

KNOWLEDGE MANAGEMENT AND HIGHER EDUCATION REFORM

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Introduction

If the last century was considered as the era of industrialization wherein the utilization of natural resources had been the key fuel of development and progress and for which the past and present generations are still paying for the cost of environmental degradation and natural resources depletion, at least the first decades of the present century is very conscious of more environment-friendly technologies and the need for more sustainable natural resources utilization and development.

The shift from an industrial era to information age or better still the knowledge-based society wherein the acquisition and utilization of information and knowledge are the major driving forces of the new economy. It is brought about by the advances in information and communication technologies which have fostered globalization. In such a globalized economy, there is great mobility of all forms of resources including information and knowledge as well as the blurring of physical boundaries of nations. Therefore, proper knowledge management is required as the key to competitive edge of any organization including universities.

Utilization of appropriate knowledge management tools which are mostly but not exclusively ICT-based, allows linkages and networking of organizations and people and sharing of resources worldwide in a more effective and efficient ways. The impact on the ability of institutions like universities to use information and knowledge for innovations and hopefully more equitable distribution of resources and sustainable development. cannot be overemphasized.

KM is also not easy to define precisely and simply. **Knowledge Management (KM)** is defined as “ a newly emerging, interdisciplinary business model dealing with all aspects of knowledge within the context of the firm or organization, including knowledge creation, codification, sharing or transfer and how these activities promote learning and innovation. In practice it encompasses in an overlapping manner both technological tools (intranets, groupware, etc) and organizational routines or cultures (mission, vision, strategy, policy and best practices) for the

attainment of the goals or mission of the organization.” *(partly modified from <http://w.w.w.sims.berkeley.educourses/is213/s99/Projects/P9>).*

Rudy Ruggles, one of the leading KM thinker and practitioner has identified the following items as integral components of KM: (ibid)

- Generating new knowledge
- Accessing valuable knowledge in decision making
- Embedding knowledge in processes, products, and /or services
- Representing knowledge in documents, databases or knowledge bases, and software
- Facilitating knowledge growth through culture and incentives
- Transferring existing knowledge into other parts of the organization
- Measuring the value of knowledge assets and/or impact of knowledge management.

According to K.M. Robert E. Cole (ibid- partly modified) and Ann Macintosh of the University of Edinburgh on her position paper on Knowledge Asset Management, a number of factors have greatly contributed to the growth and interest in KM. Among them are :

- Accelerating pace of change (innovation) and competition in the market;
- Staff attrition (resulting mostly from downsizing, reengineering and early retirement) requires replacement of informal knowledge with formal methods;
- Growth in organizational scope: geographic dispersion and need for integration associated with globalization
- Increase in networked organizations
- Growing knowledge-intensity of products and services and hence companies compete on the basis of knowledge
- Revolution in information and communication technologies
- The need for life-long learning as an inescapable reality

KM as a multi- or cross-disciplinary activity

Knowledge management is a multidisciplinary activity as it utilizes concepts and tools from business, economics, education, information technology, psychology, sociology just to mention a few. They all provide methods on how individuals work and how systemic knowledge is accessed, created, utilized, coded or stored and transferred. It involves the systematic and dynamic embedding of knowledge in networks and processes as well as in human beings that produce and use them. Knowledge is part of the organizational culture and is usually impossible for a single individual to know. The culture changes in response to environmental changes and hence the management of such corporate knowledge is the basis of the organization's innovative or creative potential and hence the leverage for its competitive advantage.

Thus among the skills and technologies and tools utilized in KM are :

- Cognitive science- insights on how one learns
- Expert systems, artificial intelligence and knowledge base management systems (KBMS)
- computer-supported collaborative work (groupware)
- Library (digital) and information science
- Technical communication skills
- Document Management (inclusion of “metainformation”)
- Decision support systems
- Semantic networks (hypertexts)
- Relational and object databases
- Simulation (computer and manual)
- Organizational science

The KM Process

The knowledge management process consists of a number of interrelated activities. Among them are:

- Asset Utilization

- Knowledge Evaluation
- Knowledge Improvement
- Knowledge Accumulation
- Knowledge Generation
- Knowledge Sharing
- Knowledge Codification
- Knowledge Storage and Protection
- Knowledge Transfer and Sharing

Knowledge Management and the University

Most universities share a common mission of providing academic programs, undertaking research, providing community service and promoting one's national heritage and culture. There is a need to relate the various strategies and programs of the university to knowledge management.

Accessing and Creating Knowledge

Universities have accessed information and knowledge through various means like scholastic search for sources of information in libraries, archives, museums and other repositories of information and knowledge. Universities through the research activities have created and systematized knowledge and information . They have also codified them into documents, reports, concepts, theories and constructs and principles or even laws. The universities have always shared their knowledge with fellow scholars and professors, with students and other sectors of society.

In reality, the three basic activities of Knowledge Management of knowledge creation, knowledge coding and knowledge transfer have always been performed by universities. The only difference perhaps now is the greater intensification of these activities through technological tools. In addition, universities no longer have the monopoly of creating, coding and transferring knowledge. Private corporations and specialized laboratories also undertake research which are the sources of new knowledge. Training and even at times awarding of certifications are also undertaken by industries. Students can access by themselves information from the Internet and could have chats or direct dialogues with experts in all fields and all parts of the world.

Again universities have lost the monopoly of codifying and transferring knowledge through their academic programs of teaching and community service. Industries and other community organizations have also undertaken these activities of training and teaching. With on-line delivery systems, teachers are no longer the only source of information and knowledge. Students can access them on their own, at their leisure and based on just on time needs. Teachers serve more as facilitators or mentors, guiding students on the use of knowledge.

