

**SOS POLITICAL SCIENCE AND PUBLIC
ADMINISTRATION
M.A. PUB.ADMN.201
SUBJECT NAME:ORGANIZATION AND
MANAGEMENT
UNIT-I
TOPIC NAME:SCIENTIFIC
MANAGEMENT(F.W.TAYLOR)**

TAYLOR'S SCIENTIFIC MANAGEMENT

SCIENTIFIC MANAGEMENT

F.W.TAYLOR, an American laid the foundations of management as a science consisting of fundamental principles. He was the first expert to suggest the use of scientific methods of measurement and study for solving managerial problems. Therefore Taylor is known as the father of scientific management.

Its development began with Frederick Winslow Taylor in the 1880s and 1890s within the manufacturing industries. Scientific Management (Taylorism), was a theory of management that analyzed and synthesized workflows. Its main objective was improving economic efficiency, especially labor productivity by analyzing and establishing workflow processes.

Scientific Management's themes include analysis, synthesis, logic, rationality, empiricism, work ethic, efficiency and elimination of waste, standardization of best practices and others

PUBLISHED BOOKS

Shop Management (1903),

The Principles of Scientific Management (1911),

A Treatise on Concrete, Plain, and Reinforced: Materials, Construction, and Design of Concrete and Reinforced Concrete (1911)

Concrete costs (1912)

ARTICLES

Notes on Belting (1894) in Transactions of the American Society of Mechanical Engineers, Vol. XV

A Piece-rate System (1895) in The Adjustment of Wages to Efficiency

Shop management (1903) in Transactions of the American Society of Mechanical Engineers 24

On the Art of Cutting Metals (1906) in Transactions of the American Society of Mechanical Engineers, Vol. XXVIII

DEFINITION OF SCIENTIFIC MANAGEMENT

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

F.W TAYLOR

Scientific management is based on careful observation, objective analysis and innovative outlook.

It consist of principles and techniques designed to increase the efficiency of operations.

IMPORTANCE OF SCIENTIFIC MANAGEMENT

Scientific Management Theory by Taylor is perfectly suitable in an office. It can change dramatically the office environment in positive mode. So, every office should adopt this theory for their actual success. However, there are mentioned some important reason why taken this theory in office. For example:-

Planning or Deciding the work in advance.

Posting right man for the right job.

Initiating of incentive or reward wage plan.

Confirmation of ideal of performance.

Advise the right development of work.

The removal of de trop flow of work.

The upgrade of worker-management affair.

BASIC PRINCIPLES OF SCIENTIFIC MANAGEMENT

A) Science not rule of thumb;

Each and every job and its method of doing it should be based on scientific study and analysis rather than on trial and error.

Each task should be scientifically planned.

B) Harmony not Discord;

There should be healthy cooperation between employer and employees

According to Taylor management should adopt an enlightened attitude and share the gains of productivity with workers.

workers should perform their duty with discipline and loyalty.

C)Co-operation, not Individualism: It shows the importance of each other (management and workers). Management should reward and appreciate the employees for their helpful suggestions. At the same time, employees also cooperate with the management for the improvement of the organization.

Development of Each and Every Person to his/her Greatest

D)Efficiency and Prosperity: Employees should be properly trained and selected in a scientific manner. And it is essential for each organization. For implementing this task, Taylor arranged some techniques, for instance, work-study, time study, motion study, fatigue study and method study.

E)Maximum, not Restricted Output: Maximum productivity is the basic purpose of an organization. In this case, Taylor has emphasized the production maximization in his principles.

FUNCTIONS OF SCIENTIFIC MANAGEMENT

- According to the skills and abilities, an employee must be selected.
- Incentives and wages have to install for enhancing their output and encouraging them.
- Implemented those methods which are based on the scientific tasks.
- Carefully observe on eradicating interruptions when plan runs.
- In an organization, leadership should develop and standard

FEATURES OF SCIENTIFIC MANAGEMENT THEORY BY TAYLOR:

- Universal: Its principles are applicable to all kinds of organizations, business, non-business, all levels of management. Therefore, they are all-pervasive or universal.
- Flexible: Here available some flexible features. For example, dynamic guidelines, non-static rules, sufficient room for managerial discretion, Modification and improvement

