

Scientific Management

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Scientific Management

Fredrick Winslow Taylor, father of scientific management and pioneer of modern management approaches and techniques.

- Born on March 20, 1856.
- In 1878, he went to work at the Midvale Steel Company as a labourer and became chief engineer in 1884 after receiving a Mechanical Engineering degree.

His Writings:

- A Piece-Rate System (1895)
- Shop Management (1903)
- The Art of cutting Metals (1906)
- The Principles of Scientific management (1911)

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- At the turn of the twentieth century, the first ever serious effort was made by Taylor to make researches in management of industry in USA.
 - He believed that best management is a true science

A Piece-Rate System

Principles of wage system

- Observation and analysis of work through time study to set the rate or standard
- Differential rate system of piece work
- Paying the men not positions

Observation at Midvale Steel Plant

- Management has no clear understanding of worker-management responsibilities
- Lack of effective standard of work
- Restricted output because of natural shouldering and systematic shouldering
- Failure of management to design jobs properly
- Decisions of management were unscientific
- Lack of proper study of division of work
- Placement of workers without studying ability, aptitude and interests.

Shop Management

- Objective of management must be to pay high wages and have low unit production cost to achieve the increased industrial efficiency
- Apply scientific methods of research and experiment to management problems
- Standardization of working conditions and placing the workers on the basis of scientific criteria
- Formal training to workers and specific instructions to perform the prescribed motions with standardized tools and materials
- Cooperation between workers and management

- Proper job design
- Proper studies about division of work

Art of Cutting Metals

- Time and motion study
- Scientific method of selection
- Effective supervision

Principles of scientific management

- Development of True science of Work
 - What constitutes a fare day work
 - Scientific investigation of large daily tasks
 - The best way of doing job
- Scientific selection and progressive development of the workman
- Bringing together of the science of work and scientifically selected and trained man
- Division of work and responsibility between management and workers

Functional Foremanship

- Worker receives order from 8 functional bosses
 - Four planning bosses (work and route clerk, instruction card clerk, time and cost clerk, shop disciplinarian)
 - Four execution functional bosses (gang-boss, repair boss, speed boss, inspectors)

Mental Revolution

Scientific management primarily involves a completely mental revolution on the part of workers and management as to their duties, towards their work, towards their fellow workers, and towards all of their daily problems.

Mutual interest is not antagonistic and mutual prosperity is possible only through mutual cooperation.

Features:

- Time and Motion study
- Differential payment
- Drastic Reorganisation of Supervision
 - a) Functional foremanship
 - b) Separation of planning and doing
- Scientific Recruitment and Training
- Intimate Friendly Cooperation between the management and Workers

Taylor' s basic principles

- Replacing rule of thumb with science
- Harmony in group action
- Cooperation
- Maximum output
- Development of workers



Thank U