THE ROLE OF MANAGEMENT INFORMATION SYSTEM (MIS) IN THE MANAGEMENT OF ORGANIZATIONS

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Abstract-Accurate, appropriate and timely information is very important in any human endeavor in today's world. The communication and processing of information whether in business Sciences, education or government, has become one of the world's major endeavors. Computers are indispensable in this effort. The invention of computer has enabled much work to be done fast and accurately. Computers are used in engineering, research, and business-cooperation, also in diverse fields such as education, crime prevention, traffic control, ecological studies, and many other social studies. Computers have been playing an increasing important role in practically everyone's life for the past quarter of the century it predicts the weather, provide balance sheets. Scrutinizes tax returns, guides intercontinental missiles and performs innumerable other operations for governments and cooperation even in health sectors.

I. INTRODUCTION

For the fact that computers are significantly affecting numerous functions in society, it is increasingly important for all individuals to posses at lease a conceptual understanding of the process it's involved. A lot of activities and functions make the use of computer to grow each day.

To appreciate the role of computer in information management in any business organization, it suffices to outline what we understand by information in the ordinary sense as well in the science sense.

Most of our fields permit the interchange of Data and information, except in management information specialization. Data is defined to be raw ideas or facts obtained from observations, research or recorded document.

Information in the ordinary sense can be defined as a results obtained from processed data, while information in the science sense is regarded as knowledge contains in human brain that is use to make machines to imitate human being.

In general we defined information as knowledge and understanding that is useable by the recipient. The value of information is normally derived from the value of the change in decision behavior coursed by the information minus the production cost of the information.

Information that posses the following feature is more likely to be better information called **relevant information**

(i) Timely (ii) Appropriateness
(iii) Accuracy (iv) Details
(v) Frequency (vi) Understandability

II. APPLICATION OF INFORMATION TECHNOLOGY IN BUSINESS

Information as we define earlier is the result obtains from processed data. With the advancement in technology, modern methods of processing data were developed, as such information technology is the information obtained or information that resulted from the modern technological methods of data processing.

2.1 Information Resource:

Information is a critical resource of organizations, as fundamental as energy or machines

2.2 Qualitative Information:

Apprises and notifies all surprises and stimulates to the reduction of uncertainty and reveals additional alternatives... Below is a simple schematic procedure that represent, how we will think of producing information and disseminating it.

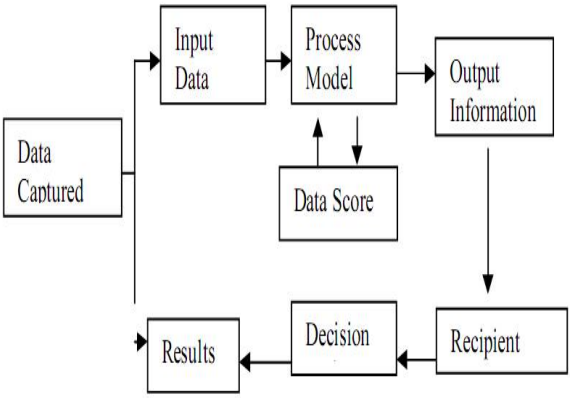


Fig 1. Data Processing

2.3 Need for Information Production:

The need for producing information in every human endeavor in our daily activities is increasing every day. Because timely and accurate information is the essential resource to maintain organization needs.

III. INFORMATION SYSTEM

An information system is a method of using reports to abstractly represent the actual events and conditions related to an organization. It main purposes include;

(i) Processing input
(ii) Maintaining data files
(iii) Outline procedure of information reports and other outputs

3.1 Concept of Management Information System

A modern organization requires information systems to support its managerial activities and decision-making functions. These systems of information are often called **Management Information System (MIS)** or information processing system.

It main purposes are;

(i) Making the transaction systems to be operations oriented
(ii) Assisting managers in decision making and problem solving.
(iii) Draw on data store as a result of transaction processing, but they may also use other information.

MIS characteristic includes:

(i) Providing inputs to be used in the managerial decision processes
(ii) Deals with supporting well structured decision situation process
(iii) Provide typical information requirements

3.2 Information and Control System

The broad view of MIS encompasses four distinct types of information, supporting different type of users, namely;

(i) Information regarding the routine processing of transactions.
(ii) Information necessary for day to day operations planning and decision making.
(iii) Information to aid tactical planning and decision making.
(iv) Information for support of strategic planning and decision making.

Definitions: There are many universally acceptable definitions of MIS. Let us look at two

1. **A Management Information System (MIS)** can be defined as an assemblage of data in such a way that they result in intelligent information that management can use to make decisions, and that the organization can use to attain goals.
2. **MIS** is the combination of human and computer based resources that results in the Collection, storage, retrieval, communication and use of data for the purpose of efficient management of operation and for business planning.