With knowledge management, it is now clear that knowledge acquisition does not occur at a single stage in one's life, but is a never ending one. There is need for continuing education and knowledge acquisition throughout life. Although best practices can be embedded in information technology for ease of use, it would also need constant review and updating. There would be continuous learning, unlearning and relearning with changing times and conditions and state of the art of the knowledge.. Universities specially the traditional ones tend to be monolithic and adhering to traditions. There may be a need to change such views and practices into one characterized by flexibility and ability to adjust or adopt quickly to ever changing environments.

When advocating academic freedom in universities, it is mostly the formal or explicit knowledge that is shared and expressed freely. The tacit or personal knowledge may be kept. There may therefore be a need to develop and use methodologies of converting tacit knowledge into explicit knowledge so that they can become part of the institution's culture and become one of the sources of strength of the organization. They can also be utilized as basis of policies, of dialogues and collective reflections for a smoother running or management of a university.

Universities must be cautious in the codification of knowledge. Simplification of contextual information for storage in IT-based repositories or systems works against the retention and sharing of the complex and varied viewpoints or perspectives on the subject. It is by keeping in mind the constructive nature of knowledge creation that one can assure the multiple and diverse interpretations of inquiry and knowledge and thus protect academic freedom and facilitate an organization's anticipatory responses to discontinuous change.

It is neither redundant nor absurd for us to remind universities that they must function as a "learning organization" and must develop and utilize their own knowledge management systems. Otherwise, how can an institution that has not tackled and developed the strategy, design and implemented information.

To facilitate knowledge creation and innovation, institutions must lessen their bureaucratic structure and use more of the adhocratic-based activities. Additionally, flatter organization, highly organic form of structure and more cross-departmental network should be implemented.

Implementation and Utilization of Knowledge

Knowledge must be used and applied in the solution of problems, in making appropriate decisions and for innovation. Universities still serve this function of innovation and creation. With present volume of information available through the Internet, there is no problem of quantity of information available, in fact there may even be an information overload. **The issue is determining which are quality information and which knowledge or information is appropriate to utilize.** Therefore, it is necessary to change the way of conducting class from content-based to research-based teaching, emphasizing more of learning skill than the content itself. Teachers can still serve as facilitators, as mentors as tutors that can motivate, guide and inspire students to acquire and use knowledge properly. There will be need for development of communication skills specially in the use of English language, it being presently the global language. Creative or parallel thinking must be developed together with critical thinking. This would allow consideration of several alternative solutions to given problems and sharpen the decision making ability to choose the most appropriate and the best.

University as Knowledge Arbitrator

Universities not only have the obligation to transfer or share information and knowledge with their colleagues and students, but also with the rest of the members of the community. This is part of the community service of the university. The university must be the learning laboratory for the community. They have to facilitate knowledge sharing need for solutions of problems and the general amelioration of the quality of life of the people. Knowledge transfer can be from North to South or South to North and even South to South. Universities must promote more equitable access to information and knowledge and that the gaps between the haves and have nots must be reduced if not totally eliminated. This is part of the moral, civic and ethical obligation of the university.

Linkages and Networking for Knowledge Sharing

The obligation of the University to its students does not end with graduation. The university must link with industries and other places of work to help facilitate the placement and career advancement of graduates. In other words, the University should be the back-office of its

graduates, providing opportunities for them to refresh and relearn relevant knowledge throughout their career-lives. A closer link between universities and industries through establishment of cooperative education or work-integrated programs must be encouraged. There could also be cooperation of universities and industries in research and hence in knowledge creation and innovations. Universities and industries must also work together in solving common community problems like that of employment, environmental degradation, more equitable and sustainable resources development. Universities must also collaborate with other community organizations in the promotion of peace, assurance of a safe and quality environment, provision of social and health services and in the promotion of the spirit of cooperation. Thus, linkages and networking must be encouraged for better knowledge and other resource sharing.

Provision of Continuous or Life-long Education and Borderless Knowledge Delivery system.

With rapid developments in technology, the rate of obsolescence or shelf-life of information and knowledge has become shorter and shorter. There is, therefore, a need for provision of continuous training and possibility for acquisition of knowledge. Learning must be possible at any time, anywhere and on any subject regardless of the age, sex, religion and socio-economic status of the learner. Access to knowledge and education must therefore be borderless.

Conclusion

In closing, I would therefore like to emphasize the need for an effective and efficient knowledge management system in a university. The university must be able to continuously access all possible sources of information and distill it into appropriate knowledge that can be used in the better understanding of events and phenomena or in the solution of problems, both theoretical and practical. The university has to remain as creator of new knowledge, the source of innovation and creative thinking for the improvement in the quality of life and the promotion of social-political wellbeing together with the promotion of the culture of peace.

The university must be an arbitrator of knowledge transfer and thus promote the sharing and transfer of its body of knowledge to all sectors of the community and society. Knowledge must be codified and presented in varied forms appropriate for the greatest possible number of users. They must attempt to reduce the gap between the haves and have nots in the accessing and utilization of information and knowledge.

If we would like to assure the innovation and maintenance of competitive advantage at both personal and organizational level, we must implement an efficient and effective knowledge management. Moreover, internal networking between different departments within the university and between various level of education institutions and knowledge providers locally and internationally have to be materialized.

Therefore, the success of higher education reform may not depend only on the external governance systems but mostly on the improvement of teaching, learning and research within the university itself. Only modern equipments and/or ICT infrastructure cannot guarantee its success, but the critical success factors rely on its utilization strategy in comply with the context of knowledge management.

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