

Launching Knowledge Management Projects in Higher Education

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ABSTRACT

Over the centuries a knowledge culture was formed and educational institutions were regarded as the sites of knowledge production, storage, dissemination and authorization. But now they are experiencing same competitive pressures as corporate world is presently facing. Yet there are significant opportunities to use Knowledge Management to support every part of their mission. Applying Knowledge Management in Higher Education needs caution as organizational design differences exist. Therefore, projected objectives have to be outlined to provide competitive teaching/training methods by using such technology as best suited to Higher Education. Higher Education culture has to change to grab the emerging opportunities and create structures and system providing answers to the needs of society. Various technology techniques have been developed but need based vision and mission is needed to apply Knowledge Management projects in Higher Education.

1.0 INTRODUCTION

Knowledge management offers something in better effective manner to all sectors. Universities and other higher education institutions are recognized to be in the knowledge business and increasingly they are exposed to marketplace pressures in a similar way to other businesses. It might, then, be reasonable to suppose that knowledge management might have something to offer higher education institutions.

Higher Educational institutions have a series of knowledge management activities, which could be used for further development rather than going for developing a brand new paradigm. It is important to bear in mind that Universities and their staff must recognize and respond to their changing role in knowledge based society. Universities need to be consciously and explicitly managing the processes

associated with the creation of their knowledge assets and to recognize the value of their intellectual capital to their continuing role in society and a wider global marketplace for higher education.

2.0 ORGANIZATIONAL DESIGN DIFFERENCES OF HIGHER EDUCATION

Higher Educational institutions organizational design differ from business organizations in many respects and require specific application of KM. and leveraging technologies and techniques to acquire pressing goals. Differing features in particular are:-

- Organizational set up of universities such as Central / State universities deemed to be Universities, Institutions of national importance and private universities with and without aids or funding systems,
- Governance through enactments passed by Centre/State and authorized autonomous bodies like U.G.C., Governing Bodies etc.
- Accreditation system procedures and requirements,
- Funding and grants in aids/resources, and level,
- Accountabilities /Leadership and level of autonomy,
- Vision and strategy under educational plans and policies,
- Social value creation /cultural additions and politically charged environment,
- Bindings of multiple rules and regulations and complexities,
- Public and private educational institutions with differing status, and
- Service rules and regulations differ, as compared to private sectors and so on.

3.0 PROJECTED OBJECTIVES TO USE KNOWLEDGE MANAGEMENT IN HIGHER EDUCATION

Almost all institutions whether public or private engaged in imparting higher education within or any part of the globe will store, access, capture, share and deliver knowledge from faculty members to students and community. In the present

scenario, where globalisation, competition are leaving diverse effects in all sectors of economy higher education is no exception. Object oriented approach of H.E. needs to:

- Provide competitive teaching/training methods & systems,
- Capture and share the best practices and courses to offer,
- Increase customer satisfaction,
- Generating revenues for improved infrastructure and facilities network,
- Deliver competitive study material, through use of improved technology,
- Generate and make available the best faculty and programmes for them,
- Provide training and refresher courses to faculty members,
- Enhance Web publishing, e-learning set ups,
- Manage and protect intellectual capital (asset management),
- Provide project and research/innovation facilities and environment with a global vision, etc.,
- Enhance ability to manage and create need based community for development of its skills and knowledge,
- Planning and redesigning library facilities to users satisfaction, and
- Increasing interaction and liaisoning with industries and business at a wide level.

However, experiments in the educational sectors are just beginning with the help of knowledge management. Higher education is moving from old culture that considers, “what is in it for me?” to a new culture that says, “what is in for our customer”? And it is developing a culture that is ready to embrace knowledge management. Using knowledge management techniques and technologies in higher education is as vital as it is in the corporate sector. 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 at reduced costs.

4.0 CHANGED SCENARIO OF HIGHER EDUCATION

World of Higher education has been facing immense changes. As aptly observed by Jan Knight “the world of higher education and the World in which higher education plays a significant role is changing for many reasons”. A new competitive environment has already taken place and is being

dictated by various forces. These forces include not only institutional resistance to change, but also external politics and government initiatives cultural dynamics, economic wealth, labour needs and the maturity of existing higher educational institutions. Some of the forces are:-

- Intense global competition in educational sector,
- Increasing rate of innovation and quality education,
- Transnational sourcing operations,
- Education as a saleable service commodity under GATS/WTO,
- New providers of education have fielded themselves with view to complement and compete,
- Global networks and market places for educational research have increased,
- Intellectual diversification and migration rate increasing,
- Increasing focus on knowledge society,
- Need for life long learning is becoming an inescapable reality,
- Open Learning (ODL) enrolments increasing and becoming more competitive, and
- International collaborations with other academic institutions are becoming more common to compete

Profound changes in competition have made universities and higher education institutions think like business. The educational markets are becoming global as universities attempt to internationalize their curricula and other higher quality programmes to students regardless of location. Universities have to adjust themselves and develop strategies to respond rapidly to the changes in technologies and increasing demands of stakeholders.

5.0 BASIC KEY FACTORS OF KNOWLEDGE MANAGEMENT

Knowledge and technology are the key factors of transforming any society and organizations. The creative talent of knowledge workers with the use of modern technology have become the key factors of gaining success. We are living in an information society where knowledge economy and knowledge management are essential for competitive advantage. The existing knowledge and skills become redundant and needs innovations in the knowledge process. Two basic factors are:

- Knowledge, Technology
- A) Knowledge:
- Knowledge is power and a source of competitive advantage.
 - Knowledge, it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practices and norms.

- Institutions inherently store, access, filter arrange and deliver knowledge in some manner or the other and add to the delivery of effective and improved services to the faculty, students and community at large.
- It is an umbrella term for a variety of interlocking terms, such as knowledge creation, knowledge valuation and metrics, knowledge mapping and indexing, knowledge transport storage and distribution and knowledge sharing.
- It is a holistic solution incorporating a variety of prospectives, namely people, process, culture and technology, all of which carry equal weighting in managing knowledge.
- Knowledge is a factor of production.

B) Technology:

- Knowledge Management basically consists: people, process, content and technology to support and initiate to achieve the objectives. Technology plays important role in delivering and supporting Knowledge Management aims and objectives including services.
- The use of technology and techniques in KM for higher education is not limited to few but would depend upon the requirement of the institution with its specific purposes.
- The most common instruments /techniques are:-
 - a) Decision Support techniques - They are tools services as data mining, simulators, artificial intelligence, or the integration of all of them in an OLAP (online analytical processing). By making right information available at the right time to the right decisions makers, in the right manner, data warehousing and decision support technologies empower employees to become knowledge workers with the ability to make the right decisions and solve problems, creating strategic leverage for the organizations.

b) Groupware solutions- The most common feature of group solutions are electronic mail and messaging online calendars or diaries of employees; project management T.Q.M,desktop video conferencing, online catalogues of library materials, books, journals, articles and workflow tools.

Information Technology supported by space based communication system has attempted

to convert the world into a global village. Information super highways have generated e-commerce ebusiness and e-education. There still exists a chasm between developed and developing countries in the arc of literacy.

6.0 LEVERAGING TECHNOLOGY TO FACILITATE KNOWLEDGE MANAGEMENT IN HIGHER EDUCATIONAL INSTITUTIONS

Following are some of the techniques, the use of which will enhance the competitive capacity and attain objectives. These are:

6.1 Data Mining:

Data mining is the process of discovering meaningful new co-relations, patterns, and trends by shifting through large amount of data stored in repositories and by using pattern recognition technologies as well as statistical and mathematical techniques by Gartner Group It produces new observations from the existing observations by use of technology and mathematical evolutions. Use of data mining in higher education attempts to answer some complex questions as:

- Courses and combinations of subjects taken together,
- Most wanted and liked courses by students,
- Interdisciplinary approach to a course of study,
- Students opting for higher education degree courses and their percentages to remain and continue further studies,
- New courses to be added to curriculum,
- Present academic performance and its reflection on increased enrolments of the universities/colleges,
 - Faculty development programmes and impacts on improved academic results,
 - Students cultural interaction in groups, and
 - Faculty, student and administrative staff behavioural patterns.

With the data mining, web technology and the future Learner Relationship Management (L.R.M.) enrolment management is once again poised to becoming a key player in higher education.

6.2 E-learning

E-learning is the use of electronic multimedia technology to deliver education, information skill, knowledge and individual learning programmes to large audiences, potentially around the globe, using internet and other technology based systems. SAP, IBM, Oracle, Microsoft, Sun, Siebel and People Soft have all added new E-learning methods and redefined elearning. E-learning is one of the most important K.M. 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 K.M. is on “just” – in time knowledge delivered anytime and anywhere, within traditional “Course” disaggregated into knowledge chunks. E-learning material in the core and vocational subjects has to be prepared and developed properly.

The conventional practices in higher education need to be replaced. They have redefined e-learning as a core business process that must be automated like any other business process. They contend that like other automated business process learning must be integrated into enterprise application suites. There is no time or place for conventional events of institution in the automated workflow.

In India, the eleventh five year plan targets ODL system to account for an enrolment of around 7 million students. If the Open and Distance Learning System is to meet the enrolment targets of 40 percent of the total enrolments, in the higher education, the delivery infrastructure will have to be augmented and expanded. To be more specific, Indian Government should leverage the technology that matches the requirements of open distance learning. The facility needs to be extended for education in general. Examples, such as distance delivery, e-education and virtual universities need to be leveraged expeditiously to cope with the manpower requirements in the country.

6.3 Total Quality Management in Higher Education

Some colleges and universities are beginning to recognise the T.Q.M. values as more compatible with higher education than existing management system.

Leaders are essential in creating quality culture and they play a significant role in assuring that the necessary resources are available to support quality initiatives, when the quality principles are implemented holistically a culture for academic excellence is created.

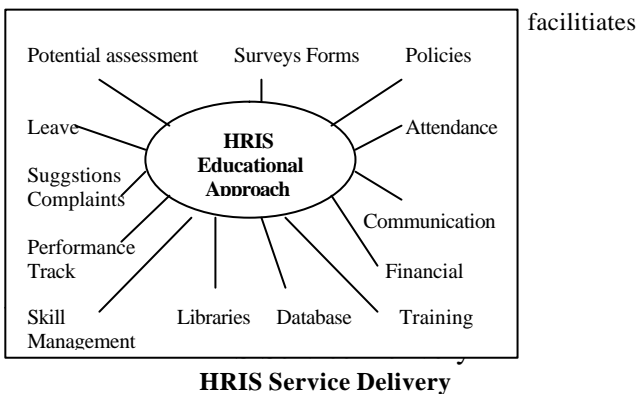
The University of Wisconsin offers portal centric graduate learning, customized forms of learning and assessment (“e-pedagogy”) personal intelligent

agents, life long access to a body of knowledge, greater involvement in professional societies and fusion of internship experiences with formal learning. The Monterey Tech System (TESM) offers connected learning services to ten different countries in Latin America. Blending learning centres leverage the clicks and bricks model for bringing educational services to developing countries in Asia, with local ICT enabled centres acting as local learning gateways.

6.4. Human Resource Information System (HRIS) in context of Higher Education

To survive in the future, higher education institution will need to be capable of adapting to changing workforces and the dynamic demands of business and government clients policies and practices. In order to build effective institutions, create, change strategies and achieve quality management teams will need timely human resource information. By knowing where it is going, through clear mission and goals, then the organisation will be able to structure appropriate development promotion training and recruitment.

HRIS, moves from isolation to integration and facilitates holistic approach of education.



- Basic objectives of HRIS are manifold such as:
- Standardization of activities, and processes,
 - Reduced Paper Work,
 - Information at fingertips,
 - Improved service delivery,
 - Enhanced efficiency at Work,
 - Enables effective analysis,
 - Student Self Service (SSS) / Open system,
 - Web system / analysis,
 - Web system /user’s Id/passwords for users’s perspective

University of California’s HRIS supports a wide range computing needs such administrative, academic, research and information portals.