- **Cause & Effect Relationship:** It indicates what will be the result of particular actions. So, if one is known, the other can be detected.
- **Aims at Influencing Human Behavior:** Human behavior is not simple and predictable. It always tries to deal with human behavior so that employee can be able to give the best result.
- **Equal Importance:** For achieving the goal of the organization, we have to give equal priorities to all things. These principles are the best examples of equal importance.
- **Scientific Selection, Training, and Development of Workers:** In the organization, workers must select, train and develop through scientific way. **Equal Division of Responsibility between Management and Workers:** Each business environment has to ensure the equal division of responsibility between management and workers

TECHNIQUES OF SCIENTIFIC MANAGEMENT THEORY BY TAYLOR:

- Work-Study (time study, method study, motion study, and fatigue study)
- Development of Functional Foremanship
- Standardization of Tools and Equipment
- Scientific Selection, Placement, and Training
- Introducing Costing System
- Mental Revolution

OBJECTIVES OF SCIENTIFIC MANAGEMENT

- To improve productivity through standardization of tools, equipment and methods and by training workers.
- To minimize cost of production per unit through proper planning and control
- To improve the quality of out put through scientific selection and training of workers

CRITICISM OF SCIENTIFIC MANAGEMENT THEORY BY TAYLOR:

- Although it appreciates in the organizational process, yet it has not spared of severe criticism. The criticism of scientific management theory by Taylor divide into two categories. Such as:-
 - Workers Viewpoint
 - For increasing productivity, replace the machine instead of the man. Therefore, it may be an unemployment tool.
 - Exploitation thinking arises in workers. So, they are not engaged in creative working.
 - These principles enforce on over speeding in the work. So, These have an adverse effect on the health of employees.
 - Due to extreme specialization, the employees are not capable to take a drive on their own. Their position decrease mere cogs in the wheel. As a result, job become dull. Employees disappoint in working.
 - Workers feel that these principles make to weak of Trade Union. So, workers don't attract these principles

EMPLOYER'S VIEWPOINT

- It is an expensive system.
- Here enforces on the work, study, standardization, and specialization. As a result, it is a time-consuming process.
- This procedure is one kind of deterioration of quality

WORKER'S OBJECTIONS TO SCIENTIFIC MANAGEMENT.

- Over burdening
- High performance standards
- Attack on unity of workers through differential piece rate system.

Advantages of scientific management

- To the employer;
- Higher productivity
- Lower cost of production
- Better utilization of resources
- Improved quality of work.
- To the employee;
- Improvement in working condition.
- Higher earnings
- Better skills through training

Advantages of scientific management

To the society

- Higher standard of living
- Better employee employer relations
- Improvement in work methods

Disadvantages of Scientific Management

It is based upon one best way and is applicable for simple organizations than that for today's dynamic and complex organization. It focuses on individual performance than group efforts and divides the workers into efficient and inefficient categories. It is focused on specialization and repetition of jobs to increase the productivity which reduces innovation and creativity and promotes monotony. It neglects human factor because it motivates workers to work for monetary benefits rather than human resource development and resources. There is no scope for creativity of employees because they are developed by manager which promotes frustration.

BASIC ELEMENTS OF SCIENTIFIC MANAGEMENT

'DUTIES OF MANAGEMENT' 'PAY PER PIECE' Select the 'FIRST CLASS MEN' to do each job Determine the 'ONE BEST WAY' to do each job

OUTLINE STRUCTURE OF TAYLOR'S SCIENTIFIC MANAGEMENT

- (1) Determination of a fair day's task for each worker through scientific methods (including the best way of doing a job).
- (2) Scientific selection and training of workers.
- (3) Standardization of raw materials, tools and working conditions.
- (4) Functional foremanship.
- (5) Differential piece-rate system of wage-payment

TYPES OF WORK STUDIES

- (a) Time study
- (b) Motion study
- (c) Fatigue study

MERITS OF SCIENTIFIC MANAGEMENT:

(i) More production and higher profits:

(ii) Job satisfaction:

(iv) Personality development:

(v) Higher standard of living:

CRITICISM OF SCIENTIFIC MANAGEMENT:

(i) Unsuitable for the small employers:

(ii) Unemployment:

(iii) Retarding human development: