**DATE**

**TIME**

**FORMAT - Plenary participatory lecture**

**TRAINER**

**OBJECTIVES**

At the end of this session, participants will be able to understand and appreciate:

1. Classical, neoclassical and modern theories of organization.  
2. The research organization as a social system.  
3. The importance of and process for goal setting in an organization.  
4. The need for and methods of integration in an organization.  
5. The concept of power in an organization.  
6. Communication in the organization.  
7. The process and models of decision making.

**INSTRUCTIONAL MATERIALS**

|  |  |
| --- | --- |
| Exhibit 1 | Organization theories |
| Exhibit 2 | Taylor's *Principles of Scientific Management* |
| Exhibit 3 | Weber's *Bureaucratic Approach* |
| Exhibit 4 | Fayol's *Principles of Management: Administrative Theory* |
| Exhibit 5 | Principles of the neoclassical approach |
| Exhibit 6 | A modern approach to organization characteristics |
| Exhibit 7 | A modern approach to organizations: the Systems Approach |
| Exhibit 8 | A research organization as a social system |
| Exhibit 9 | The importance of goal setting |
| Exhibit 10 | The process of goal setting |
| Exhibit 11 | The need for integration |
| Exhibit 12 | Methods of integration |
| Exhibit 13 | Organization-based power |
| Exhibit 14 | Communication in the organization |
| Exhibit 15 | The process of decision making |
| Exhibit 16 | Models of decision making |

**REQUIRED READING**

Reading note: *Organizational theories*

**BACKGROUND READING**

None.

**SPECIAL EQUIPMENT AND AIDS**

Overhead projector and chalkboard

**Session guide: Organizational theories**

[Exhibit 1: Organization theories](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%201:%20organization%20theories)  
[Exhibit 2: Taylor's principles of scientific management](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%202:%20taylor's%20principles%20of%20scientific%20management)  
[Exhibit 3: Weber's bureaucratic approach](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%203:%20weber's%20bureaucratic%20approach)  
[Exhibit 4: Fayol's principles of management: Administrative theory](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%204:%20fayol's%20principles%20of%20management:%20administrative%20theory)  
[Exhibit 5: Principles of the neoclassical approach](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%205:%20principles%20of%20the%20neoclassical%20approach)  
[Exhibit 6: Characteristics of modern approaches to the organization](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%205:%20characteristics%20of%20modern%20approaches%20to%20the%20organization)  
[Exhibit 7: Modern approaches to organization: The systems approach](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%207:%20modern%20approaches%20to%20organization:%20the%20systems%20approach)  
[Exhibit 8: The research organization as a social system](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%208:%20the%20research%20organization%20as%20a%20social%20system)  
[Exhibit 9: The importance of goal settings](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%209:%20the%20importance%20of%20goal%20settings)  
[Exhibit 10: The process of goal setting (management by objectives)](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%2010:%20the%20process%20of%20goal%20setting%20(management%20by%20objectives))  
[Exhibit 11: The need for integration](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%2011:%20the%20need%20for%20integration)  
[Exhibit 12: Methods of integration](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%2012:%20methods%20of%20integration)  
[Exhibit 13: Organization-based power](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%2013:%20organization%20based%20power)  
[Exhibit 14: Communication in the organization](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%2014:%20communication%20in%20the%20organization)  
[Exhibit 15: The process of decision making](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%2015:%20the%20process%20of%20decision%20making)  
[Exhibit 16: Models of decision making](https://www.fao.org/3/w7503e/w7503e03.htm#exhibit%2016:%20models%20of%20decision%20making)

There are several theories which explain the organization and its structure (EXHIBIT 1). Classical organization theory includes the *scientific management approach,* Weber's *bureaucratic approach,* and *administrative theory.*

The***scientific management approach*** is based on the concept of planning of work to achieve efficiency, standardization, specialization and simplification. The approach to increased productivity is through mutual trust between management and workers. Taylor (1947) proposed four principles of scientific management:

· science, not rule-of-thumb;  
· scientific selection of the worker;  
· management and labour cooperation rather than conflict; and  
· scientific training of workers.

Show EXHIBIT 2 and discuss these principles.

Weber's***bureaucratic approach*** considers the organization as a part of broader society. The organization is based on the principles of:

· structure;  
· specialization;  
· predictability and stability;  
· rationality; and  
· democracy.

Show EXHIBIT 3, and discuss Weber's bureaucratic approach. Observe that this approach is considered rigid, impersonal, self-perpetuating and empire building.

***Administrative theory*** was propounded by Henry Fayol and is based on several principles of management (EXHIBIT 4). In addition, management was considered as a set of planning, organizing, training, commanding and coordinating functions.

Neoclassical theory emphasizes individual or group behaviour and human relations in determining productivity. The main features of the neoclassical approach are individual, work group and participatory management. Show EXHIBIT 5 and discuss the principles.

Show EXHIBIT 6 on a modern approach to organization characteristics. Modern theories are based on the concept that the organization is an adaptive system which has to adjust to changes in its environment. Discuss the important characteristics of the modern approach to organizations. Modern theories include the *systems approach,* the *socio-technical approach,* and the *contingency or situational approach.*

The ***systems approach*** considers the organization as a system composed of a set of inter-related - and thus mutually dependent - sub-systems. Thus the organization consists of components, linking processes and goals (EXHIBIT 7).

The***socio-technical approach*** considers the organization as composed of a social system, technical system and its environment. These interact among themselves and it is necessary to balance them appropriately for effective functioning of the organization.

The***contingency or situational approach*** recognizes that organizational systems are inter-related with their environment and that different environments require different organizational relationships for effective working of the organization.

Ask participants whether they consider the research organization as a social system. Since scientists constitute the core resource in a research organization, their growth is as important as the growth of the organization. A social organization is characterized by complexity, degrees of inter-dependence between sub-systems, openness, balance and multiplicity of purposes, functions and objectives. Show EXHIBIT 8 and discuss each of these characteristics.

Now move to goal setting in an organization. Ask participants "Why should goals be set?" Goals are set to increase performance and provide control. Show EXHIBIT 9 and discuss how goal setting improves performance. How are goals set? Following management by objectives, the process of goal setting involves five steps (EXHIBIT 10). First, the overall objectives of the organization are set and then an action plan is evolved. The second step is to prepare members in the organization for successful implementation of the action plan. Individual goals are set in the third step. Periodic appraisal and feedback is the fourth step, to ensure smooth implementation of the action plan. Finally, an appraisal of performance by results takes place.

Now discuss the concept of integration and coordination in the organization. These are controlling mechanisms for smooth functioning of the organization. Organizational differentiation is the unbundling and re-arranging of the activities. Integration is re-grouping and re-linking them. The need for integration arises in the face of environmental complexity, diversity and change. Show EXHIBIT 11 and discuss some of the important reasons which necessitate integration.

How is integration achieved? Obviously, the structure of the organization should facilitate proper coordination and integration of different specialized units. What could happen were the organizational structure not proper? Integration is achieved through vertical coordination along the hierarchy, decision making levels, and span of control (EXHIBIT 12). There are several methods to improve integration. These include rules and procedures and professional training.

Next discuss the process in the organization, which involves the concept of power, decision making and communication. Power refers to the ability to get an individual or group to do something or to change in some way. Power could emanate from position, economic status, knowledge, performance, personality, physical or ideological traits. Observe that power is one of the strongest motives, and affects setting of objectives and availability of resources in an organization. Next discuss the concept, and the various types of organization-based power (EXHIBIT 13).

Communication is another important process in the organization and is a key mechanism for achieving integration and coordination of the activities of specialized units at different levels in the organization. Communication can be horizontal, downward or upward (EXHIBIT 14).

Finally, discuss decision making in an organization. It begins with goal setting, identification and evaluation of alternatives and the choice of criteria. Show EXHIBIT 15 and discuss the important steps involved in decision making. There are several models of decision making (EXHIBIT 16).

**Exhibit 1: Organization theories**

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| --- |
| **CLASSICAL ORGANIZATION THEORY**  · Scientific Management approach · Weber's *Bureaucratic approach* · Administrative theory. |

|  |
| --- |
| **NEOCLASSICAL THEORY** |

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| --- |
| **MODERN ORGANIZATION THEORY**  · Systems approach · Socio-technical approach · Contingency or Situational approach |

**Exhibit 2: Taylor's principles of scientific management**

· Science, not rule-of-thumb;  
· Scientific selection of the worker  
· Management and labour cooperation rather than conflict  
· Scientific training of workers

**Exhibit 3: Weber's bureaucratic approach**

Structure  
Specialization  
Predictability and stability  
Rationality  
Democracy

**Exhibit 4: Fayol's principles of management: Administrative theory**

|  |
| --- |
| · Division of work (specialization) · Authority and responsibility · Discipline · Unity of command · Unity of direction · Subordination of individual interest · Remuneration of personnel · Centralization · Scalar chain · Order · Equity · Stability of tenure of personnel · Initiative · *Esprit de corps* *·*The concept of line and staff · Committees · Functions of management - planning - organizing - training - commanding - coordinating |

**Exhibit 5: Principles of the neoclassical approach**

INDIVIDUAL  
WORK GROUP  
PARTICIPATIVE MANAGEMENT

**Exhibit 6: Characteristics of modern approaches to the organization**

|  |
| --- |
| · Systems viewpoint · Dynamic process of interaction · Multilevelled and multidimensional · Multimotivated · Probabilistic · Multidisciplinary · Descriptive · Multivariable · Adaptive |

**Exhibit 7: Modern approaches to organization: The systems approach**

|  |
| --- |
| **COMPONENTS**  · The individual · The formal and informal organization · Patterns of behaviour · Role perception · The physical environment  **LINKING PROCESSES**  · Communication · Balance · Decision analysis  **GOALS OF ORGANIZATION**  · Growth · Stability · Interaction |

**Exhibit 8: The research organization as a social system**

|  |
| --- |
| Characteristics of the research organization  ß ß  Complexity Degree of inter-dependence between sub-systems Openness of the social organization Balance in the social organization Multiplicity of purposes, functions and objectives |

**Exhibit 9: The importance of goal settings**

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| --- |
| · Clarified what people have to do · Identifies problems and facilitates solution · Reduces ambiguity in work · Establishes a relationship between work and organizational achievements · Assists individuals to allocate time, efforts and personal resources · Provides a sense of accomplishment and contentment · Provide control over the people in the organization · Measures performance |

**Exhibit 10: The process of goal setting (management by objectives)**

1. Setting overall organizational objectives and action plan

· identifying key result areas  
· identifying measures of performance  
· stating objectives  
· agreement on objectives and goals

2. Develop the organization  
3. Set individual objectives  
4. Periodic appraisal and feedback  
5. Appraisal by results

**Exhibit 11: The need for integration**

· Environmental complexity, diversity and change

· Increase in structural dimensions

· Specialization

· Across various specialized units - each pursuing individual objectives - to ensure that organizational goals are being pursued

· Conflict resolution

· Better performance and productivity

**Exhibit 12: Methods of integration**

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| --- |
| COORDINATING VERTICALLY THROUGH THE HIERARCHY |
| DETERMINING THE DECISION MAKING LEVEL |
| DECIDING THE SPAN OF CONTROL |

**Exhibit 13: Organization-based power**

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| --- |
| REWARD POWER |
| COERCIVE POWER |
| EXPERT POWER |
| CHARISMATIC POWER |

**Exhibit 14: Communication in the organization**

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| Ý  UPWARD  Ý  Ü Ü Ü HORIZONTAL Þ Þ Þ  ß  DOWNWARD  ß |

**Exhibit 15: The process of decision making**

|  |
| --- |
| SETTING ORGANIZATIONAL GOALS  ß  ESTABLISHING PERFORMANCE CRITERIA  ß  CLASSIFYING AND DEFINING THE PROBLEM  ß  DEVELOPING CRITERIA FOR A SUCCESSFUL SOLUTION  ß  GENERATING ALTERNATIVES  ß  COMPARING ALTERNATIVES TO CRITERIA  ß  CHOOSING AN ALTERNATIVE  ß  IMPLEMENTING THE DECISION  ß  MONITORING THE DECISION AND GETTING FEEDBACK |

**Exhibit 16: Models of decision making**

|  |
| --- |
| *Economic* or *Rational Choice* model |
| *Incremental Bargaining* method |
| Simon's *Bounded Rationality* model |
| Peters and Waterman's *Well Managed* model |
| Quantitative techniques |

**Reading note: Organizational theories**

[Classical organization theory](https://www.fao.org/3/w7503e/w7503e03.htm#classical%20organization%20theory)[Neoclassical theory](https://www.fao.org/3/w7503e/w7503e03.htm#neoclassical%20theory)[Modern theories](https://www.fao.org/3/w7503e/w7503e03.htm#modern%20theories)  
[The research organization as a social system](https://www.fao.org/3/w7503e/w7503e03.htm#the%20research%20organization%20as%20a%20social%20system)  
[Process in the organization](https://www.fao.org/3/w7503e/w7503e03.htm#process%20in%20the%20organization)  
[References](https://www.fao.org/3/w7503e/w7503e03.htm#references)

Organizational theories which explain the organization and its structure can be broadly classified as classical or modern.

**Classical organization theory**

[Taylor's scientific management approach](https://www.fao.org/3/w7503e/w7503e03.htm#taylor's%20scientific%20management%20approach)  
[Weber's bureaucratic approach](https://www.fao.org/3/w7503e/w7503e03.htm#weber's%20bureaucratic%20approach)  
[Administrative theory](https://www.fao.org/3/w7503e/w7503e03.htm#administrative%20theory)

Classical organization theories (Taylor, 1947; Weber, 1947; Fayol, 1949) deal with the formal organization and concepts to increase management efficiency. Taylor presented scientific management concepts, Weber gave the bureaucratic approach, and Fayol developed the administrative theory of the organization. They all contributed significantly to the development of classical organization theory.

**Taylor's scientific management approach**

The scientific management approach developed by Taylor is based on the concept of planning of work to achieve efficiency, standardization, specialization and simplification. Acknowledging that the approach to increased productivity was through mutual trust between management and workers, Taylor suggested that, to increase this level of trust,

· the advantages of productivity improvement should go to workers,  
· physical stress and anxiety should be eliminated as much as possible,  
· capabilities of workers should be developed through training, and  
· the traditional 'boss' concept should be eliminated.

Taylor developed the following four principles of scientific management for improving productivity:

· *Science, not rule-of-thumb* Old rules-of-thumb should be supplanted by a scientific approach to each element of a person's work.

· *Scientific selection of the worker* Organizational members should be selected based on some analysis, and then trained, taught and developed.

· *Management and labour cooperation rather than conflict* Management should collaborate with all organizational members so that all work can be done in conformity with the scientific principles developed.

· *Scientific training of the worker* Workers should be trained by experts, using scientific methods.

**Weber's bureaucratic approach**

Considering the organization as a segment of broader society, Weber (1947) based the concept of the formal organization on the following principles:

· *Structure* In the organization, positions should be arranged in a hierarchy, each with a particular, established amount of responsibility and authority.

· *Specialization* Tasks should be distinguished on a functional basis, and then separated according to specialization, each having a separate chain of command.

· *Predictability and stability* The organization should operate according to a system of procedures consisting of formal rules and regulations.

· *Rationality* Recruitment and selection of personnel should be impartial.

· *Democracy* Responsibility and authority should be recognized by designations and not by persons.

Weber's theory is infirm on account of dysfunctions (Hicks and Gullett, 1975) such as rigidity, impersonality, displacement of objectives, limitation of categorization, self-perpetuation and empire building, cost of controls, and anxiety to improve status.

**Administrative theory**

The elements of administrative theory (Fayol, 1949) relate to accomplishment of tasks, and include principles of management, the concept of line and staff, committees and functions of management.

· *Division of work or specialization* This increases productivity in both technical and managerial work.

· *Authority and responsibility* These are imperative for an organizational member to accomplish the organizational objectives.

· *Discipline* Members of the organization should honour the objectives of the organization. They should also comply with the rules and regulations of the organization.

· *Unity of command* This means taking orders from and being responsible to only one superior.

· *Unity of direction* Members of the organization should jointly work toward the same goals.

· *Subordination of individual interest to general interest* The interest of the organization should not become subservient to individual interests or the interest of a group of employees.

· *Remuneration of personnel* This can be based on diverse factors such as time, job, piece rates, bonuses, profit-sharing or non-financial rewards.

· *Centralization* Management should use an appropriate blend of both centralization and de-centralization of authority and decision making.

· *Scalar chain* If two members who are on the same level of hierarchy have to work together to accomplish a project, they need not follow the hierarchy level, but can interact with each other on a 'gang plank' if acceptable to the higher officials.

· *Order* The organization has a place for everything and everyone who ought to be so engaged.

· *Equity* Fairness, justice and equity should prevail in the organization.

· *Stability of tenure of personnel* Job security improves performance. An employee requires some time to get used to new work and do it well.

· *Initiative* This should be encouraged and stimulated.

· *Esprit de corps* Pride, allegiance and a sense of belonging are essential for good performance. Union is strength.

· *The concept of line and staff* The concept of line and staff is relevant in organizations which are large and require specialization of skill to achieve organizational goals. Line personnel are those who work directly to achieve organizational goals. Staff personnel include those whose basic function is to support and help line personnel.

· *Committees* Committees are part of the organization. Members from the same or different hierarchical levels from different departments can form committees around a common goal. They can be given different functions, such as managerial, decision making, recommending or policy formulation. Committees can take diverse forms, such as boards, commissions, task groups or *ad hoc* committees. Committees can be further divided according to their functions. In agricultural research organizations, committees are formed for research, staff evaluation or even allocation of land for experiments.

· *Functions of management* Fayol (1949) considered management as a set of planning, organizing, training, commanding and coordinating functions. Gulick and Urwick (1937) also considered organization in terms of management functions such as planning, organizing, staffing, directing, coordinating, reporting and budgeting.

**Neoclassical theory**

[Principles of the neoclassical approach](https://www.fao.org/3/w7503e/w7503e03.htm#principles%20of%20the%20neoclassical%20approach)

Neoclassical theorists recognized the importance of individual or group behaviour and emphasized human relations. Based on the Hawthorne experiments, the neoclassical approach emphasized social or human relationships among the operators, researchers and supervisors (Roethlisberger and Dickson, 1943). It was argued that these considerations were more consequential in determining productivity than mere changes in working conditions. Productivity increases were achieved as a result of high morale, which was influenced by the amount of individual, personal and intimate attention workers received.

