DURGA MAHAVIDYALAYA

Scientific Management

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Meaning of Scientific Management

Meaning

Scientific management is a set of techniques and ideology of an organization that seeks to increase the efficiency of operations through systematically identifying and addressing problems in the production process.

Characteristics of scientific Management

Approach: Scientific management is a systematic, analytical and objective approach to management which makes sure that all activities are carried out a systematic and scientific manner.

Minimize Wastage: The focus of scientific management is to cut down the waste of time, materials, machine, etc. All of the avoidable components of production are removed and a genuine attempt is made to attain highest production at the minimum cost.

Discards Traditional Management: The scientific management approach completely discards the old ways of rule of thumb and hit or miss strategy. It demands the usage of new and modern methods.

Emphasis: It concentrates on all factors of production, men, material and technology.

Method: This approach tries to uncover the most practical way of doing a job with the lowest cost.

Mental Revolution: Scientific management brings a complete change in the mental attitude of employees along with the management. The aim is superior production targets as opposed to just chasing higher profits.

Techniques: The scientific management approach uses scientific techniques in work, recruitment, selection and training of workers.

A good choice for Huge Companies: Considering that the scientific management technique is pricey to employ, it is beneficial only for large sized organisations.

Principles of Scientific Management

Primary principle of Scientific Management as evolved by *F.W. Taylor*

1. **Science, Not Rule of Thumb** – Use scientific methods to find the best way of doing work.
2. **Harmony, Not Discord** – Maintain good relations between workers and managers.
3. **Cooperation, Not Individualism** – Work together as a team with mutual trust.
4. **Development of Each Worker** – Train workers and assign tasks as per their ability.
5. **Maximum Output** – Focus on higher productivity, not limiting production.

Secondary principle of Scientific Management

1. Standardization of Tools and Equipment- It is essential for the improvement of quality of products and also for bringing about uniformity in the production of standard goods.

2. Scientific Selection and Training: The management should design scientific selection procedure so that right men are selected for the right jobs.

3. Functional Foremanship: Functional foremanship is a form, of organization which involves supervision of a worker by several specialist foremen.

4. Experimentation and Scientific Investigation : it involves analytical study, observation, research, experimentation and investigation.

5. Differential piece wages : a performance-based incentive pay plan that offers a higher wage rate per unit for efficient workers who meet or exceed a standard output and a lower rate for inefficient workers who fall below it.

6.Efficient Costing System : The management is interested in knowing the cost of production, not only total cost, but cost at every stage of production.

7. Scientific Allotment of Tasks : Every job must be entrusted to the best available man according to his aptitude and training for that specific job.

Advantages of Scientific Management

- **Use of Scientific Methods** – Instead of relying on guesswork or traditional methods, businesses study work processes scientifically to find the **most efficient way** to do a task.
- **Standardization** – Tools, equipment, and processes are standardized based on research and analysis, reducing waste and increasing efficiency.
- **Predictable Results** – Decisions are based on data and observation rather than personal judgment, leading to **consistent and reliable outcomes**.
- **Improved Productivity** – By applying scientific principles, labor and resources are used optimally, increasing output and reducing unnecessary effort.
- **Training and Development** – Workers are trained based on scientific methods, improving their skill levels and ensuring the right person does the right job.

Disadvantages of Scientific Management

- **Ignores Human Element** – Focuses too much on machines, methods, and productivity, but less on workers' emotions, creativity, and social needs.

- **Monotony of Work** – Jobs are broken into small repetitive tasks, which can make work boring and reduce job satisfaction.

- **Exploitation of Workers** – Sometimes managers misuse scientific methods to increase output without giving fair benefits to workers.

•**High Cost of Implementation** – Requires research, training, standardization, and supervision, which can be expensive for small businesses.

•**Resistance from Workers** – Workers may feel threatened by new methods, strict supervision, or fear of job loss due to efficiency improvements.

•**Overemphasis on Efficiency** – Quality, innovation, and worker welfare may be neglected when only efficiency is prioritized.

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