It is in this situation that the University had the foresight to develop in July 2000 its vision for the future UC 2010 – A New Business Architecture. The New Business Architecture put forward six general strategies that will allow the University to achieve these objectives:

- Develop campus business portals that will integrate components of the New Business Architecture,
- Apply new approaches to how the University recruits, retains and develops the very best people,
 - Streamline UC’s cumbersome policies and processes,
 - Leverage new technology to contain costs and improve services to UC’s constituents,
 - Integrate campus financial systems and provide enhanced financial reporting through implementation of emerging technology standards, and
 - Embed performance management systems in UC business processes and focus on the most important financial controls.

6.5 Digital Dashboards

A digital dashboard is customerized solution for knowledge workers that consolidates personal, team, corporate and external information and provides single –click access to analytical and collaboration tools.

A digital dashboard consists of Web Parts, reusable components that can contain any kind of Web-based information. A Web Part can be a simple component that displays a user’s favourite Web site, or it can be a sophisticated component that integrates your existing systems with the analytical and collaborative tools in products such as Microsoft Office, Microsoft Exchange Server, and Microsoft SQL Server. By creating customized Web Parts, you can tailor a digital dashboard solution to meet the specific needs of an organisation.

A digital dashboard dynamically integrates personal, team, corporate and external information. A successful digital dashboard deployment is designed with the following goals in mind:

- Focus on critical information
- Integrate information from a variety of sources
- Use knowledge fully
- Work with the same information, in the office or on the move
- It is Powerful Tool for Change

6.6 Statistical Analysis System (SAS)

Large amount of data held in College and University databases can be transformed into meaningful intelligence. Organizations are now better equipped and prepared to respond to complex educational issues, such as measuring effectiveness, and strategically allocating resources.

SAS, provides a powerful and comprehensive suite of solutions and services from decision support administrative solutions to curriculum resources. Educational professionals can turn to SAS to get accurate, critical, timely information they need.

SAS offers capabilities in the following categories:

- Enrolment Management – Attract, retain academic talent and identify students.
- Institutional Advancement – Cost effectively target potential donors that are most likely to contribute,
- Institutional Effectiveness – Monitor and track performance.
- Operational efficiency- Increase efficiency, maximize the use of available funds, and better position resources to student support learning.
- Online Curriculum – Offers innovative online instructional activities and tools in core subjects such as English, Math, Sciences, History and Spanish.

7.0 LAUNCHING PRECAUTIONS OF K.M. PROJECTS IN HIGHER EDUCATION

The decision of implementing K.M. Project in H.E. any technique/technology project is a complex issue to be wisely considered, after taking strategic considerations such as:

- Budgets and time suitability,
- Value of Knowledge Management in terms of tangible and visible advantages,
- Changing requirements of institutions,
- Various academic & non-academic activities integration,
- Communication among staff people,
- A strong leadership initiative with clear vision
- Complex situations be given special attention

Higher educational institution must take a global and consistent vision when managing its knowledge and selecting the KM tools to be implemented. Many organizations still do not know what to do in order to manage its knowledge. Some important key points to remember are:

- Knowledge management with clear and definite attitude as to what you want to achieve, (strategy).
- The whole institution must share common KM strategies to be achieved,
- Effective review and analysis should be done to update the K.M. practice,

- Balance be made between exploration and exploitation i.e. between creation, discovery or acquiring knowledge, its refinement and reuse,
- Creation of a culture conducive to the application of K.M. practices,
- Awareness of the benefit of KM practices and everlasting uses be propagated effectively,
- Funding of resources to KM practices and tools, techniques be matched with the financial and administrative benefits to faculty, students, society and stakeholders.
- Use of appropriate technology as enabler and measure its impact in financial benefits,
- Precuring possibility of achieving economies of scale, reuse of knowledge for future growth and development,
- A balance to be established between accountability and autonomy of educational institution as applied to faculty and administrative members,
- Care to exercised to codify knowledge using a “people to document” approach. It is to ensure that strategies are innovative to build and sustain competitive advantage,
- Organisational infrastructure is to be developed accordingly to support K.M.
- Seek a high level champion for the initiative – someone who believes in its benefits and who can advocate as needed,
- Select a pilot project for K.M. – ideally one with high impact on the organization but of low risk to build credibility for K.M.
- Develop a detail action for the pilot that defines the process.
- After the pilot assess the results and refine action plan.

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