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Quality Open Higher Education via Knowledge Management

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ABSTRACT

In the age of information and communication revolution, leaders in education can come from anywhere. The best quality education will dominate, regardless of its national origins, ushering a globally competitive regime, making the globalization of education inevitable. Education today is being seen as a marketable commodity, which can be imported and exported.

The quality of education is an important measure of productivity and prosperity of a nation. Social, political and economic changes and reforms are possible only through education.

The development of quality resource persons depends on the quality of education. Therefore, it is the responsibility of the system of education, which produces efficient manpower to inculcate quality in education.

Effective management of knowledge to develop quality skills and healthy attitudes are essential in processing educational courses is a sort of challenges to move from information to insight.

Processing of knowledge and its efficient management are important ingredients to make change in the quality of education both in conventional and non-formal systems.

Iranian conventional as well as non-conventional systems of education are lagging today not because we lack the capacity and resources, but we lack dreams. Besides, we underestimate ourselves. What we need now are high visions and missions for knowledge management to develop human resource.

Knowledge management will be the focus for harnessing individual talent and building competence. People now look beyond the monetary rewards to acquiring of knowledge. People with knowledge and competence will hold the power to shape the future. Success will be in achieving excellence through retention of such people. In fact it is a fundamental challenge for human resource leaders to identify and nurture talent. Leaders must accord top priority to management and development of talent at all levels.

In this research paper we discuss about quality open higher education and the role of knowledge management in this area.

KEY WORDS: Education; Open Education; knowledge management; Quality Education.

INTRODUCTION

During the past century, rapid development of an information society and growth in the quantity of accessible information was given considerable momentum with the development of information and communication technologies (ICT), which allow people to interact with each other and to share digital information relatively easily. An example of this is the Internet.

If information and knowledge are to be of practical value they must be effectively managed. This is particularly important in education and distance education (DE) where information plays such an important role in teaching and learning. Knowledge Management (KM) is a response to these challenges, mostly seen in the business world and to some extent, in education.

Knowledge Management has increased in popularity and credibility as a management tool, as well as a research discipline, over the past decade. KM is in the process of establishing itself as a new aspect of management (Ponzi and Koenig 2002). Knowledge Management is therefore said to be slowly but surely capturing the attention of many organizations in a quest for competitive advantage (Boahene and Ditsa 2003).

KM is a term that has not only gained credibility over the years by virtue of the increased research projects on the subject but also through the increased application of it as a management tool within business organizations. In 2000, Rowley (2000) asked the question, “Is higher education ready for knowledge management?”. This paper investigates the perceptions of knowledge management within higher education as a management tool, and presents the nature of academics and universities, and the related challenges for KM implementation within this context.

Higher education institutions have "significant opportunities to apply knowledge management practices to support every part of their mission," explains Kidwell et al (2001). "Knowledge management should not strike higher education institutions as a radically new idea; rather it is a new spin on their raison d'etre" (Kidwell et al. 2001). The problem is that it

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is such a "wide open area of study that it is difficult to understand the implications of knowledge management for an educational setting" (Thorn 2001).

MATERIALS AND METHODS

Knowledge Management

Knowledge Management has sparked a plethora of definitions, and a variety of explanations, and encompasses diverse disciplines, which hence gives rise to the different perspectives. An extensive literature review yielded many different models, thoughts, perspectives, frameworks and definitions for KM.

People are at the centre of processes that convert data into information, as well as of those that use information to create and share knowledge. People, not systems, manage knowledge. KM is the attempt to improve or maximise knowledge usage in an organization or system.

KM involves the "discovery and capture of knowledge, the filtering and arrangement of this knowledge, and the value derived from sharing and using this knowledge throughout the organization" (Bernbom 2001). It is this "organized complexity" of collaborative work to share and use information across all aspects of an institution which marks the effective use of knowledge.

According to www.dictionary.com, knowledge is nothing but familiarity, awareness, or understanding gained through experience or study and management is the act, manner, or practice of managing; handling, supervision, or control. So any act or practice to handle your familiarities, understandings and awareness in a meaningful manner is knowledge management. Knowledge management is also concerned with finding new knowledge, propagate that knowledge and thus utilize it. Knowledge management (KM) has emerged from earlier buzzwords of computing like data processing, data management and information management.

Tiwana (2000) commented, “Knowledge management enables the creation, communication and application of knowledge of all kinds to achieve goals”. According to Kidwell et al. (2001), “there is tremendous value to higher education institutions that develop initiatives to share knowledge to achieve business objectives”. Since educational institutes are also not spared from the global competition, it is essential that they sustain their competitive edge. Heinrichs & Lim (2003) postulated three unique prerequisites for sustaining competitive edge. According to them, these are good human resource, good learning culture and the use of information technology tools for effective knowledge management. Na Ubon & Kimble (2002) identified some common elements in knowledge management & online distance education. These common elements are formation of academic communities, building collaborations, building trusts in knowledge sharing and shared understanding among students. Time is not very far when only knowledge based business would prevail.

Knowledge Management Initiatives

Companies with a focus on KM pay close attention to issues of collaboration, organizational learning, best practices, workflow, intellectual property management, document management; customer-centric focus, and using data effectively. KM initiatives include portals that use the web to span communication across an entire enterprise and to promote business-to-business relationships (Roberts-Witt 1999; Ruber 2000). The Internet is also used intensively for team collaboration and groupware; natural language queries of data; sharing information on best practices; and anytime/anywhere online learning (Delio 2000; Sherman 2000).

According to a survey conducted by Knowledge Management magazine and International Data Corporation (IDC) about the state of KM (Dyer and McDonough 2001), the primary business uses or domains of KM are to:

--Capture and share best practices (77.7%)
--Provide training, corporate learning (62.4%)
--Manage customer relationships (58.0%)
--Deliver competitive intelligence (55.7%)
--Provide project workspace (31.4%)
--Manage legal, intellectual property (31.4%)
--Enhance web publishing (29.9%)
--Enhance supply chain management (20.1%)
--Other (5.5%)

E-learning is one of the most important KM practices, something which one would expect higher education institutions to have as an advantage. Yet these e-learning opportunities are geared most often to students as online customers, not to employees as part of capitalizing on their knowledge as an intellectual asset. The e-learning focus in KM is on "just-in-time knowledge," delivered anytime and anywhere, with the traditional "course" disaggregated into "knowledge chunks." Two-thirds of 700 companies polled in a Delphi Group study use online resources for training employees (Survey Tracks 2001).

Reasons to Adopt Knowledge Management

The 2001 survey by Knowledge Management and IDC found that of those companies that adopt KM, the top reasons are to:

--Retain expertise of personnel (51.9%)
--Increase customer satisfaction (43.1%)
--Improve profits; grow revenues (37.5%)
--Support e-business initiatives (24.7%)
--Shorten product development cycles (23.0%)
--Provide project workspace (11.7%)

As public, private, and for profit higher education institutions alike respond to the phenomenal growth of online courses, cyber colleges, and virtual universities, these same reasons to adopt KM apply. 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; 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.

Implementing Knowledge Management

A KM strategy that works well in one institutional context may fail in another. When designing KM strategies, systems and tools, consider the people involved; the organization's operational context, history and ICT capacity; and what the institution wants to achieve. People, processes and technologies are the three core elements in preparing a KM strategy, as noted by Lisa Patrides and Thad Nodine (2003).

KM and People

The more people see the benefit of managing knowledge effectively, the easier it makes their jobs, the more supportive of the KM strategy they will be. The simplest way to achieve this is to design KM strategies and systems around the needs of its users, which are the educators, administrators and managers, and learners. Successful KM depends on engaged proactive participants and a broader institutional environment that facilitates collaboration, builds trust and shared understanding, and encourages creation of communities of practice.

KM and Organizational Processes

KM is useful to all processes that identify, share and create knowledge. In DE formal and informal processes and procedures govern all aspects of institutional operations, including administration, course design and development, learner support, student assessment, and quality assurance. All institutional processes can be improved through effective KM.

KM and ICT

ICT enables effective KM. Rapid growth and development of ICT functionality opens great possibilities for building and exploiting information and for converting it into knowledge. As PC Barnes notes, ICT can be harnessed to support many key KM processes:

• Capturing knowledge
• Designing, storing, categorizing, indexing and linking digital information
• Searching for, and subscribing to, digitally stored content
• Presenting information and content in a way that it is meaningful and applicable for many contexts and uses

Challenges to Implementing Knowledge Management

There are obvious challenges to the implementation of KM. The Knowledge Management magazine/IDC survey (Dyer and McDonough 2001) documents the following:

--Employees have no time for KM (41.0%)
--Current culture does not encourage sharing (36.6%)
--Lack of understanding of KM and benefits (29.5%)
--Inability to measure financial benefits of KM (24.5%)
--Lack of skill in KM techniques (22.7%)
--Organization's processes are not designed for KM (22.2%)
--Lack of funding for KM (21.8%)
--Lack of incentives, rewards to share (19.9%)
--Have not yet begun implementing KM (18.7%)
--Lack of appropriate technology (17.4%)

--Lack of commitment from senior management (13.9%)
--No challenges encountered (4.3%)

Higher Education and the Knowledge Economy

Higher Education institutions face many challenges in a rapidly changing global economy (Birgeneau 2005). As we enter the 21st century, Birgeneau (2005) contends that Higher Education institutions face a world that is more interconnected, one in which knowledge, creativity, and innovation are the essential elements of thriving societies. Cranfield and Taylor (2007) support this by stating that "we are entering a new age, an age of knowledge in which the key strategic resource necessary for prosperity has become knowledge itself – educated people and their ideas". Higher Education institutions today and in the near future, will experience different and intensified external pressure influenced by globalisation, and the past few decades have witnessed the pressure on HEIs to respond to this global integration (Bloom 2005). Globalisation refers to the process whereby countries become more and more integrated, mainly via movements of goods, capital, labour and ideas (Cranfield and Taylor 2008). Cranfield and Taylor (2008) highlight two main attributes of what he terms the 21st century globalisation: 1) Acceleration of trends associated with a 'knowledge society'. Some of these trends include the rise of information and communication technologies, which has been accompanied by a cultural revolution. 2) The process of acceleration and innovation has brought about 'uncertainty' about individual identity, about social affinities, about gender roles and about jobs and careers.

If it is easy for goods, capital, labor and ideas to move around, what do HEIs need to do to stay competitive to ensure the quality of their products and to ensure that a good academic experience is achieved by their students? Globalization and mercerization have therefore forced Higher Education Institutions to think about the way in which they teach, conduct research and manage the institution and its various stakeholders.

Knowledge Management and Distance Education

At an institutional level, KM is essential to creating organisations that "learn" more effectively. In a business context, a "learning organisation" is well-positioned to meet customer needs with employees who are good "knowledge workers" that apply knowledge effectively and adapt quickly through learning.

KM should be a fundamental objective of any educational institution, as learning is its core function and should be reflected in how the organisation operates. In an educational context, educators are the knowledge workers because they typically have considerable personal discretion and responsibility for analysing, developing and implementing curricular goals. The primary "customers," the learners, also play a role in creating and sharing knowledge.

The practices of well-functioning DE systems already reflect attempts to manage knowledge. A key attribute of DE programmes is a systematic planning and implementation approach that compensates for separation in time and space between educators and learners. Well functioning DE institutions invest significantly in developing structured curricula and materials; creating flexible learner support systems; maintaining carefully designed administrative systems to support distance learners; and implementing quality assurance strategies.

KM is, therefore, not a new concept beyond the reach of the average DE institution, nor a concept that should induce fear in distance educators. The main challenge in DE institutions is to create and build on existing good practices, to integrate KM more systematically into all aspects of the institution's operations.

Application of Knowledge Management in Distance Education

Sridharan & Kinshuk (2002) tried to find alternative ways of using knowledge management tools to support learners to leverage their learning. They tried to investigate what knowledge base structure is appropriate for the knowledge management in learning situation.

Kidwell et al. (2001) asserted that if knowledge management tools are applied effectively, they could result in "better decision-making capabilities, reduced product development cycle time (for example, curriculum development and research), improved academic and administrative services, and reduced costs".

Liao (2003) classified KM technologies in seven categories: KM framework, knowledge-based systems (KBS), data mining (DM), information and communication technology (ICT), artificial intelligence (AI)/expert systems (ES), database technology (DT), and modeling, together with their applications on different research and problem domains.

It is time that new approaches, like data mining and knowledge discovery open new avenues in distance education for understanding the phenomenon and more importantly in devising methods which will ensure better teaching and learning process.

Application of KM techniques and their validation to create a knowledge path needs to be examined in various areas of Open and Distance Learning Systems (ODLS). The areas are:

• Study Material Development data related to pre-development surveys, need survey, availability of experts in the field, development time, and printing time.
• Student Registration data related to geographical distribution, academic program options, choice of medium, age, sex, etc.

• Support Services data related with learner support network, counselor identification, attendance of learner, student query, library, teleconference, audio-visual utilization, continuous assessment, cost of delivery, student feedback, etc.
• Study Material Production & Distribution data related with printing schedule and performance, course inventory management, predictive dispatch data mining, courseware distribution, management information systems, and maintenance database.
• Evaluation and Certification data related with term-end examination, evaluation of term-end and continuous assessments, evaluators database, certification database, quality assurance, etc.
There do exist few initiatives towards this.

Conclusion

Today, world is full of data and the need is to use that data to find useful information that is hidden in the volumes. For example, thousands of students join the distance learning programs with different institutions and thus, become part of dataset. Each institution has a lot of pre-program data about these students but there are very few empirical studies, which highlights any useful insight into this data.
A lot has been done in the field of knowledge management in corporate sectors for enhancing marketing or to understand the psychology of buyers. But in educational research, the concepts of knowledge management are yet to be exploited.
This accumulated data may not be sufficient to obtain knowledge that can improve decision support system. Still, the quantum is sufficient to understand the learners, learning styles and learning environments. Unfortunately, distance education institutions are not exploring the possibilities of using the available datasets as is done in commercial sector. The patterns, associations, or relationships among all these data can provide information for better functioning of ODLS by converting the datasets into knowledge about past patterns and future trends.

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