The IRM Curriculum Model:
An International Curriculum Model
for a 4-Year Undergraduate Program

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In modern organizations, information resources are now recognized as the single most important asset of the organization and requires effective management that is highly trained and educated in information resources management. An international state-of-the-art information resources management curriculum for a four-year undergraduate level program is detailed in this document. The intention of this curriculum is to prepare students to understand the concepts of information resources management and technologies, methods, and management procedures to collect, analyze and disseminate information throughout organizations in order to remain competitive in the global business world. Core course descriptions, rationales, and objectives are outlined. Specific course topics and the percentage of emphasis are also included. The proposed IRM Curriculum Model should be considered as a general generic framework for customizing a specific curriculum in light of local needs and requirements.

During the past few decades, management literature has witnessed a tremendous increase in the volume of writings about Management Information Systems (MIS). Concepts, applications, problems, and future potentials have been discussed and assessed both by researchers and practitioners. Each group has recognized the value and importance of MIS in the achievement of success in this very competitive business world. At no time has the need for effective management of information resources been so important as in recent years. Particularly since an increasing number of firms are realizing the true power of information technology systems in providing information and assistance to decision-makers at all levels of national and international organizations. However, the need for proper management to utilize these resources has not been considered important until very recently. This is mainly due to the fact that more and more firms have realized the significance of computer-based information systems in providing information and assistance to decision-makers at all levels of an organization.

In response to the aggressive growth in information requirements, companies have been searching for more effective ways of managing their information resources. At the same time, many top executives have come to believe that the traditional management team of the computer center has failed to satisfy the information needs of decision–makers because of a basic lack of business sense. Top management preferred IS personnel with strong basic managerial skills along with technical skills. Insufficient orientation toward business and management information concepts and theories was considered one of the major deficiencies in the education of current IS managers. Top managers’ perceptions regarding the present skill profile of IS managers and the importance of information as a major corporate resource has not been reflected in the current IS curricula used to train the future IS managers of the corporate world.
**Information Systems Evolution**

During the 1960s, most companies employed a staff with a strong technical background to manage their computer centers. The major requirement for the manager of a computer center was technical competence, particularly the ability to cope with hardware maintenance and operations. Further, the DP management position was viewed as purely technical, not managerial. In this era of computer systems operations, technical feasibility was a primary concern while economic feasibility was a secondary concern for most companies.

As the use of computer systems leveled off, many firms began to apply newly introduced MIS concepts and applications to various business functions by developing computer-based information systems. Consequently, the former data processing center manager became the new MIS manager. Unfortunately, this change of status did not reflect additional skills, nor did it indicate a change in the organizational structure of the computer center. Knowledge of the use of hardware and software, rather than the acquisition and application of information, is insufficient for an effective MIS professional (Porter, 1983; Davis, 1986). Over a decade ago, leaders in the field of MIS education recognized the need for MIS professionals to acquire skills, independent of technology, in a wide range of areas including effective verbal and written communication, time management, leadership, and delegation of authority (Metz, Greenhill, Smith, 1983).

As information systems technology matures by providing more advanced equipment for information processing and facilitating the operation of computer-based information systems, more attention is given to the managerial aspects of MIS personnel. The orientation of MIS management in many organizations is changing in the direction of greater user involvement. Consequently, MIS managers, rather than serving as the technical custodians of computer hardware entities, now function more as agents between MIS resources and end-users. Additionally, the trend toward decentralization of IS duties and downsizing of hardware from mainframe processing to networked end-user PCs, has further led to the fundamental change in the traditional role of IS managers and the function of IS within many organizations (Lee, D.M., et al., 1995; Bulkeley, 1990; Goldberg, 1986; Guimaraes, 1986; Maglitta, 1993; Rockart and Flannery, 1983).

**Issues of Information Resources Management**

Information resources management (IRM) is a general theory advocating a method for organizations to comprehensively utilize their information resources. A primary function of IRM is to promote information as a major resource, with information processing technology as the ultimate tool for the processing, distribution, and integration of information and its use in various organizational functions (Khosrowpour, 1989). Figure 1 highlights some of the components of information resources in modern organizations.

In general, many information processing professionals perceive that resources of computer-based information systems are limited only to hardware and software components. This perception has been partially promoted by restricted views given by information systems education of the past. Today, information resources consists of many more resources than the computer hardware and software used to manage information within organizations. This requires an increased understanding of these resources and their applications (Liscouski, 1991).

**Information Resource Value and Concepts**

The rapid integration of IRM into all aspects of business and the great advancement of information technology during the past few decades have created a demand for MIS professionals who are not limited to knowledge of the technical side of information systems, but who possess a broad understanding of these systems, organizational behavior, and management (Yaffe, 1989; Spruell, 1989). Increased use of technology in all areas of business has caused a shift in the occupational skills required in many areas. Specifically, as typewriters were replaced with computers, a secretary who typed correspondence became an “information manager” required to use greater cognitive skills to manipulate and interpret information using word processing, database, desktop, and graphics applications.

As information systems technology matures, providing advanced equipment for processing information and facilitating the operation of computer-based information systems, more attention is being given to the managerial aspects of IRM. Many MIS managers have already found themselves to be incapable of coping with the behavioral issues which arise in MIS management.

**Organizational and Behavioral Issues**

Effective management of rapidly expanding information resources has become a focal point of the corporate world. The fears of top management that traditional MIS teams lack the ability to produce adequate information for strategic decision-making are based upon the belief that these teams lack sufficient business sense. The role of these teams was viewed as purely technical, not managerial and was conceived as a strictly “line” position job, concerned with the supervision and operations of computer systems, and the preparation of computer-generated outputs to be used predominantly by accountants, controllers, and inventory managers.

While the new concept of MIS was intended to be utilized by management at all levels, the custodian of the MIS remained a totally technically oriented person (Alavi, Wheeler and Valacich, 1995). This resulted in a general suspicion about the value of MIS within the organization (Khosrowpour, 1988). Additionally, many MIS managers have already found themselves to be unqualified for coping with the behavioral issues of information resources.
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