

Knowledge Management in Education

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Abstract— Institutional effectiveness, synonymous with assessment of learning, but perhaps larger is having sweeping impact on education. Education today is subject to the same pressures of the marketplace to spur innovation, improve customer service, or achieve operational excellence. Modalities of delivering learning have changed from “only game in town” to “anywhere, anytime”. Knowledge management is the process of transforming information and intellectual assets into enduring value. It connects people with the knowledge that they need to take action, when they need it. There is tremendous value to educational institutions that develop initiatives to share knowledge to achieve business objectives. If done effectively, it can lead to better decision-making capabilities, reduced “product” development cycle time (for example, curriculum development and research), improved academic and administrative services, and reduced costs. The challenge is to convert the information that currently resides in the individuals of the institution widely and easily available to any faculty member, staff person, or other constituent. This paper outlines the basic concepts of knowledge management as and considers trends, and explores how it might be applied in educational institutes and whether educational institutes are ready to embrace it.

All institutions inherently store, access, and deliver knowledge in some manner. It is with KM that institutions will be better able to increase student retention and graduation rates; retain a technology workforce in the face of severe employee shortages; expand new web based offerings; work to analyze the cost effective use of technology to meet more enrollment; transform existing transaction-based systems to provide information, not just data, for management; and compete in an environment where institutions cross state and national borders to meet student needs anytime/anywhere.

I. INTRODUCTION

Knowledge starts as *data*—raw facts and numbers. *Information* is data put into context. Information is readily captured in documents or in databases; even large amounts are fairly easy to retrieve with modern information technology systems. Only when information is combined with experience and judgment does it become *knowledge*.

Knowledge management is the process of transforming information and intellectual assets into enduring value. It connects people with the knowledge that they need to take action, when they need it. The concept of Knowledge Management has been around for decades, but most

organizations accept it only as theory and have not put it into practice. Knowledge transfer (one aspect of Knowledge Management) has always existed in one form or another. Examples include on-the-job peer discussions, formal apprenticeship, corporate libraries, professional training, and mentoring programs.

In the last few years, academic world has experienced an influx of changes and has become more dynamic, due to the introduction of computers, internet, intranet and software applications in the campus. Furthermore, the explosion of digital contents and online resources has contributed to the rise of new challenges that higher educational institutions need to face. Knowledge Management principles recognize that it is important for organizations to “know what they know.” All institutions inherently store, access, and deliver knowledge in some manner. Knowledge may be shared through emailed “best practices” memos or even sticky notes on a cubicle wall.

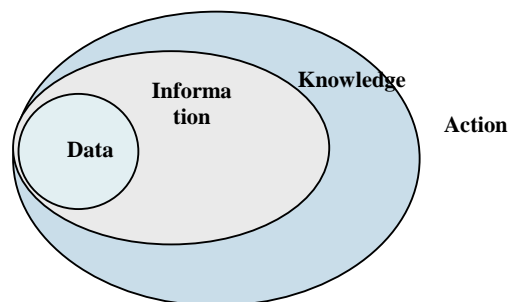


Figure 1 Knowledge Management

Knowledge can be categorized into the following as

- *Internal tacit knowledge* - embedded in the minds of individuals, gained through working experience, including research, teaching, and operational activities. Senior and experienced employees as well as university teachers and researchers have a sound knowledge of work procedures, rules and regulations, etc.

- *Internal explicit knowledge* - reports, guidelines, course syllabi, theses, databases, minutes of meetings and any type of tangible knowledge containers generated within the institution. Employees who provide support functions generate significant explicit knowledge in different areas such as student services, international relations, enrolment management, computer services, research support, physical plant, among others
- *External explicit knowledge* - tangible material in the form of books, journals, reports, CD/ROMs and any other media, produced outside the institution. This type of information and knowledge is generally available in the institution library system
- *External tacit knowledge* - personnel external to the institution with expertise knowledge, i.e. service personnel, subject experts, and any other person who provides expertise to the institution.