**Principles of the neoclassical approach**

The classical approach stressed the formal organization. It was mechanistic and ignored major aspects of human nature. In contrast, the neoclassical approach introduced an informal organization structure and emphasized the following principles:

· *The individual* An individual is not a mechanical tool but a distinct social being, with aspirations beyond mere fulfilment of a few economic and security works. Individuals differ from each other in pursuing these desires. Thus, an individual should be recognized as interacting with social and economic factors.

· *The work group* The neoclassical approach highlighted the social facets of work groups or informal organizations that operate within a formal organization. The concept of 'group' and its synergistic benefits were considered important.

· *Participative management* Participative management or decision making permits workers to participate in the decision making process. This was a new form of management to ensure increases in productivity.

Note the difference between Taylor's 'scientific management' - which focuses on work - and the neoclassical approach - which focuses on workers.

**Modern theories**

[The systems approach](https://www.fao.org/3/w7503e/w7503e03.htm#the%20systems%20approach)  
[Socio-technical approach](https://www.fao.org/3/w7503e/w7503e03.htm#socio%20technical%20approach)  
[The contingency or situational approach](https://www.fao.org/3/w7503e/w7503e03.htm#the%20contingency%20or%20situational%20approach)

Modern theories tend to be based on the concept that the organization is a system which has to adapt to changes in its environment. In modern theory, an organization is defined as a designed and structured process in which individuals interact for objectives (Hicks and Gullet, 1975). The contemporary approach to the organization is multidisciplinary, as many scientists from different fields have contributed to its development, emphasizing the dynamic nature of communication and importance of integration of individual and organizational interests. These were subsequently re-emphasized by Bernard (1938) who gave the first modern and comprehensive view of management. Subsequently, conclusions on systems control gave insight into application of cybernetics. The operation research approach was suggested in 1940. It utilized the contributions of several disciplines in problem solving. Von Bertalanffy (1951) made a significant contribution by suggesting a component of general systems theory which is accepted as a basic premise of modern theory.

Some of the notable characteristics of the modern approaches to the organization are:

· a systems viewpoint,  
· a dynamic process of interaction,  
· multilevelled and multidimensional,  
· multimotivated,  
· probabilistic,  
· multidisciplinary,  
· descriptive,  
· multivariable, and  
· adaptive.

Modern understandings of the organization can be broadly classified into:

· the systems approach,  
· socio-technical theory, and  
· a contingency or situational approach.

**The systems approach**

The systems approach views organization as a system composed of interconnected - and thus mutually dependent - sub-systems. These sub-systems can have their own sub-sub-systems. A system can be perceived as composed of some components, functions and processes (Albrecht, 1983). Thus, the organization consists of the following three basic elements (Bakke, 1959):

(i) *Components* There are five basic, interdependent parts of the organizing system, namely:

· the individual,  
· the formal and informal organization,  
· patterns of behaviour emerging from role demands of the organization,  
· role comprehension of the individual, and  
· the physical environment in which individuals work.

(ii) *Linking processes* The different components of an organization are required to operate in an organized and correlated manner. The interaction between them is contingent upon the linking processes, which consist of communication, balance and decision making.

· *Communication* is a means for eliciting action, exerting control and effecting coordination to link decision centres in the system in a composite form.

· *Balance* is the equilibrium between different parts of the system so that they keep a harmoniously structured relationship with one another.

· *Decision analysis* is also considered to be a linking process in the systems approach. Decisions may be to produce or participate in the system. Decision to produce depends upon the attitude of the individual and the demands of the organization. Decision to participate refers to the individual's decisions to engross themselves in the organization process. That depends on what they get and what they are expected to do in participative decision making.

(iii) *Goals of organization* The goals of an organization may be growth, stability and interaction. Interaction implies how best the members of an organization can interact with one another to their mutual advantage.

**Socio-technical approach**

It is not just job enlargement and enrichment which is important, but also transforming technology into a meaningful tool in the hands of the users. The socio-technical systems approach is based on the premise that every organization consists of the people, the technical system and the environment (Pasmore, 1988). People (the social system) use tools, techniques and knowledge (the technical system) to produce goods or services valued by consumers or users (who are part of the organization's external environment). Therefore, an equilibrium among the social system, the technical system and the environment is necessary to make the organization more effective.

**The contingency or situational approach**

The situational approach (Selznick, 1949; Burns and Stalker, 1961; Woodward, 1965; Lawrence and Lorsch, 1967) is based on the belief that there cannot be universal guidelines which are suitable for all situations. Organizational systems are inter-related with the environment. The contingency approach (Hellriegel and Slocum, 1973) suggests that different environments require different organizational relationships for optimum effectiveness, taking into consideration various social, legal, political, technical and economic factors.

**The research organization as a social system**

[Goal setting](https://www.fao.org/3/w7503e/w7503e03.htm#goal%20setting)  
[Integration and coordination](https://www.fao.org/3/w7503e/w7503e03.htm#integration%20and%20coordination)

An organization is a continuing system, able to distinguish and integrate human activities. The organization utilizes, transforms and joins together a set of human, material and other resources for problem-solving (Bakke, 1959). The main function of an organization is to satisfy specific human needs in interaction with other sub-systems of human activities and resources in the given environment. In a research organization, individual needs of researchers are more often in conflict with organizational needs than in any other organization. Therefore, growth of the organization should concurrently also promote growth of the individual.

**Characteristics of the research organization**

Social organizations are characterized by their complexity, degree of inter-dependence between sub-systems, openness, balance, and multiplicity of purposes, functions and objectives (Huse and Bowditch, 1973).

· *Complexity* A research organization consists of a number of individuals, groups, or departments, each of which is a sub-system within the total system. The prevalence of these sub-systems makes the organization complex.

· *Degree of inter-dependence of sub-systems* The various sub-systems of the research organization are inter-dependent which makes it further complex, as each sub-system has its way of working, requirements, behaviour, etc.

· *Openness of the social organization* Research organizations operate in the wider environment of a larger organization or system, and are therefore open. They have to function in harmony with environmental requirements, goals and functions. This may cause conflicts in the organization unless the sub-systems are appropriately balanced.

· *Balance and the social organization* Social organizations are highly dynamic. Forces such as researchers, managerial hierarchy and various inputs from within and outside the organization have to be balanced for the smooth functioning of the organization.

· *Multiplicity of purpose, functions and objectives* Most research organizations have a multiplicity of sub-systems, each of which has dynamic interactions with others. In the research organization, a researcher can be viewed as a sub-system with specific needs, goals and functioning, although those needs, goals and functioning may sometimes not match those of the organization.

**Goal setting**

In an organization, goal setting is one of the control systems, a component of the appraisal process and an effective tool for human resource management (Locke, 1968; Sherwin, 1976). The concept of goal setting is now used to increase the performance of the organization as well as the individual through management by objectives. Drucker (1954) suggested that management by objectives can be useful for managers for effectively managing the future direction of the organization.

**Importance of goal setting**

Well specified and clear goals improve performance in an organization by:

· making clear what people have to do;

· solving specific problems related to the work as they emerge during the process of goal setting;

· reducing ambivalence in the assigned work and thus encouraging increasing efforts;

· supporting people to find a connection between their work and the achievements of the organization;

· assisting individuals in allocating their time, efforts and personal resources to important areas;

· giving a feeling of accomplishment and contentment when specified goals are achieved; and

· providing some control over the people and their work in an organization. Goals are an objective way of assessing performance in the organization.

There is a definite linkage between goal setting and performance. Latham (1981) reported that

· specified goals are better than vague or general goals,

· difficult and challenging but attainable goals are better than relatively easy goals,

· goals evolved through participation and accepted by workers are preferred to assigned goals, and

· objective and timely feedback about progress toward goals is better than no feedback.

**The process of goal setting**

Peter Drucker suggested thirty years ago that a systematic approach to goal setting and appraising by results leads to improved organizational performance and employee satisfaction. This concept of goal setting is now widely used in most organizations. The process of goal setting (or management by objectives as it is often called) involves several steps (Luthans, 1985):

(i) The first step in the process is setting general organizational objectives and preparing an action plan. Goal setting is based on a top-down approach, and involves:

· identifying key result areas in the organization,

· identifying measures of performance,

· stating objectives, and

· evolving agreement between members of top management on the objectives and goals set.

(ii) Once goals are formulated, the second step is to activate the system for implementation. For successful implementation of such a system, it is essential to prepare the members in the organization.

(iii) The third step is to set individual goals. Individual goals are decided jointly by superiors and subordinates. Once goals are finalized, an action plan is developed for implementation.

(iv) The fourth step involves:

· ensuring that work is carried out in the right direction,  
· identifying obstacles, and  
· making adjustments to eliminate obstacles.

(v) Finally comes appraisal of performance of the individual against the set targets. An appraisal and feedback system is an important part of goal setting. The individual is given feedback on his or her performance, and provided with suitable rewards and motivation.

**Integration and coordination**

Integration and coordination refer to integration of the objectives and activities of specialized units or sub-systems in order to achieve the organization's overall strategic objectives. Coordination and integration are necessary controlling mechanisms to ensure placid functioning, particularly when organizations become large and complex. Integration aims at ensuring that different sub-systems work towards common goals.

Integration of the organizational sub-systems relates to differentiation and division of labour in the organization. Organizational differentiation means un-bundling and re-arranging of activities. Re-grouping and re-linking them is organizational integration (Lawrence and Lorsch, 1967). When different units are assigned different tasks and functions, they set independent goals for performing the assigned tasks and function accordingly. In such situations, integration of the activities of different sub-systems is necessary to facilitate smooth working and to bridge communication gaps.

In research organizations, integration of research units and administrative units is very important for the smooth functioning of research activities.

**Need for integration**

Integration and coordination is necessary for several reasons (Anderson, 1988):

· As the organization encounters environmental complexity, diversity and change, it requires more and more differentiation of its units. Need for integration also increases with increase in structural dimensions.

· Different specialized units are required to achieve broad strategic objectives rather than only individual objectives. For the purpose of achieving these strategic objectives, a research manager has to coordinate different units.

· A research manager has to settle conflicts and disputes between different specialized units. When different units are assigned different goals and tasks, conflicts are inevitable. A manager needs to integrate and coordinate the work of different sub-units to effectively resolve conflicts.

· Managers also need to coordinate and integrate independent units or research stations to ensure that their objectives and functioning are in consonance with overall organizational goals and strategies.

· The necessity for coordination increases with increased specialization, because increases in specialized functions leads to decision making in specialized units or sub-units. This may cause conflict.

**Methods of integration**

Within any large organization it is important to have proper communication systems to enable different sub-systems to coordinate various activities and avoid obstacles in the work environment. Lack of proper coordination often causes conflicts in an organization. To ensure proper coordination in research organizations, the research manager has to take care of behavioural dimensions (such as motivation and conflicts) while ensuring an efficient overall structure.

**Achieving integration**

The structure of a research institution needs to be suitably designed to facilitate proper coordination and integration of different specialized units. A poorly designed structure may:

· hinder coordination and integration,  
· cause conflicts, and  
· lead to poor performance.

***Coordinating vertically through hierarchy***

Work is assigned to specialized units and coordinated by a manager. A hierarchy (vertical) of authority evolves from lower to higher levels. A manager can use the following principles of hierarchy of authority for integrating specialized units:

· The *unity of command* principle. Every worker should report to only one manager.

· The *scalar* principle. Decision making authority (and a chain of command) should be from the top to lower levels.

· *Responsibility* principle. A manager is accountable for the performance of his or her subordinates. In turn, subordinates are responsible to their manager for their performance.

***Determining the decision making level***

A manager has to decide about the levels at which decisions are to be taken, and this would depend upon the type, impact and values of decisions.

***Deciding the span of control***

Span of control refers to the number of specialized activities or personnel supervised by one manager. There is no optimal number for a span of control and number of levels in the hierarchy. In fact, span of control and hierarchy levels are inter-related and depend on situational factors (Barkdull, 1963). Some of the important situational factors are:

· Similarity of functions.  
· Complexity of supervised functions.  
· Direction and control needed by subordinates.  
· Coordination required by the manager.  
· Planning required by the manager.  
· Organizational help received by the manager.

**Methods to improve integration**

There are several ways to improve integration, the most common being through a hierarchy of authority. For this, specialized units whose activities are inter-related could be put under one manager.

Coordination can also be improved through

· developing rules and procedures wherever possible,  
· providing professional training,  
· liaison roles, and  
· use of professional committees involving managers from different specialized units.

Using committees to improve coordination is more difficult than other methods, as it requires considerable skills in group dynamics and technical knowledge on the part of the chairperson of the committee. The person who takes this role must not be involved directly in the work, but tries to assist managers in improving integration.

**Process in the organization**

[Power in the organization](https://www.fao.org/3/w7503e/w7503e03.htm#power%20in%20the%20organization)  
[Communication in the organization](https://www.fao.org/3/w7503e/w7503e03.htm#communication%20in%20the%20organization)

Norms for proper functioning of the organization are evolved through organizational processes. These relate to power, decision making, communication, motivation and leadership. Socialization also plays a significant role.

**Power in the organization**

Power refers to the ability to get an individual or group to do something or to change in some way. Politics is a process to achieve power. Power is inter-related with authority and influence. Bernard (1938) defined authority in terms of 'legitimate power.' Power is considered as an essential element in any human organization so as to engender order and coordinate various activities. Power provides one of the strongest motivations (Galbraith, 1952). It also affects the setting of objectives and the distribution of resources in an organization. The source of power can be positional, economic, knowledge, performance, personality, physical or ideological (Hicks, 1975). Organization-based power refers to the power beyond the range of legitimate authority because of the position which a person has in the organization (Milgram, 1974). This power can be controlled and transferred by the organization.

Four categories of organizational power can identified, according to source (French and Raven, 1959):

· *Reward power* This refers to the control over rewards desired by others. This is given by persons at a higher level or by decision-makers.

· *Coercive power* This is the power to give punishment. This too is given by persons at a higher level or by decision-makers.

· *Expert power* This is based on personal skills, knowledge, training, experience, etc. It cannot be transferred by the organization since it is person-specific.

· *Charismatic power* This derives from the sensitivity of the owner. This facilitates association with others.

In research organizations, as in other organizations, power plays a significant role. It influences the organization's strategies, recruitment of competent scientists, behavioural control system and changes in the organizational structure.

**Communication in the organization**

Communication is a basic element in organizational structure and functioning. It is the key mechanism for achieving integration and coordination of the activities of specialized units at different levels in the organization.

The communication process consists of seven steps (Shannon and Weaver, 1949): message, encoding, transmitting, receiving, decoding, understanding and feedback.

Organizational communication can be horizontal, upward, and downward:

· *Horizontal*(*lateral*)*communication* aims at linking related tasks, work units and divisions in the organization. The importance of horizontal communication increases with task specialization and diversity in organizational structure. The need for lateral or horizontal communication was first stressed by Fayol (1949), when he suggested a 'gang plank' between similar hierarchical positions.

· *Downward communication* provides information from higher levels to lower levels. Being superior-subordinate communication, it follows the chain of command through the line of authority. Downward communication can be of four types (Katz and Kahn, 1966):

- communication designed to provide job rationale to produce understanding of the task and its relation to other organizational tasks;

- communication about organizational procedures and practices;

- feedback to the subordinate about his or her performance; and

- communication to foster inculcation of organizational goals.

· *Upward communication* serves as a control system for the organization.

In an agricultural research organization, a suitable blending of lateral, downward and upward communication is required to effectively coordinate and integrate activities of individual subsystems. The effectiveness of research results greatly depends upon proper communication links among scientists, between scientists and agricultural extension workers, and between extension workers and farmers.

In an agricultural research organization, there are several specialized sub-systems which need to be integrated through horizontal communication. Downward communication facilitates transmission of research results to actual users. Upward communication enables flow of information from lowers level to the top level:

farmers Þ extension workers Þ scientists Þ research manager Þ DG and policy-makers

**Organizational decision making**

Decision making is choosing among alternatives. It starts with goal setting in the organization, and entails searching for alternatives, analysing alternatives and choosing criteria. Decisions may pertain to

· broad policies or plans for the organization,  
· programmes and projects to achieve goals, or  
· operations of programmes and management systems.

The process of decision making involves nine steps (Hicks and Gullet, 1975; Anderson 1988):

(i) Setting organizational goals.  
(ii) Establishing performance criteria.  
(iii) Classifying and defining the problem.  
(iv) Developing criteria for a successful solution.  
(v) Generating alternatives.  
(vi) Comparing alternatives to criteria.  
(vii) Choosing an alternative.  
(viii) Implementing the decision.  
(ix) Monitoring the decision and getting feedback.

**Models of decision making**

There are five major models for decision making in an organization (Gortner, Mahler and Nicholson, 1987). They are:

· The *economic* or *rational choice* model, as used in bureaucratic organizations. It is based on rational choice among well reasoned and logical alternatives.

· *Incremental bargaining,* commonly used in resolving conflicts through negotiation.

· Simon's *bounded rationality* model, which is used as an aggregative model in administrative practices. This model is suitable as a consultant-assisted method for policy making.

· Peters and Waterman's *well managed* model (also called the *garbage can* or *non-decision making* model) aims at formulating a descriptive model of choice which focuses on the expressive character of decision making in the organization. It does not consider rationality and incrementation. This method is based on an empirical perception of how successful organizations are being run.

· *Quantitative techniques of decision making.* Decisions have to be made under varying conditions of certainty or uncertainty, with different degrees of risk (Luthans, 1985).

Certainty decisions are largely made by managers at lower levels under known conditions with known outcomes. For such decisions, nearly complete information is available. Quantitative techniques are not usually required to make certainty decisions. However, calculus and a few mathematical programming techniques can be useful.

Risk decisions are more difficult to make than certainty decisions because of limited information and the possibility of several outcomes for each alternative. Most risk decisions are taken at higher levels. For risk decisions, probability techniques (objective and subjective probability) are widely used.

Decisions under uncertainty are the most intricate. For such decisions, probability techniques are of limited help. However, minimax analysis and Bayes's procedure can be used in refining the decision making process under conditions of uncertainty. Minimax analysis attempts to calculate the worst outcome that can occur for each alternative, whereas Bayes's procedure is based on the concept of expected value and assumes that each possible outcome has an equal chance of occurring.

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