CHAPTER 1

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Management, as we all know, is all pervasive functional concept comprising of various processes like planning, organising, staffing, directing, supervising and controlling etc. Decision-making forms the nucleus of all these processes. Success of the management in any organisation depends on the level of synergy in completing these processes which in turn is again determine by the quality of decisions that are made in respect of these processes –severally and jointly.

Decisions cannot be and should not be made in vacuum. There has to be a solid basis, logic and vision in making decisions. These bases rest in some information of factual nature. As such, information is an essential prerequisite for making decisions that work. But the information has to be timely updated, factual, and highly relevant to the core purpose of the
decision that is to be made. So, organisations, irrespective of their size and nature of activities, have to have a system which ensures free and regular flow, and supply of information to the points where decisions are to be made. The system in modern context is known as Management Information System.

The need and relevance of information as an aid for managerial performance has been felt and realised since time immemorial. This fact is authenticated by some information system in all organisations without any exception as an integral component of the organisation – big or small, young or old.

Management information system can be defined technically as a set of interrelated components that collect, retrieve, process, store, and distribute information to support decision making and control in an organisation. In addition to supporting decision-making, co-ordination and control, management information system may also help solve managers’ and workers’ problems, visualise complex subjects, and create new products. Management information system contains information about significant
people, places and things within the organisation or in the environment surrounding it. Management information system produces information that organisations need for making decisions, controlling operations, analysing problems, and creating new products or services. The whole information processes consist of three sub-processes i.e. input, processing and output. Input captures or collects raw data from within the organisation or from its external environment. Processing converts this raw data input into a more meaningful form. Output transfers the processed information to the people or activities where it will be used. Besides these three sub-processes management information system also requires feedback which is essential to evaluate or to correct the quality of output. So, in the real sense management information system represents the internal communications network in the organisation, providing necessary intelligence to plan, execute and control. Management information system of today is not merely traditional recording of what happened. It seeks to elaborate as to how and why it happened. In addition, it explains not only the extent of deviation from what has been planned but also its impact on the plan as such. In a fast changing global socio-economic and political scenario, the need for modern management information system has become all the more imperative. This calls for total
overhauling of the architecture of information in the organisations of today so that it can be used in a manner, which is goals or function specific. This type has become more important for a better overall performance of the organisation. It has the quality to fit needed information to all levels of responsibility on time so as to make them think at ease and ignite the development process from this end.

Real time processing of any kinds of information, adaptability with the dynamic environment, accountability, and system transparency are some of the advantages of using management information system in the organisation. So every organisation is looking for a robust management information system. But many a times today's leading managers ask –

(i) Can management information system flatten organisations by reducing their number of levels?
(ii) Will Management information system allow organisations to operate with fewer middle managers and clerical workers?
(iii) Can management information system reduce paperwork?
(iv) Can it be used to "re-engineer" organisations so they become lean, efficient, and hard-hitting?

(v) Can organisations use information technology to decentralise power down to lower-level workers, thereby unleashing the creative talents of millions of employees?

These issues raised by contemporary management information system – efficiency, creativity, bureaucracy, employment, and quality of worklife – are long-standing issues of the organisations and they pre-date computers. No one can deny that management information system has contributed to organisational efficiency and effectiveness.

Management information systems and organisations have a mutual influence on each other. On the other hand, management information system must be aligned with the organisation to provide information needed by important groups within the organisation. At the same time, the organisation must be aware of and open itself to the influence of information system to benefit from new technologies. Management information system affects organisations, and organisations necessarily affect the design of the systems.
So, there is a relationship between management information system and organisation.

Thus, management information system does not exist in isolation of organisational entities. Every organisation has its own information system. What is important is how far the management information system, they use, has contributed to organisational efficiency and effectiveness. So, the organisation, like the University, has to have its own management information system for processing of the information at different levels of management. The present study aims at examining the management information system in use by the university, vis-à-vis its operational efficiency and effectiveness, as a case study of some universities in North Eastern say Manipur University, Central Agriculture University, Manipur; Gauhati University, Guwahati; Dibrugarh University, Dibrugarh.

The university system may be conceived as an open system. The main characteristic of an open system is its ability to interact and transact with the outside systems and the environment. Such transaction provides the university system with an opportunity, both to influence these systems and
the environment, and to be influenced by them. A schematic presentation of
the university of an open system is shown in figure 1.1.

Figure 1.1. A model of University as an open system

[Source for Figure 1.1: Ravi J. Mathai, Udadu Pareek & T. Venkateswara Rao – “Management
Process in Universities” Oxford and IBH, New Delhi, 1992.]

As the figure shows, the university transacts with the environment
which mainly consists of three components which are also interrelated -
financing system like the government and the UGC, the community and the society, and users of knowledge and skills generated by the university system. Within the university system there are three main groups of people – faculty, the students, and employees who can be called the staff.

The model focuses on the transaction between the dynamic system within the university and the outside environment and systems. The transaction primarily is in the form of receiving, which is healthy and building the university system further, and preventing influences which are not healthy and are likely to hinder the growth of the university as a system. Similarly, the university system influences the environment and other systems. This influence also is monitored so that the system is able to maximise the effectiveness of its energy and resources. Such ability to sense and distinguish between healthy and unhealthy influences from outside, a realistic and unrealistic influence by the university system on the outside agencies, and the ability to filter such influences, are extremely important for the functioning of the university. This has been called Metastasis.
The concept of openness of the university system then can be seen as the ability of the system to discriminate between influences which are healthy and unhealthy, its ability to continuously sense these and its capability to resist and prevent unhealthy influences; and to receive, absorb and integrate healthy influences, to be able to grow continuously. Similarly, to influence the outside systems, metastasis is built up by the internal working of the university, depending on how the three main groups in the university – the faculty, the students and the staff – work together and how it is able to develop both the autonomy and openness of this kind. So, building up a metastasis is fully dependent on the processing of information, which are received by the university system from outside environment, as well as from the subsystems inside the university system. Thus, the need of an information system is an essential for the growth of the university.

1.2 Relevance of the study

University is an open social and educational system with a mission to groom humans for taking up challenges in varying organisations. So, quality of its output is the major determinant of the type and blend of performance
in other organisations. So, crucial is the significance of successful functioning of a University as a feeder of human resource – a critical and pivotal factor in shaping the to-day and tomorrow of organisations. This factor makes the need of effective and modern management information system for a university more urgent and imperative, as it will affect the quality of radiation other organisation will get from the university through its output. The following few paragraphs, which attempt to highlight the utility and usefulness of management information system for a university system, will establish the relevance of the present study beyond doubt.

The University administrators should think of the University as a system. University can be analysed from many points of view. They can, for instance, be seen as organisations, institutions, or communities. Universities possess characteristics common to most forms of organisation. A university exists to accomplish something; “it has a purpose”. It consists of people and other resources (buildings, money, and materials). It has to establish internal systems and processes regulated by the management function, which enable the manpower to use the other resources to accomplish the purposes. A university exists in a changing environment in which it interacts with other
organisations, and changes its priorities and development i.e. it is a dynamic institution. Universities as organisations face many problems common to most modern organisations. For example, they have to determine how to develop a systematic organisation to co-ordinate all the resources to achieve the stated purposes. The problems of containing costs of negotiating with staff and unions and maintaining the capacity to innovate provide further illustrations. For this reason, it would be valuable to arrange from time to time for exchange of ideas and information between university administrative staff and their counterparts within the university system.

The various activities of a university are inter-related. No individual or group can act effectively in isolation. Everyone is dependent on others in his work and in the pursuit of his interests. Information within a university is usually scattered, and degrees of its availability, accuracy and sophistication vary from section to section. On the one hand, an Admission Officer may collect, analyse and use detailed information on the profile of the applicant field, the process of selection and the profile of a particular intake. On the other hand, an Examination Officer may simply record the bare essential of the data flowing through his office and ignore or even destroy information
such as the spread of marks of a particular examiner in each of several years, or the changes in the patterns of result for particular papers over a period of years. Even if Admission Officer and Examination Officer are both conscious of the value of information for their own immediate purposes, it is unlikely that they are operating within a co-ordinated system which would ensure the integration of the data they independently possess. So, the examination people see a continuous process from the receipt of examination forms to the declaration of results. The public relation officer sees it in environmental wants and needs. The account and finance officer believes that careful control of the sanctions and cost elements contribute to successful administration. The professors and researchers believe in research and academic developments. Each sees the university from the point of view of his speciality.

To associate and correlate the specialist’s viewpoints and goals with the total system, to fill up the gaps between individual goals and organisational goals, administrators and specialists in universities want information systems to understand real world, situation and subsystems to help them make satisfying decisions. All planning and decision making
needs information. It can come from a variety of sources; from formal reports, ad hoc investigations, informal contact, and most importantly, personal experience, and value judgements. The objective of any system for processing information must be to provide enough of the right information at the right time. If this is to be achieved, the information flow must match the decision making structure. All flows of information must be identified to meet that objective. In a university, as in any other complex organisation, the departmental barriers prevent information flow, whereas, several administrative departments need the same information. If they are unable to get the information they need from the centralised systems, they set up duplicate collection procedures in their own narrower field. The dangers of reliance solely on uncoordinated decentralised records are obvious. Where information processing is centralised or is undertaken by members of the administration for the university as a whole, the danger of incompatibility in any way of information is usually removed. It will usually prove impossible in a manual system to satisfy all individual information requirements.

Information systems exist in every institution, though they may not be recognised or labeled as such. Records within universities, whether they are
concerned with financial transactions, students admissions or space, are often designed and simply used as repositories of data rather than as part of a total flow which provides the information needed to change attitudes, plan, implement, control and evaluate. A wide range of data already exists within the universities, and this has noticeably expanded over the past few years mainly as result of external demands. The information needed to produce critical indicators on a particular problem area or to develop a profile of the overall development of a particular department exists in most universities though usually scattered in various offices. The internal and external demand for information also exists. It may be that each individual groups or committee identifies only those items of information from which benefits can be derived, and attempts to suppress other forms of information. But it would be difficult to deny that there has been a significant increase over the past few years in the demand for information from internal participants and external agencies. Although the supply of and demand for information have grown considerably in recent years, it has not been accompanied by the creation of integrated systems designed to meet the needs quickly and accurately and to draw together dispersed materials. The reasons for this failure are partly concerned with the additional costs of establishing an
integrated information system and partly due to the relatively slow adoption of the techniques of information processing in universities. The two more important reasons, however, have little to do with either cost or technique.

The first is a conceptual failure on the part of university officers and administrators. A prerequisite to the development of an information system is the education of the officers responsible for the government and administration of a university in the uses, and misuses, of information. The second results from the fact that the receipt or creation of information is necessarily widely dispersed. Thus, a second prerequisite is the necessity for all members to be aware of the need to share information. The nature of university is usually such that the flow of information does not inevitably filter through one group for transmission to all members. It is an information-sharing system. Although some individual groups receive more information than others, for status, historical or professional reasons, all groups possess some information uniquely and any system has, therefore, to be based upon a concept of pooling and sharing information. It would be naive to suggest that either the conceptual failure on the part of management or the reluctance to share information stem from a lack of thought. It is
partly a matter of effort; it is more often a question of power or influence and the individual’s perceptions of how to improve his own case. Rights of information retention, collection and interpretation play an important part in the daily structures and politics of university life. For instance, a great deal of the influence associated with Finance Officer stem from their exclusive possession of certain categories of information, such as the size and range of reserve funds. Equally, many departmental heads would feel that they had lost some power if the university knew more about the detailed activities of their departments and if the department’s members had better access to information about university policy discussion and decisions. There is no simple way to overcome these obstacles. The education or training of administrators may be of considerable help but in the end, political resistance has to be overcome by political insistence.

Any system must take into account the environment in which it operates. The average university is riddled with informal information grapevines. They are inevitable, and often helpful, but their existence means that individuals are frequently acting upon inaccurate or incomplete information. For example, if accurate information on the comparative
teaching loads of groups is not made available to a committee responsible for reviewing teaching methods or for allocating staff posts, it merely means that each member will act on the information of rumours he has obtained from his particular grapevines. Grapevines often distort information and their existence provides further justification for a more open access policy to be operated in relation to the availability and dissemination of information.

Much of the crucial information needed for decision-making lies across the boundaries of operating divisions, and it needs to be integrated into one university Management Information System.

So, there is a need of Management Information System in a university for smooth running and to achieve desired goals. The efficiency of a university system will also be increased if there is a MIS. In fact MIS provides relevant information to the people concerned. The departmental barriers will be removed if there is a MIS. Today, university administration cannot plan and function successfully without a well-developed MIS.
The art of integrating massive data into relevant information remains difficult in the university. This difficulty arises both from the diversity of information needs and from the diversity of information users.

The sharing of information serves managerial and administrative functions. Management Information Systems supply intelligence aids to the University administrator that facilitate the administrative process, examination system, academic developments and democratic and participative decision-making process.

From all these points of view, there is need of change of existing system which facilitates the information flow among various departments. So, this research work will study the existing system in some selected North Eastern university and will try to design a MIS which suits to the existing environment to increase the efficiency and effectiveness.

1.3 Objective of the study

The central objective of the present study is to examine the critical impact of Management Information System in some of the North Eastern
Universities on its organisational performance and transparency in dealing with various issues and also to suggest a corrective measure if necessary.

Thus, the study seeks to serve the following sub-objectives:

1. **To analyse the existing MIS in some of the North Eastern Universities.**
2. **To examine its impact on performance and transparency.**
3. **To identify strong as well as weak points of the system if any.**
4. **To suggest a suitable MIS for some of the North Eastern Universities.**

Thus, the study is an attempt to examine and to evaluate Management Information System in these Universities as influencer of their functioning and performance in general terms.

**1.4 Research methodology**

Research methodology is a systematic way to solve the research problem. It explains the logic behind the methods which we use in the research study so that the researcher can draw some inferences. These
inferences are the results of the research study. The research design of the present study is exploratory in nature.

1.4.1 Data collection

The approach of the present study comprises of Primary data collection and informal discussion. The required data for the present study is mainly based on the primary data. Primary data are collected from different levels of university by using different methods – Interview cum questionnaire method. The questions in the questionnaire are open-ended, closed-ended, and multiple-choice type depending on the suitability of the question. The interview cum questionnaire method is chosen because free interaction and discussion is possible so that additional information can assess.

1.4.2 Sampling

The method use in the present study for sampling is convenience sampling. Out of the 13 universities in the North Eastern region, four
universities – Manipur University, Central Agriculture University, Manipur; Gauhati University, Guwahati; and Dibrugarh University, Dibrugarh, Assam, are selected for the present study.

1.4.3 Analysis of the data

The present study expresses the interpretation by using bar charts and pie charts as a way to highlight the comparative figure of these universities.

1.4.4 Study design

The present study has been designed in the following form: -

Chapter 1 with caption INTRODUCTION attempts to introduce in brief the concept of Management Information System and university as open system signifying the use of management information system for a university. Relevance and objective of the study, research methodology used and design of the study are the other components of this chapter.
Chapter 2 titled *MANAGEMENT INFORMATION SYSTEM – A Theoretical Vision* treads through the theoretical trend the management information system has passed through in general and university system in particular.

*MANAGEMENT INFORMATION SYSTEM – Current Scenario in North Eastern Universities* is the third chapter of the study. Contents of this chapter are based on mainly the primary data collected by the researcher. Here an endeavour has been made to portray as clear picture of management information system in use by these universities as could be possible within the limitation of the information given by respondents.

*IFS AND BUTS OF MANAGEMENT INFORMATION SYSTEM IN THE UNIVERSITIES* is the fourth chapter which attempts to present comparative picture of management information system in use by the universities namely Manipur University, Central Agriculture University, Manipur; Gauhati University, Guwahati, and Dibrugarh University Dibrugarh, Assam. Here, an attempt has been made to identify strength and weakness of the management information system in used by these
universities with a motive to find basis for further improvement and cure for the ailment, if any.

Lastly, the chapter bearing the nomenclature – MANAGEMENT INFORMATION SYSTEM DESIGN is an exercise in the direction to draw inferences based on the analysis done in the previous chapter 4 and to put forth suggested management information system design with a view to transform the management information system in these universities into a modern one.

References: