Information Management in Higher Education Administration: A Slow Drive on the Information Superhighway

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INTRODUCTION

Society has entered a new information age and higher education administration remains far behind its counterparts in the business sector. Educational information management is being drastically underutilized by higher education administration. Databases are used exclusively for record keeping purposes as an end in itself. They are not being effectively used for information management. Thousands of human hours are wasted annually to complete various types of administrative paperwork without using the existing databases as sources of input.

This new information age is categorized by ongoing developments in multimedia and information technology that are opening new possibilities and forcing most people to restructure numerous activities in their lives, encompassing personal, professional, social, and institutional spheres. Rapid advancements in quality and versatility of products in information technology bring new challenges to every working environment. While the specialists in electronic technology keep upgrading the hardware, system and application software specialists continue to upgrade existing systems and create new systems and programs to increase access to new technology for the masses.

In the computer industry, entrepreneurs who recognized the potential of the market transformed an industry of "computers for computer wizards" into an industry where the computer was destined to become an essential household item. Nevertheless, a great majority of end-users are not up to par with the required repertoire of technical knowledge and skills to exploit the capabilities of available information technology. This is most certainly true in higher education. This case explores the underutilization of information technology in higher education administration and looks at whether higher education administration is ready for the new information age.

CASE QUESTIONS
- What are the problems with the current information management systems among higher education institutions?
- What type of restructuring might be necessary in higher education institutions in

order to find solutions to information management problems?
- What are the hurdles to be cleared in implementing a plan of action for the redesign of education information management systems?
- What is the role of end-users in the redesign process?

CASENARRATIVE

Background

Generally, higher education administrative structure is based on the proliferation of administrative units centered on various functions. An unintended outcome of the growth of administrative progressivism concerns the building up of layers of super structures within organizations (Tyack & Hansot, 1982). This can be applied to both K-12 and post-secondary levels. Therefore, to understand higher education information management systems, one has to look at the evolution of various activities within these institutions.

There are three major administrative areas: student, finance, and personnel or human resources. These three areas present a major challenge in collecting, updating, and maintaining data in a way that is useful, timely, and efficient. They evolved as separate blocks in a centralized administration system. The collection of student records at various locations or units serves as an example of the current system. The admissions office admits students and collects the related data. Another unit, the registrar's office, collects records related to a student's program of study. The financial aid office handles matters related to financial aid, loans, pay plans, and so forth. Payments are handled by the cashier's office. Financial, human resources, and other divisions operate in a similar fashion. The budget office sets the budget. The comptroller's office controls expenses. The human resources office deals with hiring, promotion/demotion, firing, retirements, and benefits. Each of these offices collects, updates, and maintains data separately. Naturally, the redundancy of the system is guaranteed to generate errors (e.g., incompatible records) and leads to a waste of time, money, and resources.

For any higher education institution, one definite checkpoint is to examine a number of publications and look for consistency in faculty names, qualifications, titles, contact information, and so forth. For example, one could examine an institution's cumulative directory, a college directory, undergraduate catalog, and graduate catalog to see the extent of discrepancy among them. Consistency among such publications is hard to find because they are generated by various units and not by one database. The undergraduate admissions office is responsible for the content of the undergraduate catalog, while the graduate admissions office is responsible for the content of the graduate catalog. Nevertheless, the bulk of the data independently collected by each unit represents a common core. This administrative set up is prevalent among higher education settings.

There is abundant evidence concerning the ad-hoc manner in which information management systems evolved within higher education institutions. Incompatibility among unit-specific databases is one compelling source of evidence. For example, data fields have different lengths and different types. In a Human Resource System (HRS), the name of an employee can take three or four different fields (last, first, middle, suffix, etc.) and the total length of fields combined may run into 26-30 columns. In comparison, in a Student Information System (SIS), the combined length of fields of a faculty name can run into 24 or less columns. While name suffixes are included in HRS, they are excluded in SIS. Similarly, the field definitions of variables in Financial Record System (FRS) are incom-

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