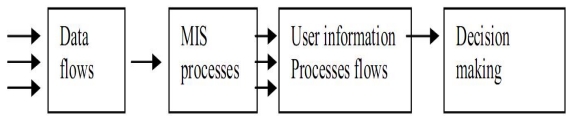


Fig. 2. Data processing and decision making

3.3 Decision Focus on MIS

This means that MIS are qualitatively different from data processing systems and that management involvement and interaction between information specialists and management is the key feature of successful MIS design.

3.4 Data Processing and Information System

Traditionally, computers have been used for basic data processing jobs, which directly affected the organizational operations.

Traditionally, management information has not received high priority.

IV. SWING INTEREST IN MIS

1. Today less time is available between the moment when a problem is presented to management, and the moment when a solution is needed.
2. Changed public attitudes towards organization and authority create need for information systems.
3. Increasingly, organizations are staffed with sophisticated, better-educated people whose work is related to higher-technology processes.
4. Many organizations have gained experience with computers.
5. The computer hardware and software that are needed to handle MIS-level.

4.1 The Importance of Information for Decision Making

All managers perform the functions of planning organizing, controlling, and actuating with a view to using the organization resources in the best way possible. As such

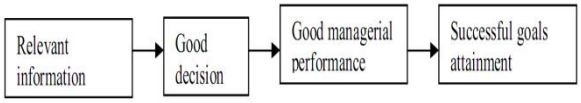


Figure 3: the importance of information to an organization and it suggest:

1. That quality information, in the hands of those who can effectively use it, will support good decision.
2. That good actions will lead to effective performance of managerial functions; and
3. That effective managerial performance will lead to successful attainment of organizational goals.

The specific information required by a particular manager includes:

1. Establish, evaluate and adjust goals;
2. Developed plans and standard to initiate action.

3. Measure actual performance and take appropriate action when performance varies from the plans and standards.
4. Assess achievements.

Related guidelines which can help in determining the information needed by a particular manager include:

1. Identification of those factors that determine the success of the manager's contribution to organizational goal
2. Determination of how these. Critical factors can measure.
3. Establishments of quantifiable measurements that indicate success, for each critical factor.
4. Identification of the information need to ensure achievement of the success measurements. Each day, numerous management decisions may be required. Each decision process can be viewed as transformation of information into decision outputs. Thus, the designer of an information system must concern him/herself with three aspects of the decision process;
   - The information inputs for the decision.
   - The decision process
   - The Decision Outputs and how they result on action.

V. COMPUTERS-BASE MIS

Recent technology has created the potential for significant improvements in MIS. Such potential has aroused considerable interest about computer based MIS.
Computer's features that make an MIS more feasible are;

1. Accurate and rapid processing of data:
2. Vast storage and prompt retrieval of information
3. Performance of computations and logical operations with very high reliability. Without the computer, sophisticated and even unsophisticated information systems would be difficult to attain in today's complex organization.

An effective information system should have certain characteristics that permit:

1. **Selection** of information that is relevant to particular situation.
2. **Comparison** of current information, with plans (feedback) to discover deviations **Immediate** access to information to supervise management decisions.
3. **Delivery** of information is a timely fashion to facilitate decision making.
4. **Horizontal and vertical dissemination** of needed information so that all affected persons will be informed properly.

5.1 Management Information Systems Concept

The data elements in the database can combine and manipulated to provide a combination of integrated information. The integrated information can be filtered on the basic of any set of rules, resulting in selected information. The levels of the MIS are planned so that they are responsive to the levels of responsibility in the organization.

5.2 System Concept

The word "system" is widely used in contemporary vocabulary, to describe many things in difference fields... **The concept of an orderly collection of a series of different parts implies other characteristics which are usually associated with a system**.

These characteristics may be generalized as follows:

1. Coordinated components
2. Internal and external Environment
3. Information Flow
4. Objective

We will define a system as an assembly of parts or components where;

a) The parts or components are connected together in an organized way.
b) The parts or components are affected by being in the system and are change by leaving it.
c) The assembly does something and
d) The assembly has been identified by a person as being of special interest.

1.5.3 System Elements

All systems are composed of three basic elements that are input, process and output. The fundamental relationship of these elements is as shown in figure 4

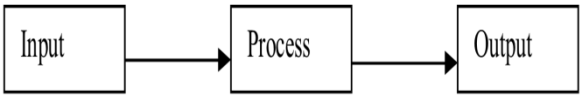


Fig. 4. Relationship of system elements

In a System disturbances and changes can come from variety of sources of which the following are examples:

- Changes in social attitudes.
- Changes in demand patterns.
- The introduction of new materials.
- Government legislation,
- Industrial relations and trade unions, etc.

VI. RECOMMENDATIONS

1. That all organizations should endeavour to develop an integrated MIS unit/Department.
2. Dissemination of both data and information within organizations should be given priority.
3. Staff should be ICT oriented.

CONCLUSION

In order to achieve the above recommendations organizations should endeavour to purchase/acquire all tools, equipment and software for ICT staff should be given regular training on ICT and information processing techniques.

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