Institute of Engineering
JIWAJI UNIVERSITY

Presentation On
SCIENTIFIC MANAGEMENT
UNIT-II BE 8sem
(EL-8103) Electronics

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INTRODUCTION

- It implies the application of science.
- To the job management of an industrial concern.
- It aims at replacement of traditional techniques by scientific techniques.

INTRODUCTION

- It is a thoughtful, organized human approach.
- To the job of management as contrasted
- With hit or miss, rule of thumb.

INTRODUCTION

"It is the art of knowing exactly what you want men to do and then seeing that they do it in the best and cheapest way".

DEFINITION

- Scientific management is an intellectually complex set of techniques.
- For coordinating human behavior in organizations.
- Or for providing organizational members with the skills and knowledge to do so.

DESCRIPTION

- This implies that it is systematic study of relationships between people and tasks
- That enables redesigning of work towards higher efficiency.

DESCRIPTION

- Scientific selection and training of worker,
- Proper allotment of duties and work,
- and achieving cooperation between workers and management.

DESCRIPTION

- It has principles or laws derived by the process of

  - Scientific investigation
  - And analysis,

- Instead of on tradition or policies

DESCRIPTION

- Determined by the process of trial and error.
- Indeed, it is a process of transference of skill from management to worker.

OBJECTIVES

- **Higher Productivity**

- Increase in the rate of production
- By use of standardized tools,
- Equipment's methods
- And training of the workers.

OBJECTIVES

- **COST REDUCTION**
  - Reduction in the cost of production
  - By rational planning,
  - And regulation,
  - And cost control techniques.

OBJECTIVES

- **ELIMINATION OF WASTES**
  - In the use of resources
  - And methods of manufacturing.

- **QUALITY CONTROL**
  - Improvement in the quality of output
  - By research, quality control inspection devices.

OBJECTIVES

- **RIGHT MEN FOR RIGHT WORK**
  - Placement of right persons on the right jobs
  - Through scientific selection
  - And training of workers.

OBJECTIVES

- **INCENTIVE WAGES**

- Relating wage payments to the efficiency of the workers,

- i.e., giving wages at the higher rates to the efficient workers.

SCHOLARS STATEMENT

"Scientific management is the substitution of exact scientific investigations and knowledge for the old individual judgment or opinion in all matters relating to the work done in the shop". —F.W. Taylor

SCHOLARS STATEMENT

"The core of scientific management is the organized study of work, the analysis of work into its simplest elements and the systematic improvement of the worker's performance of each element." —Peter F. Drucker

SCHOLARS STATEMENT

"Scientific management characterizes that form of organization and procedure in purposive collective effort, which rests on principles or laws derived by the process of scientific investigation and analysis, instead of any tradition or policy determined casually by the process of Trial and Error." —H.S. Pearson

SCHOLARS DESCRIPTION

- Scientific management is also known as Taylorism.
- Because Frederic Winslow Taylor,
- As the father of scientific manage-ment.

SCHOLARS DESCRIPTION

- He introduced scientific method at the workshop level.

EXAMPLE

- As the Chief Engineer in a steel mill,
- Taylor noticed wastage of time
- And energy on the part of workers.

EXAMPLE

- He found that workers were deliberately slack in performing their work.
- Time-rate, being the basis of wage-payment,
- Was not conducive to hard work.

EXAMPLE

- He was amazed at the employers
- Who paid no attention to this wastage
- The methods used for performing the task were crude

EXAMPLE

- And unscientific so that a worker could not produce
- To the maximum of his capacity.

EXAMPLE

- And their efficiency increased.
- The adjustment of tools and conditions
- Was another phase of scientific management.

TAYLOR'S CONCLUSION

- Taylor and other pioneers concluded
- In comparison to what was possible with scientific control,
- The industries were working at about 50 percent efficiency.

TAYLOR'S CONCLUSION

- **Taylor demonstrated that** proper method of work produced
- Good results,
- And locating the proper method
- Involved scientific investigation.

TAYLOR'S CONCLUSION

- Every employer should by scientific investigation,
- Develop the best method of work
- And then teach it to workers who must follow it.

TAYLOR'S CONCLUSION

- The adjustment of tools and conditions
- Another phase of scientific management.

TAYLOR'S CONCLUSION

- Another interesting fact discovered
- Almost all workers were misfits
- They were at wrong jobs.

TAYLOR'S CONCLUSION

- The workers were put by Taylor on jobs more suited to them,
- and their efficiency increased.

TAYLOR'S CONCLUSION

- Complete cooperation between employers and workers,
- or mental revolution, and
- Scientific Investigation as the basis of all decisions.

GILBRETH CONTRIBUTION

- Gilbreth has also contributed considerably
- To the development of scientific management.
- Gilbreth was a building contractor.

GILBRETH CONTRIBUTION

- He noticed that the old and traditional methods of bricklaying were inefficient,
- Because a bricklayer lost much time in examining

GILBRETH CONTRIBUTION

- And turning bricks in his hand
- And in making a number of movements
- To pick up the bricks

GILBRETH CONTRIBUTION

- And putting enough mortar on the wall etc.
- Gilbreth arranged to reduce the number of movements
- Required to lay a brick from 18 to 5

GILBRETH CONTRIBUTION

- By introducing adjustable scaffolding,
- And the number of bricks laid per hour
- Was raised from 120 to 350.

CHARACTERISTICS

- It is a systematic approach to handle management problems.

- It implies scientific techniques in method of
  - Work,
  - Recruitment,

CHARACTERISTICS

- Selection and training of workers.

- It rejects the age old method of rule of thumb’ or ‘hit or miss’ approach.

CHARACTERISTICS

- It attempts to discover the best method of doing the work at the lowest cost.
- It attempts to develop each worker to his greatest efficiency.

CHARACTERISTICS

- It involves a complete change in the mental attitude of the workers,
- As well as of the management.

TO BE CONTINUED……..

- **SCIENTIFIC TECHNIQUES**
- **PROJECT MANAGEMENT**

THANK YOU