

DEVELOPMENT OF MANAGEMENT THOUGHT

SCIENTIFIC MANAGEMENT

Scientific Management tries to increase productivity by increasing efficiency and wages of the workers. It finds out the best method for performing each job. It selects employees by using Scientific Selection Procedures. It provides Scientific Training and Development to the employees. It believes in having a close co-operation between management and employees. It uses Division of Labour. It tries to produce maximum output by fixing Performance Standards for each job and by having a Differential Piece-Rate System for payment of wages.

Element & Tools of Scientific Management Theory:

1. Separation of Planning & Doing

Taylor emphasized the separation of planning aspect from actual doing of the work. Before Taylor's scientific management, a worker used to plan about how he had to work and what and what instruments were necessary for that. The worker was put under the supervision of a supervisor commonly known as gang boss. Thus, supervision's job was merely to see how the workers were performing. This was creating lot of problems, and Taylor emphasized that planning should be left to the supervisor and the worker should emphasize only operational work.

2. Functional Foremanship

Taylor started "Functional Foremanship". Here, 8 foremen (lower level manager or supervisor) are required to supervise the workers. This is because one foreman cannot be an expert in all the functions.

Taylor's functional foremanship consists of two groups of supervisors:-

- 1. At the Planning Level or Office Level.*
- 2. At the Doing Level or Factory Level.*

(a) At the Planning Level:-

Taylor separated planning from doing. At the planning level there were four supervisors. They are:-

- 1. Time and Cost Clerk: This boss prepares the standard time for completing the work and cost of doing that work.*

2. *Route Clerk: This boss makes the exact route (way) through which each product has to travel from a raw-material to a finished product.*
3. *Discipline Clerk: This boss looks after the discipline and absenteeism problems in the organization.*
4. *Instruction Card Clerk: The boss gives instructions about how to do a particular work.*

(b) At the Doing Level:-

At the doing level there were also four supervisors. They are:-

1. *Gang Boss: He is responsible for setting up the machines and tools and for direct supervision of workers.*
2. *Speed Boss: He is responsible for maintaining a proper speed of work.*
3. *Repair Boss: He is responsible for the repairs and maintenance of machines.*
4. *Inspector Boss: He is responsible for maintaining the quality of production.*

3. Job Analysis

Job Analysis is undertaken to find out the best way of doing the things. The best way of doing job is one which requires the least movements, consequently less time and cost. The best way of doing the things can be determined by taking up time – motion – fatigue studies.

1. *Time study involves the determination of time a movement takes to complete. The movement which takes minimum time is the best one. This helps in fixing the fair work for a period.*
2. *Motion study involves the study of movements in part which are involved in doing a job and thereby eliminating the wasteful movements and performing only necessary movements. Elimination of unnecessary movements in doing work reduces time taken in performing a work and also the fatigue of workers.*
3. *Fatigue study shows the amount and frequency of rest required in completing the work. After a certain period of time, workers feel fatigue and cannot work with full capacity. Therefore, they require rest in between. When the rest is allowed, they start working with full capacity.*

4. Standardization

Standardization should be maintained in respect of instruments and tools, period of work, amount of work, working conditions, cost of production etc. These things should be fixed in advance on the basis of job analysis and various elements of cost that go in performing a work.

5. Scientific Selection & training of workers

Taylor has suggested that workers should be selected on scientific basis taking into account their education, work experience, aptitude, physical strength etc. A worker should be given work for which he is physically and technically most suitable. Apart from selection, proper emphasis should be given on the training of workers which makes them more efficient and effective.

6. Financial Incentives

Financial incentives can motivate workers to put in their maximum efforts. If provisions exist to earn higher wages by putting in extra efforts, workers will be motivated to earn more.

Taylor observed that workers did as little work as possible. He felt that under existing wage system, an efficient worker gained nothing extra. So, Taylor used the **differential piece (unit) rate system**.

Under differential piece rate system, a standard output was first fixed. Then two wage rates were fixed as follows:-

1. Low wage rate was fixed for those workers who did not produce the standard output.
2. Higher wage rate was fixed for those workers who produced the standard output or who produced more than the standard output.

