

Schools of Management Thought

Everything you need to know about the schools of management thought. Many experts and specialists from different disciplines have given various approaches of management, also called schools of management thought.

The various approaches to the study of management have propounded by specialist from different disciplines have come to be called schools of management thought.

All these thoughts are basically different point of views or guidelines regarding management which enables the managers to achieve their organizational goals easily and effectively.

A: Major schools of management thought are as follows –

1. The Management Process School 2. The Empirical School 3. The Human Behaviour School 4. The Social System School 5. The Decision Theory School 6. The Mathematical School 7. The System Management School 8. The Contingency School 9. Bureaucracy School of Management.

B: Following are the major schools of management thought –

1. Scientific Management School 2. Organizational School 3. Behavioural School 4. Quantitative School 5. Integration School 6. Contemporary School

C: The three main schools of management thought are – 1. Quantitative School of Management 2. Contingency School of Management 3. Contemporary School of Management.

Major Schools of Management Thought: Contributors, Branches, Aspects and Limitations

Schools of Management Thought: Top 9 Schools

The various approaches to the study of management has propounded by specialist from different disciplines have come to be called schools of management thought.

Major schools are classified as under:

- (1) The management process school
- (2) The empirical school
- (3) The human behaviour school
- (4) The social system school
- (5) The decision theory school
- (6) The mathematical school

- (7) The system management school
- (8) The contingency school
- (9) Bureaucracy school of Management

These schools are briefly discussed as follows:

(1) The Management Process School:

This is also called as Operational School of Management, Traditional/Universality/the Classicist approach. Henry Fayol is considered to be the father of this school. This school considered management as a process of getting things done through and with people operating in organizational groups. According to this school the management process divided into five functions such as planning, organizing, staffing, directing and controlling. It aims to analyse the process to establish a conceptual frame work, to identify principles and the underline process of each of these functions. The main features of this school are – (a) Principles have universal application (b) The function of managers are the same in all type of organizations (c) Principles provide useful theory of management.

Criticism:

This approach has been criticized on the following grounds:

- i. This approach emphasis that principles are universal but in many occasions these principles of management have failed to stand the test.
- ii. This approach could not give much significant contribution in the management field.
- iii. Universality may not always prove to be a successful as the organizations have to work under changing circumstances.

(2) The Empirical School:

The approach is also known as Management by Customs School/Case study approach as it gives much importance to case studies of management. The important contributors to this approach are Earnest Dale and group of researchers from Harward Business School and The Management Associations of different countries. As per this school problems could be solved better by drawing upon the experience of manager.

The basic idea of this school is that business conditions will contribute to the development of managerial skills. This school imparts good management education. This school enables the managers to develop analytical and problem solving skill.

Assumptions:

This approach works on the following assumptions:

- i. Management is the study of experience and such experience may give some message to the next manager.
- ii. As per this theoretical approach should be based on practical experience.
- iii. All case studies in management can be useful in training future managers.

iv. The success or failure of management in the process of decision-making can provide a fruitful guidance to the manager in a similar situation that may arise in future.

Criticism:

This approach has been criticized on the following grounds:

i. This approach has given much importance to the past which is supposed to be the main drawback.

ii. There is bound to the great contrast between the situation of the past and those of the present.

iii. This approach has completely neglected the concept of the theoretical aspect of management.

iv. Learning through experience is a time consuming process.

v. Management is highly dynamic rather than based on procedure and rules and regulations.

(3) The Human Behavioural School:

It is concerned with the recognition of the importance of human element in business organizations. Elton Mayo and his associates made significant contributions to this approach. The studies in this school have highlighted the relationship between social factors productivity.

The thinkers of this approach are in the opinion that the effectiveness of any organization depends upon the quality of relationships among the people working in the organization. The key concepts of this school are motivation, leadership and group dynamics.

(4) The Social System School:

In this approach an organization is considered as a social consisting of various groups of people. Chester Barnard was the father of this approach. The main contribution of this school of thought is its focus on cultural factors in the working of an organization. This approach much concentrated on cooperation and teamwork among the group members for achieving organizational objectives. So the management should attempt to create and maintain harmony between the organizational goals and goals of the group.

(5) The Decision Theory School:

Herbert A Simon and James March are the pioneers of this school. The concentrated on rational decision-making, selecting from among possible alternatives of a course of action or policy. The approach of this school of opinion is concerned with the persons or organizational groups making the decision or with the analysis of the decision-making process. Attempt is also made in this theory to cover the social and psychological aspects and environment of the decisions and decision-makers.

(6) Mathematical/Quantitative School of Management:

This is also known as quantitative school. It views management as a system of mathematical models and logical processes. It was developed by W.C. Churchman & others. It focused on findings right answers to the managerial problems. It was developed by W.C. Churchman and

others. It developed mathematical symbols to describe managerial problems. It helped in systematizing management thinking and lent a certain measure of precision to management.

Features:

The essential features of this approach are:

- i. Management is a series of decision-making.
- ii. Mathematical models can be developed by quantifying various variables of the problems.
- iii. Mathematical symbols can be used to describe managerial problems.
- iv. Organizations exist for the achievement of specific and measurable economic goals.

(7) The System Management School:

This approach is based on the generalization that an organization is a system and its components are inter-related and inter-dependent. The effectiveness of system mainly depends upon the interdependency and inter-relations of the various sub-systems. The organization is responsive to environmental effect. It provides a strong conceptual framework for meaningful analysis and understanding of organizations. This approach is better than others because it is close to reality.

Features:

This approach has got the following features:

- i. An organization is a system consisting of several sub-systems.
- ii. All sub-systems are mutually related to each other.
- iii. All sub-systems should be studied in their inter-relationship rather than in isolation from each other.
- iv. The organization is responsive to environment effect.

(8) Contingency/Situational School:

This approach was developed by J. W. Lorsch and P. R. Lawrence. This is new approach to management. The basic essence of this approach is that organizations have to cope with different situations in different ways. So, managers should develop variable methods, tools and action plans as per the required situations. Managers should understand that there is no one best way to manage.

Features:

They are:

- i. Management is entirely situational so the application and effectiveness of any technique is contingent on the situations.
- ii. Policies and procedures should be according to environmental conditions.
- iii. Managers should understand that there is no one best way to manage. They must not consider management principles and techniques universal.

(9) Bureaucracy School of Management:

This approach was propounded by Max Webber. He was a German sociologist and contemporary of Taylor and Fayol. He emphasized on the recognition and exercise of

authority is the fundamental question. For answering this question he has classified authority structures into three categories. They are charismatic, traditional and Bureaucratic. A charismatic leader's authority is expected by virtue of some exceptional innate qualities. The authority which flows from generation to generation or hereditary is called traditional authority. The authority which comes from the position in the organization is called Bureaucratic authority. This authority will have a clearly defined set of rules, procedures and roles.

This model includes the following:

- i. There is clearly separation between superior and subordinate.
 - ii. There is a division of labour based upon competence and functional specialization.
 - iii. There is a clear divorce between personal and official matters.
 - iv. There is a system of rules, regulations and procedures.
 - v. There is a hierarchy in positions based on legal authority and power.
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Schools of Management Thought: Top 6 Schools and their Contributors

The classical development of management thoughts can be divided into the scientific management, the organizational management, the behavioural management and the quantitative management. The first two (scientific management school and organizational) emerged in the late 1800s and early 1900s were based on the management belief that people were rational, economic creatures choose a course of action that provide the greatest economic gain.

These schools of management thoughts are explained as below:

1. Scientific Management School:

Scientific management means application of the scientific methods to the problem of management. It conducts a business or affairs by standards established by facts or truth gained through systematic observation, experiments, or reasoning. The followings individuals contribute in development of scientific management school of management thoughts. They dedicated to the increase in efficiency of labour by the management of the workers in the organization's technical core.

They are:

i. Charles Babbage (1792-1871):

He was a professor of mathematics at Cambridge University from 1828 to 1839. He concentrated on developing the efficiencies of labour production. He, like Adam Smith, was a proponent of the specialization of labour, and he applied mathematics to the efficient use of both production materials and facilities.

He wrote nine books and over 70 papers on mathematics, science and philosophy. He advocated that the managers should conduct time studies data to establish work standards for anticipated work performance levels and to reward the workers with bonuses to the extent by

which they exceed their standards. His best known book is 'On the Economy of Machinery and Manufacturers' published in 1832. He visited many factories in England and France and he found that manufacturers were totally unscientific and most of their work is guess work.

He perceived that methods of science and mathematics could be applied to the operations of factories. His main contributions are as follows:

- a. He stressed the importance of division of and assignment to labour on the basis of skill.
- b. He recommended profit-sharing programmes in an effort to foster harmonious management-labour relations.
- c. He stressed the means of determining the feasibility of replacing manual operations with machines.

ii. Frederick W. Taylor (1856-1915):

He is known as 'father of scientific management'. His ideas about management grew out of his wide-ranging experience in three companies – Midvale Steel Works, Simonds Rolling Mills and Bethlehem Steel Co.

As an engineer and consultant, Taylor observed and reported on what he found to be inexcusably inefficient work practices, especially in the steel industry. Taylor believed that workers output was only about one-third of what was possible. Therefore, he set out to correct the situation by applying scientific methods.

Taylor's philosophy and ideas are given in his book, 'Principles of Scientific Management' published in 1911. Taylor gave the following principles of scientific management. Taylor concluded that scientific management involves a complete mental revolution on the part of both workers and management, without this mental revolution scientific management does not exist.

iii. Henry Gantt (1861-1919):

He was a consulting engineer who specialized in control system for shop scheduling. He sought to increase workers efficiency through scientific investigation. He developed the Gantt Chart that provides a graphic representation of the flow of the work required to complete a given task. The chart represents each planned stage of work, showing both scheduled times and actual times. Gantt Charts were used by managers as a scheduling device for planning and controlling work.

Gantt devised an incentive system that gave workers a bonus for completing their job in less time than the allowed standards. His bonus systems were similar to the modern gain sharing techniques whereby employees are motivated to higher levels of performance by the potential of sharing in the profit generated. In doing so, Gantt expanded the scope of scientific management to encompass the work of managers as well as that of operatives.

iv. Frank (1868-1924) and Lillian (1878-1972) Gilbreth:

Frank Gilbreth, a construction contractor by back ground, gave up his contracting career in 1912 to study scientific management after hearing Taylor's speak at a professional meeting.

Along with his wife Lillian, a psychologist, he studied work arrangements to eliminate wasteful hand-body- motion. Frank specialized in research that had a dramatic impact on medical surgery and, through his time and motion findings, surgeons saved many lives. Lillian is known as 'first lady of management' and devoted most of her research to the human side of management. Frank Gilbreth is probably best known for his experiments in reducing the number of motions in bricklaying.

The man and wife team developed a classification scheme for the various motions (17 basic hand motions) used to complete a job referring a motion as a therblig. Their classification design covered such motions as grasping, moving, and holding. This scheme allowed him to more precisely analyze the exact elements of worker's hand movements.

Their scientific motion scheme noted the relationship between types and frequencies of motions and the creation of workers fatigue, identifying that unnecessary or awkward motions were a waste of workers energy. By eliminating inappropriate motions and focusing on appropriate motion, the Gilbreth methodology reduces work fatigue and improves workers' performance.

Gilbreth were among the first to use motion pictures films to study hand-and-body motions. They devised a micro chronometer that recorded time to 1/2,000 of a second, placed it in the field of the study being photographed and thus determined how long a worker spent enacting each motion. Wasted motions missed by the naked eyes could be identified and eliminated. Gilbreths also experimented with the design and use of the proper tools and equipment for optimizing work performance.

2. Organizational School:

The organizational school of management placed emphasis on the development of management principles for managing the complete organization.

The contributors of organizational schools are:

i. Henry Fayol (1841-1925) was a Frenchman with considerable executive experience who focused his research on the things that managers do. He wrote during the same period Taylor did. Taylor was a scientist and he was managing director of a large French coalmining firm. He was the first to envisage a functional process approach to the practice of management. His was a functional approach because it defined the functions that must be performed by managers. It was also a process approach because he conceptualized the managerial job in a series of stages such as planning, organizing and controlling.

According to Fayol, all managerial tasks could be classified into one of the following six groups:

- (a) Technical (related to production);
- (b) Commercial (buying, selling and exchange);
- (c) Financial (search for capital and its optimum use);
- (d) Security (protection for property and person);

(e) Accounting (recording and taking stock of costs, profits, and liabilities, keeping balance sheets, and compiling statistics); and

(f) Managerial (planning, organizing, commanding, coordinating and control);

He pointed out that these activities exist in every organization.

He focused his work on the administrative or managerial activities and developed the following definition:

(a) Planning meant developing a course of action that would help the organization achieve its objectives.

(b) Organizing meant mobilizing the employees and other resources of the organization in accordance with the plan.

(c) Commanding meant directing the employees and getting the job done.

(d) Coordinating meant achieving harmony among the various activities.

(e) Controlling meant monitoring performance to ensure that the plan is properly followed.

ii. Max Weber (1864-1920):

He was a German sociologist. Writing in the early 1900s, Weber developed a theory of authority structures and described organizational activities on the basis of authority relations.

He described an ideal type of organization that he called a bureaucracy, a form of organization characterized by division of labour, a clearly defined hierarchy, detailed rules and regulations, and impersonal relationships.

Weber recognized that this ideal bureaucracy didn't exist in reality. He used it as a basis for theorizing about work and the way that work could be done in large groups. His theory became the model structural design for many of today's large organizations.

The elements of bureaucracy are:

(a) Labour is divided with clear definition of authority and responsibility that are legitimized as official duties.

(b) Positions are organized in a hierarchy of authority, with each position under the authority of a higher one.

(c) All personnel are selected and promoted based on technical qualifications, which are assessed by examination or according to training and experience.

(d) Administrative acts and decisions are recorded in writing. Recordkeeping provides organizational memory and continuity over time.

(e) Management is separate from the ownership of the organization.

(f) Management is subject to rules and procedures that will insure reliable, predictable behaviour. Rules are impersonal and uniformly applied to all employees.

iii. James D. Mooney and Alan C. Reilly:

James Mooney was a General Motors executive who teamed up with historian Alan Reilly to expose the true principles of an organization in their books. They wrote a book 'Onward Industry' in 1931 and later revised and renamed it as 'Principles of Organization' which had

greatly influenced the theory and practice of management in USA at that time. They contended that an efficient organization should be based on certain formal principles and premises.

They contended that organizations should be studied from two viewpoints:

- (a) The employees who create and utilize the process of organization; and
- (b) The objective of the process.

With respect to first aspect, their contributions to some fundamental principles of organization are:

a. The Coordination Principle:

It was considered to be the single basic principle that actually encompassed the other two principles. They defined coordination as the orderly arrangement of work group effort that provides unity of action in pursuit of common goals.

b. The Scalar Principle:

It was borrowed from the Fayol's work, was the device for grading duties in accordance with the amount of authority possessed at the different organizational levels.

c. The Functional Principle:

The functional distinction is those unique differences in organizational operations that the manager must perceive in order to effectively integrate and coordinate all the functions of the organization.

In essence, Mooney and Reilly made an attempt to offer a rigid framework of management theory with emphasis on hierarchical structure, clear division and definition of authority and responsibility, specialization of tasks, coordination of activities and utilization of staff experts.

iv. Chester Barnard (1886-1961):

Chester Barnard, president of Bell Telephone Company, developed theories about the functions of the manager as determined by constant interaction with the environment.

Barnard saw organizations as social systems that require human cooperation. He expressed his view in his book *The Function of the Executive*.

He proposed ideas that bridged classical and human resource viewpoints. Barnard believes that organizations were made up of people with interacting social relationships. The manager's major functions were to communicate and stimulate subordinates to high level of efforts.

He saw the effectiveness of an organization as being dependent on its ability to achieve cooperative efforts from a number of employees in a total, integrated system. Barnard also argued that success depended on maintaining good relations with the people and institutions with whom the organization regularly interacted.

By recognizing the organization's dependence on investors, suppliers, customers, and other external stakeholders, Barnard introduced the idea that managers had to examine the external

environment and then adjust the organization to maintain a state of equilibrium. Barnard also developed set of working principles by which organizational communication systems can maintain final authority for the management team.

These principles are:

- (a) Channels of communication should be definitely known.
- (b) Objective authority requires a definite formal channel of communication to every members of an organization.
- (c) The line of communication must be as direct or short as possible.
- (d) The complete line of communication should usually be used.
- (e) Competence of the persons serving at communication centres that is officers, supervisory heads, must be adequate.
- (f) The line of communication should not be interrupted during the time the organization is to function.

v. Herbert A. Simon:

Simon, the Noble Laureate in Economics (1978), is an American political and social scientist. He started his career in local government. He analyzed the classical principles of management. Due to their ambiguous and contradictory nature, he criticized these principles as 'myths'. He analyzed the problems of management from the socio-psychological viewpoint. But he is best known for his work in the field of decision-making and administrative behaviour.

He perceived the modern manager as being limited in his knowledge of a problem and the number of alternative available to him is also limited. Thus, the manager is an administrative man, not an economic man, who makes decision amid bounded rationality and selects not the maximizing alternative.

3. Behavioural School:

The school of behavioural management theory involved in recognition on the importance of human behaviour in organization.

i. Robert Owen (1771-1858):

He was a British industrialist who was the first to speak out on behalf of the organization's human resources. He carried out experiments and introduced many social reforms. He believed that workers' performance was influenced by the total environment in which they worked.

He criticized industrialists who spent huge sums of money repairing their production machines, but did little to improve the lot of their human machines. Owen worked for the building up of a spirit of cooperation between the workers and managers. He introduced new ideas of human relations, e.g., shorter work hours, housing facilities, education of children, provision of canteen, training of workers in hygiene, etc. He suggested that proper treatment of workers pays dividends and is an essential part of every manager's job.

ii. Hugo Munsterberg (1863-1916):

He developed a psychology laboratory at Harvard University where he studied the application of psychology to the organizational settings. Psychology and Industrial Efficiency he argued for the study of scientific study of human behaviour to identify the general patterns and to explain individual differences.

Thus, his concern for the human side of business led his peers to consider him to be father of industrial psychology. He successfully documented the psychological conditions associated with varying levels of work productivity, and he instructed managers on ways to match workers with jobs and also how to motivate them.

Munsterberg suggested the use of psychological tests to improve employee selection, the value of learning theory in the development of training methods, and the study of human behaviour to determine what techniques are most effective for motivating workers.

iii. George Elton Mayo (1880-1949):

Mayo was a professor at the Harvard Business School. He served as the leader of the team which carried out the famous Hawthorne Experiments at the Hawthorne plant of the Western Electric Company (USA) during 1927- 32. Originally the research was an application of Taylor's management science techniques designed to improve production efficiency.

Mayo discussed in detail the factors that cause a change in human behaviour. Mayo's first study involved the manipulation of illumination for one group of workers and comparing their output with that of another group whose illumination was held constant. He concluded that the cause of increase in the productivity of workers is not a single factor like changing working hours or rest pauses but a combination of these several other factors.

Considerate supervision, giving autonomy to the workers, allowing the formation of small cohesive groups of workers, creating conditions which encourage and support the growth of these groups and the cooperation between workers and management lead to increase in productivity.

Mayo's contribution to management thoughts lies in the recognition of the fact that worker's performance is related to psychological, sociological and physical factors. Mayo and his associates concluded that a new social setting created by their tests had accounted for the increase in productivity. Their finding is now known as the Hawthorne Effect or the tendency for people, who are singled out for special attention, to improve their performance.

Hawthorne study was an important landmark in studying the behaviour of workers and his relationship to the job, his fellow workers and organization. He highlighted that workers were found to restrict their output in order to avoid displeasure of the group, even at the sacrifice of incentive pay. Thus, Hawthorne studies were a milestone in establishing the framework for further studies into the field of organizational behaviour.

iv. Mary Parker Follett (1868-1933):

She was a social philosopher whose ideas had clear implications for management practice. Her contribution towards the understanding of group is of immense value. She believed that groups were the mechanisms through which people could combine their differing talents for the greater good of the organization, which she defined as the community in which managers and subordinates could work in harmony.

The managers and workers should view themselves as partners and as a part of common group. She was convinced that the traditional and artificial distinction between the managers who give the orders and the workers who take the orders obscured their natural relationships. Manager should rely more on their expertise and knowledge to lead subordinates than on the formal authority of their position.

Thus, her humanistic ideas influenced the way we look at motivation, leadership, power and authority. The Follett Behavioural Model of control being sponsored by an oriented towards the group, while self-control exercised by both individuals and the group ultimately result in both sharing the power. In the Follett Holistic Model of Control, Follett captured the interactive, integrative nature of self-control groups being influenced by the forces within the work environment.

v. Abraham Maslow:

He was a humanistic psychologist, proposed a hierarchy of five needs- physiological, safety, social, esteem and self-actualization. He proposed that man was a wanting animal whose behaviour was calculated to serve his most pressing needs.

A need can be described as a physiological or psychological deficiency that a person is motivated to satisfy. Maslow further proposed that man's need could be placed in a hierarchy of needs. The study shows that a man has various needs and their order can be determined.

The moment the first need of man is satisfied he starts thinking of the second need, and then follows his worry about the third need and the sequence continues till all the needs are satisfied.

Maslow's theory is operationalized through two principles:

- a. The deficit principle holds that a relatively well-satisfied need is not a strong motivator of behaviour.
- b. The progression principle holds that, once a need is fairly-well satisfied, behaviour is dominated by the next level in the need hierarchy.

(1) Physiological Needs:

This category includes those needs which a man needs to satisfy first of all in order to remain alive. It includes food to eat, house to live in, clothes to wear and sleep for rest.

(2) Safety Needs:

After having satisfied the physical needs a man thinks of his safety. Safety needs mean physical, economic and psychological safety. Physical safety means saving him from accidents, diseases and other unforeseen situations. Economic safety means security of

employment and making provision for old age. Psychological safety means maintaining his prestige.

(3) Social Needs:

Man is a social being and wants to live in society with honour. It is, therefore, necessary that he should have friends and relatives with whom he can share his joys and sorrows.

(4) Esteem and Status Needs:

They are called ego needs of man. It means everybody wants to get a high status which may increase his power and authority.

(5) Self-Actualization Needs:

Last of all man tries to satisfy his self-actualization need. It means that a man should become what he is capable of. For example, a musician wants to be proficient in the art of music, an artist wants to gain proficiency in creating works of art and similarly, a poet wants to be an expert in the art of writing poems.

vi. Douglas McGregor (1906-1964):

He is best known for his formulation of two sets of assumptions-Theory X and Theory Y. McGregor argued that managers should shift their traditional views of man and work (which he termed Theory X) to a new humane views of man and work (which he termed Theory Y). According to McGregor, Theory X attitudes, that man was lazy and work was bad were both pessimistic and counterproductive. Theory X assumes that people have little ambition, dislike work, want to avoid responsibility, and need to be closely supervised to work effectively. Theory Y view that man wanted to work and work was good should become the standard for humanizing the workplace. Theory Y offers a positive view, assuming that people can exercise self-direction, accept responsibility and consider work to be as natural as rest or play. McGregor believed that Theory Y assumptions best captured the true nature of workers and should guide management practice.

vii. Chris Argyris:

He was an eminent social scientist and a professor of industrial administration at Yale University. He conducts research into personality and organizational life factors and developed the theory that both traditional management practices and organizational structure are inconsistent with the growth and development of the matured personality. Further he argued that the continuing incongruence between one's work environment and one's personality will result in conflict, frustration and failure.

4. Quantitative School:

With the revolutionary change in the application of information technology came the quantitative school of thoughts, which finds its foundation in decision theory, the application of statistics in decision-making and the evolution of mathematical/econometric models that are nurtured by computer technology. This approach is based upon the assumption that mathematical techniques can help the manager in solution of problems.

The features of quantitative management school were:

- i. Primary Focus on Decision-Making- The end result of problem analysis will include direct implications for managerial action.
- ii. Based on Economic Decision Theory- Final actions are chosen criteria as costs, revenue and rates of return on investment.
- iii. Use of Formal Mathematical Models- Possible solutions to problems are specified as mathematical equations and then analyzed according to mathematical rules and formulas.
- iv. Frequent Use of Computers- Heavy reliance is placed on computers and their advanced processing capabilities.

The quantitative approach has found favour through the following applications:

(1) Operations Management:

It entails the application of quantitative methods to the organizational tasks of production and operations control.

The operational management techniques utilizes following basic quantitative techniques:

- i. Forecasting is the process by which future predictions are formulated through mathematical computations.
- ii. Inventory control entails the control of costly inventories through mathematical formulas that determine the proper level of inventory to be maintained as well as the economic quantities to be ordered.
- iii. Linear programming involves the use of computations to allocate scarce resources for their optimal use.
- iv. Networks are complex models, such as Program Evaluation and Review Techniques (PERT) and the Critical Path Methods (CPM) for analyzing, planning and controlling complex operations.
- v. Regression analysis is used to predict the relationships between two or more variables and to determine how changes in one variable might affect other variables.

(2) Management Information System:

These are integrated programmes for the collection, analysis and dissemination of information to support management decision-making. The total MIS network is more than a machine; it contains human resources, hardware, software and intricate processes. Most MIS networks are computer based due to vast amount of number crunching to be done. That is why the ideal MIS provides accurate, condensed informational analysis to the appropriate manager in a timely manner.

5. Integration School:

In recent years, an attempt has been made to integrate the classical theories with the modern behavioural and quantitative theories into an overall framework that use the best of each

approach. These approaches assumed that there is no best way to manage, and all theories have application to the practice of management.

Two such integrative developments are explained as follows:

Contingency Theory:

It is based on the notion that the proper management technique in a given situation depends upon the nature and conditions of that situation. The contingency view of management is highlighted in Figure 7.6 contend that an organizational phenomenon exists in logical patterns which managers can come to understand.

Along with this organizational understanding comes the development of unique behaviours that have proven successful in particular situations. However, there are no universal solution techniques because every problem situation is unique in itself.

6. Contemporary School:

The contemporary school of management thoughts outlines the framework for studying the more recent trends in management practices, such as the impact of global business, Theory Z concepts, McKinsey 7-S approach, the search for excellence, and the concern for quality and productivity.

These are explained as follows:

i. Global:

The recent emergence of a truly global economy is affecting every manager in the world. In today's environment, success in the long-run demands that the manager think globally, even if he can still limit his actions to local market.

ii. Theory Z:

These firms are those which are highly successful American firms that use many of the Japanese management practices. The Type Z firm features long-term employment with a moderately specialized career path and slow evaluation and promotion. Lifetime employment would not be especially attractive to America's mobile workforce and the slow evaluation and promotion processes would not meet the high expectations of American workers.

iii. Mckinsey 7-S:

The 7-S factors are as follows:

(a) Strategy- The plans that determine the allocation of an organization's scarce resources and commit the organization to a specified course of action.

(b) Structure- The design of the organization that determines the number of levels in its hierarchy and the location of the organization's authority.

(c) Systems- The organizational processes and proceduralized reports and routines.

(d) Staff- The key human resource groups within an organization, described demographically.

(e) Style- The manner in which manager behave in pursuit of organizational goals.

(f) Skills- The distinct abilities of the organization's personnel.

(g) Superordinate Goals (shared values)- The significant meanings or guiding concepts that an organization instill in its members.

iv. Excellence:

The firms that qualified as excellent companies shared the following characteristics:

- (a) A successful firm makes things happen.
- (b) Successful firms make it a point to know their customers and their needs.
- (c) Autonomy and entrepreneurship is valued in each employee.
- (d) Productivity through people is based on trust.
- (e) Hands on, value driven management is mandatory.
- (f) A firm must always deal with strength.
- (g) A firm leads to cost-effective works teams.
- (h) A firm can decentralize many decisions while retaining tight controls, usually through the function of finance.

v. Quality and Productivity:

In today's dynamic marketplace, consumers are encouraged to buy a product that demonstrates the highest level of quality at the optimum price. This requires a dedicated and skilled workforce that places utmost importance on quality workmanship.

Schools of Management Thought – 3 Schools of Management Thought: Branches, Aspects and Limitations

I. Quantitative School of Management:

The quantitative approach to management involves the use of quantitative techniques, such as statistics, information models, and computer simulations, to improve decision making. The quantitative approach facilitates disciplined thinking, while defining management problems and establishing relationship among the variables involved.

This quantitative school of management consists of several branches as under:

1. Management science
2. Operations management
3. Management information systems
4. Systems management theory

1. Management Science:

The management science school emerged to treat the problems associated with global warfare. Encourages managers to use mathematics, statistics, and other quantitative techniques to make management decisions. Managers can use computer models to figure out the best way to do something as saving both money and time. Managers use several science applications.

Mathematical forecasting helps make projections that are useful in the planning process.

Inventory modeling helps control inventories by mathematically establishing how and when

to order a product. Queuing theory helps allocate service personnel or workstations to minimize customer waiting and service cost.

It developed during World War II as strategists tried to apply scientific knowledge and methods to the complex problems of war. Industry began to apply management science after the war. George Dantzig developed linear programming, an algebraic method to determine the optimal allocation of scarce resources.

Other tools used in industry include inventory control theory, goal programming, queuing models, and simulation. Management science approach also known as mathematical or quantitative measurement approach, visualizes management as a logical entity, the action of which can be expressed in terms of mathematical symbol relationships and measurement data.

2. Operations Management:

This school focuses on the operation and control of the production process that transforms resources into finished goods and services. Operations management emphasizes productivity and quality of both manufacturing and service organizations. W. Edwards Deming exerted a tremendous influence in shaping modern ideas about improving productivity and quality. Major areas of study within operations management include capacity planning, facilities location, facilities layout, materials requirement planning, scheduling, purchasing and inventory control, quality control, computer integrated manufacturing, just-in-time inventory systems, and flexible manufacturing systems.

Focuses on managing the process of transforming materials, labor, and capital into useful goods and services. The product outputs can be either goods or services; effective operations management is a concern for both manufacturing and service organizations.

The resource inputs, or factors of production, include the wide variety of raw materials, technologies, capital information, and people needed to create finished products. The transformation process, in turn, is the actual set of operations or activities through which various resources are utilized to produce finished goods or services of value to customers or clients.

Pays close attention to the demands of quality, customer service, and competition. The process begins with attention to the needs of customers: What do they want? Where do they want it? When do they want it? Based on the answers to these questions, managers line up resources and take any action necessary to meet customer expectations.

3. Management Information Systems:

A management information system organizes past, present, and projected data from both internal and external sources and processes it into usable information, which it then makes available to managers at all organizational levels. The information systems are also able to organize data into usable and accessible formats.

As a result, managers can identify alternatives quickly, evaluate alternatives by using a spreadsheet program, pose a series of “what-if” questions, and finally, select the best alternatives based on the answers to these questions.

Focuses on providing needed information to managers in a useful format and at the proper time. Decision support systems (DSS) attempt to integrate decision models, data, and the decision maker into a system that supports better management decisions.

4. Systems Management Theory:

The systems school focuses on understanding the organization as an open system that transforms inputs into outputs. This school is based on the work of a biologist, Ludwig von Bertalanffy, who believed that a general systems model could be used to unite science.

Early contributors to this school included Kenneth Boulding, Richard Johnson, Fremont Kast, and James Rosenzweig. The systems school focuses on the organization as a whole, its interaction with the environment, and its need to achieve equilibrium. Many of the ideas inherent in the systems school formed the basis for the contingency school of management.

The systems management theory has had a significant effect on management science. A system is an interrelated set of elements functioning as a whole. System approach of management lacks universality and its precepts cannot be applied to all organizations.

An organization as a system is composed of four elements:

- i. Inputs- Raw material, human resources and money.
- ii. Transformation processes- Technological and managerial processes.
- iii. Outputs- Products or services.
- iv. Feedback- Reactions from the environment

II. Contingency School of Management:

The contingency school originated in the 1960s. Major contributors to this school of management thought include Joan Woodward, Paul Lawrence, Jay Lorsch, and Fred Fiedler, etc. Management action is contingent on certain outside system or subsystem. Organizational action should be based on the behavior of action outside the system so that organization should be integrated with the environment.

Because of specific organization-environment relationship no action can be universal. It varies from situation to situation. Focuses on applying management principles and processes as dictated by the unique characteristics of each situation. It emphasizes that there is no one best way to manage and that it depends on various situational factors, such as the external environment, technology, organizational characteristics, characteristics of the manager, and characteristics of the subordinates.

Contingency theorists often implicitly or explicitly criticize the classical school for its emphasis on the universality of management principles; however, most classical writers recognized the need to consider aspects of the situation when applying management principles.

It has been applied primarily to management issues such as organizational design, job design, motivation, and leadership style. Can be summarized as an “it all depends” approach. The appropriate management actions and approaches depend on the situation. Managers with a contingency view use a flexible approach, draw on a variety of theories and experiences, and evaluate many options as they solve problems.

In the contingency perspective, managers are faced with the task of determining which managerial approach is likely to be most effective in a given situation. Contingency thinking avoids the classical “one best way” arguments and recognizes the need to understand situational differences and respond appropriately to them. It does not apply certain management principles to any situation.

Contingency theory is recognition of the extreme importance of individual manager performance in any given situation. The contingency approach is highly dependent on the experience and judgment of the manager in a given organizational environment. The basic idea of contingency approach is that there cannot be a particular management action which will be suitable for all situations. Rather, an appropriate action is one which is designed on the basis of external environment and internal states and needs.

Contingency approach tries to fill this gap by suggesting what should be done in response to an event in the environment. Contingency approach, on the other hand suggests an active interrelationship between the variables in a situation and the managerial actions devised.

Limitations of Contingency School of Management:

- i. Inadequate Literature – Contingency approach suffers from inadequacy of literature.
- ii. Complex – Determination of situation in which managerial action is to be taken involves analysis of a large number of variables with multifarious dimensions.
- iii. Reactive not Proactive – Contingency approach is basically reactive in nature. It merely suggests what managers can do in given situation.

III. Contemporary School of Management:

a. Total Quality Management (TQM):

Total quality management (TQM) is a philosophy or approach to management that focuses on managing the entire organization to deliver quality goods and services to customers. This approach to management was implemented in Japan after World War II and was a major factor in their economic renaissance.

TQM has at least four major elements:

1. Employee involvement is essential in preventing quality problems before they occur.
2. A customer focus means that the organization must attempt to determine customer needs
3. Wants.
4. Deliver products and services that address them.

Benchmarking means that the organization is always seeking out other organizations that perform a function or process more effectively and using them as a standard, or benchmark,

to judge their own performance. The organization will also attempt to adapt or improve the processes used by other companies.

A philosophy of continuous improvement means that the organization is committed to incremental changes and improvements over time in all areas of the organization. TQM has been implemented by many companies worldwide and appears to have fostered performance improvements in many organizations. W. Edward Deming was the best-known proponent of this school of management.

b. The Learning Organization:

All employees are involved in identifying and solving problems, which allows the organization to continually increase its ability to grow, learn, and achieve its purpose. The organizing principle of the learning organization is not efficiency, but problem solving.

Three key aspects of the learning organization are:

1. A team-based structure
2. Empowered employees
3. Open information.

Peter Senge is one of the best-known experts on learning organizations. The dimension that distinguishes' learning from more traditional organizations is the mastery of certain basic disciplines or 'component technologies'. The five that Peter Senge identifies are said to be converging to innovate learning organizations.

They are:

- a. Systems thinking
- b. Personal mastery
- c. Mental models
- d. Building shared vision
- e. Team learning

Reference: <https://www.economicdiscussion.net/management/schools-of-management-thought/31583>