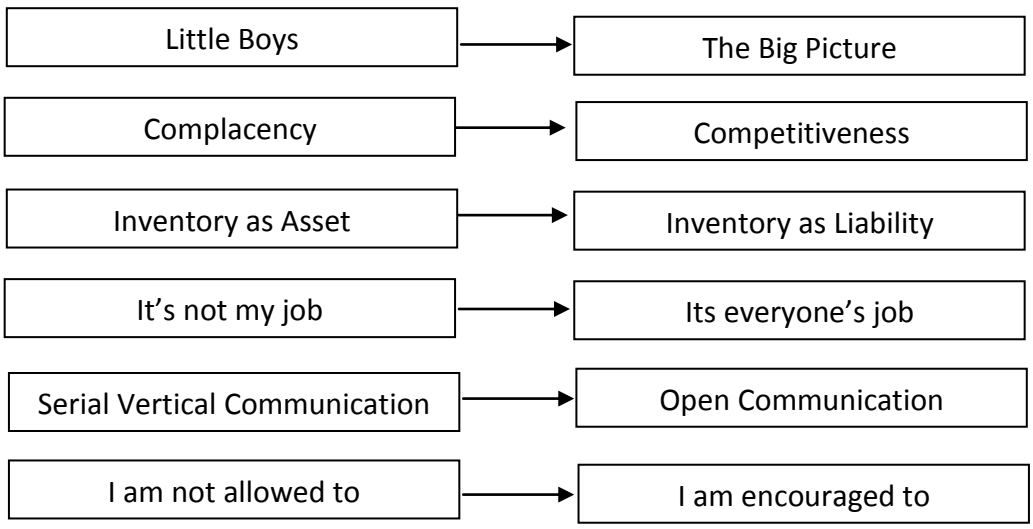


FIGURE 1: Attitude Changes In Implementing JIT

CONCLUSIONS

On the basis of literature survey and survey undertaken in various institutions, it was observed that various elements which are mainly used in the educational institutions are

- Administrative efficiency(ERP)
- Communication & Information sharing (between Employers & Employees)
- Continuous improvement of students (industrial training & industrial visit, institute industry interaction programs)
- Curriculum utilizing visual and information literacy's
- Expansion of syllabus contents with adding of modern techniques
- Expert lectures
- Housekeeping (orderliness, cleanliness, discipline, safety)
- Infrastructure (Aesthetic Value)
- Job satisfaction
- Motivation of students for Entrepreneurship
- Motivate faculty and non-teaching staff for higher Education and training
- Modernization of lab facilities in the scenario of global competition
- Preventive maintenance of Lab Equipments
- Research and development(utilization of lab facilities for Consultancy & Student projects)
- Student-Faculty ratio
- Technical support (MOU) with R&D institute and industries

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- Transportation facility
- Top management support
- Value addition program (SDP , FDP)

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