Differential piece-rate system can be explained with following example:-The standard output for a day is 10 units. The wage rate for producing less than 10 units is Rs. 5 per unit, and for producing 10 or more units is \$ 8 per unit. If Mr. X produces 7 units, and Mr. Y produces 12 units, then their wages will be as follows :-

Mr. X's wage is $7 \times 5 = 35$

Mr. Y's wage is $12 \times 8 = 96$

Because of this system, the inefficient workers will try to improve their efficiency, and the efficient workers will be motivated to maintain or improve their production capacity.

7. Economy

While applying scientific management, not only scientific and technical aspects should be considered but adequate consideration should be given to economy and profit. For this purpose, techniques of cost estimates and control should be adopted. The economy and profit can be achieved by making the resources more productive as well as by eliminating the wastages.

8. Mental Revolution

Taylor introduced the concept of "Mental Revolution". He said that the management and workers should have a positive attitude towards each other. This will result in close cooperation between them. This will increase productivity and profits.

Critical Analysis of Scientific Management

Taylor's scientific management was opposed by trade unions, industrialists and general public. The major reasons for the opposition of scientific management were as follows:

- 1. There were many of the followers of Taylor who took aggressive mechanical view of production and sidelined human aspect at the workplace. This created aggressive attitudes among workers.*
- 2. The work used to be performed under close and strict supervision based on authoritarian approach. Workers were not allowed to raise their voice even for genuine grievances.*
- 3. There was lack of scientific standardization of work and whatever standards used to be set by the management, the workers had to follow strictly. Such standards often used to raise production norm without taking into consideration the factors affecting such a norm.*
- 4. Trade union opposed the differential piece rate system on the plea that it was a new method of exploiting workers by the industrialists.*

BEHAVIOURAL APPROACH

The Behavioral or social science approach developed as a corollary to the human relations approach. Human behavior approach is the outcome of the thoughts developed behavioural scientists who have looked at the organization as collectivity of people for certain specified objectives. Since management involves getting things done by people, the study of management must revolve around human behaviour. This approach also known as 'leadership', 'behavioural science', or 'human resource' approach. Behavioural approach reflects the findings of intensive carried out by Behavioural scientists like Chester Bernard, A.H. Maslow, Herzberg, Rensis Likert etc.

Features of Behavioural Approach

The Behavioural approach concerns itself with the social and psychological aspects of human behaviour in organization. The behaviour of members of an organization clearly affects its structure and its functioning as well as the principles on which it can be managed. Behavioural researches have provided sufficient evidence that human element is the key factor in the success or failure of an organization. In several experiments, it has been observed that people prefer to be consulted rather than receive order or information. Less reliance on the use of authority is preferred.

Some of the more important elements or concepts of Behavioural approach may be outlined as follows:

Individual behaviour

Individual behaviour is closely linked with the behaviour of the group to which he belongs. The group dictates changes in his behaviour. Individuals observe those work standards which are prescribed by the group.

Healthy Environment

The manager should create a healthy environment wherein all subordinates can contribute to the best of their capacity. The environment should provide a healthy, safe, comfortable, and convenient place to work.

Informal Leadership

Informal leadership, rather than formal authority of managers is more important for setting and enforcing group standards of performance. A leader, a manager may be more effective and acceptable to subordinates, if he adopts the democratic style of leadership.

Participation

If the subordinates are encouraged and allowed to participate in establishing goals, there will be positive effect on their attitude towards work. If employees are involved in planning, designing the jobs and decision-making, there will be least resistance to changes effected in technology and work methods.

Motivation by Self-Control and Self-Development

Behavioural scientists maintain that by nature most people enjoy work and are motivated by self-control and self-development. Managers should try to provide necessary conditions. The manager's attitude towards human behaviour should be positive. Every man likes to work and prefers to assume responsibilities. Operating efficiency can be improved by self control & self direction.

General Supervision Not Close One

As regards supervision of subordinates, Behaviouralists particularly Likert, are not in favour of close supervision. They advocate general supervision, which tends to be associated with high productivity.

SYSTEM APPROACH

The word System is taken from a Greek language which means to bring together or to combine. A system is a set of inter-related parts, which work together to achieve certain goals.

Concepts of Systems Approach to Management

1. Sub-system

The full system is made up of many parts. Each part is called a sub-system. A system may be a sub-system of a larger system. For e.g. a department is a sub-system of a plant. A plant is a sub-system of a company.

2. Open System

Open system means that which interacts with its environment and closed system is that which does not interact with its environment being self-sustained. The emphasis of systems approach is an open system. It believes that most of the organizations are open systems because they depend for their inputs (i.e., money, materials, men, information etc.) on the society. In addition, the organization sells their outputs (i.e. goods and services) to the customers in the society. Thus, if an organization wishes to survive, it must respond to its environment – customers and suppliers.

3. Adaptive

Organization being an open system, its survival and growth in a dynamic environment demands on adaptive system which can continuously adjust to changing environment. Management tends to achieve environmental consistency by bringing the external world under control or bringing internal modification of organizational functioning to meet the needs of the changing world.

4. Dynamic

Management as a system is dynamic. It's not only the internal processing process that determines the effectiveness of management but also how it interacts with the changing environment in terms of taking inputs and giving outputs also determines its effectiveness.

5. Probabilistic

Management is probabilistic and not deterministic. Management being probabilistic points out only the probability and never the certainty of the performance and consequent results. Management has to function in the face of many dynamic variables and there cannot be absolute predictability of these variables.

6. Multilevel & Multidimensional

Systems approach of management points out the multilevel and multidimensional features of management. It has both macro and micro approach. At macro level, a business system as a whole. At micro level, it can be applied to a subsystem of an organization.

7. Multivariable

Management is multivariable and involves taking into account many variables simultaneously. This feature of management suggests that there is no simple cause – effect phenomenon, rather an event may be the result of so many variables which themselves are interrelated & interdependent. This makes managing quite a complex process.

8. An Integrated Approach

System approach of management takes an integrated view of managing. Management tries to integrate the various factors to find out the reasons behind a phenomenon.

Limitation of System Approach.

1.

Abstract Approach.

It is often suggested that system approach is too abstract to be of much use of practicing managers. It only indicates that various parts of the organization are interrelated. But it fails to spell out relationships among these.

Lack of Universality.

Systems approach of management lacks universality and its rules cannot be applied to all organizations. These systems approach are suitable for large and complex organizations but are not suitable for small organizations.

CONTINGENCY APPROACH

Contingency approach advocates that managerial actions and organizational design must be appropriate to the given situation and a particular action is valid only under certain conditions. There is no one best approach to management and it all depends on the situation. In other words, managerial action is contingent upon external environment. There is no one best approach for all situations. What

a manager does depends upon a given situation and there is an active inter-relationship between the variables in a situation and the managerial action. Contingency theory attempts to analyze and understand these interrelationships with a view towards taking the specific managerial actions necessary to deal with the issue. This approach is both analytical and situational, with the purpose of developing a practical answer to the question at hand.

Features of contingency approach:

1. Management is externally situational: the conditions of the situation will determine which techniques and control system should be designed to fit the particular situation.
2. Management is entirely situational.
3. There is no best way of doing anything.
4. One needs to adapt himself to the circumstances.
5. It is a practically suited.
6. Management policies and procedures should respond to environment.
7. Managers should understand that there is no best way of managing. It dispels the universal validity of principles.

Limitation of Contingency Approach

Inadequate literature: The contingency approach suffers from inadequacy of the literature. Therefore, it has not adequately spelled out various types of actions which can be taken under different situations. It is not sufficient to say that managerial action depends on the situation. The approach should provide 'if there is the situation, this action can be taken.'

Complex: The suggestion of the approach is very simple, that is managers should do according to the needs of the situation. However, when put into practice, this becomes very complex. Determination of situation in which managerial action is to be taken involves analysis of a large number of variables. Therefore, there is a possibility that managers, who are always short of time, may ignore the thorough analysis of all these variables and may resort to short – cut and easier way.

Difficult empirical testing: The contingency approach, being complex, presents problems in testing the prospects of the theory. For empirical testing of a theory, it is necessary that some methodology is available. No doubt that methodology is available but because of the involvement of too many factors, the testing becomes very difficult.

Reactive not practice: *The contingency approach is basically reactive in the nature. It merely suggests what managers can do in the given situation.*

No doubt that these limitations are valid, but the situation remains that at micro level, managers have to manage according to the contingency approach. They should not ignore the importance of taking actions according to the needs of the situations. For analyzing the situations, they will have to use their higher skills.