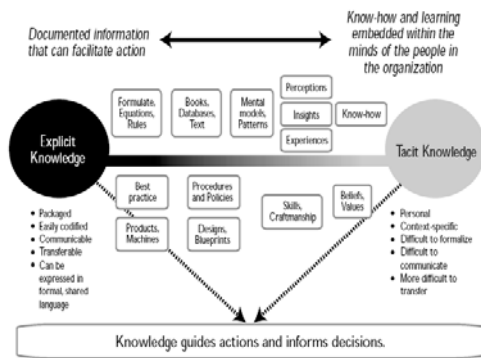


Figure 2 Knowledge Management Process

II. NEED OF KNOWLEDGE MANAGEMENT IN EDUCATION

The continuous drive for improvement and accountability in education makes it a prime example of the need for knowledge repositories. Consider the number of faculty and staff who possess institutional knowledge. For example, what institution does not have a faculty member who has led successful curriculum revision task forces? Or a educational administrator who knows how to navigate the complex proposal development or procurement processes? Or a researcher who has informal connections to the AICTE? Or a special assistant to the VC who has uncovered (or generated) useful reports that individual deans or department chairs could use to develop their own strategic plans? Relying on the institutional knowledge of unique individuals can hamper the flexibility and responsiveness of any organization. The challenge is to convert the information that currently resides in those individuals and make it widely and easily available to any faculty member, staff person, or other constituent. An institution-wide approach to knowledge management can lead

to exponential improvements in sharing knowledge—both explicit and tacit—and the subsequent surge benefits. Several barriers do exist that make it difficult to use and share data and information effectively in educational institutions.

Data Collection not Uniform - Various departments within educational institutions often use different software and other means to collect and organize data.

Lack of Integration of Technology - Many teachers, faculty and staff adopt a "hands-off" approach to technology issues, leaving them to those who might know a lot about hardware, but very little about the information needs of people in the organization.

Unclear Priorities - Information collection and analysis is often isolated and not clearly related to the mission of the organization.

Distrust of Data Use - Many faculty members have witnessed the manipulation of data and are wary of any process that would have their work subject to institutional "bean counting."

Tactic Knowledge - The problem is that tactic knowledge is little too portable—if you have it today, your competitors will likely have it tomorrow. The ability to manage tacit knowledge, on the other hand, promises to deliver huge returns for organizations that learn to use it effectively

Knowledge management has not been the high priority in higher education. However, there is a growing recognition that KM can enable higher education to evolve more smoothly to a highly interactive and dynamic educational environment.

A. Goals of Knowledge Management Initiative

- To help users understand and formulate problems quickly.
- To speed up the process of finding information users need to accomplish their tasks.
- To connect knowledge sources and assets (i.e., records, documents and people)
- To create, capture and organize knowledge assets.
- To ensure that newly created decisions & solutions are accessible to any part of the organization.
- The above goals can be achieved by
 - Personal mastery - there is always something to learn-
 - Shared vision - everyone is going in the same direction
 - Sharing knowledge - learning from others
 - Transferring k - training, staff rotation
 - Systems thinking - seeing the whole
 - Solving problems not symptoms
 - Learning from the past - continues review of failure and success

B. *Applying Knowledge Management to higher*

Education

Using knowledge management techniques and technologies in higher education is as vital as it is in the corporate sector. It is with KM that colleges will be better able to increase student retention and graduation rates; retain a technology workforce in the face of severe employee shortages; expand new web based offerings and compete in an environment where institutions cross state and national borders to meet student needs anytime/anywhere. Knowledge management initiative will help identify expert resources, sift through information about different education strategies, and share experiences and insights into successful and failed interventions in education systems.

Applications of Knowledge Management

- The research process,
- Curriculum development process,
- Administrative services,
- Strategic planning process

C. *Challenges to Implementing KM*

There are obvious challenges to the implementation of KM. Some of them are the following:

- Employees have no time for KM
- Current culture does not encourage sharing
- Lack of understanding of KM and benefits
- Inability to measure financial benefits of KM
- Lack of skill in KM techniques

- Organization's processes are not designed for KM
- Lack of funding for KM
- Lack of incentives, rewards to share
- Have not yet begun implementing KM
- Lack of appropriate technology
- Lack of commitment from senior management designations.

III. CONCLUSION

Academic culture must change from knowledge hoarding to knowledge sharing. Colleges and universities have significant opportunities to apply knowledge management practices to support every part of their mission. The greatest benefit of using KM may come from its ability to capture tacit knowledge, which is the most valuable knowledge asset of an organization. Greater collaboration among institutional stakeholders in the area of knowledge management will result in better use of resources and improved services that are easier to access and use.

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