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Knowledge Management in Universities: Role of Knowledge Workers

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Abstract
Knowledge management has been hailed as one of the most important developments in the fields of information studies and management science in the recent decades. By capturing, organizing, documenting and sharing organisational knowledge, Knowledge management helps today's complex organisations to make better decisions and solve their problems effectively. As highest centers of learning, universities need to build information infrastructure and create a favourable atmosphere where teaching and non-teaching staff, students, researchers, patrons and other stakeholders can take part in various knowledge management activities. The role of knowledge workers in this regard is quite important. By advocating knowledge discovery and use, knowledge workers can bring about changes in the university's organisational cultures and individual behaviors relative to knowledge. Universities can play a significant role in the building and unhindered development of a knowledge-based society by recruiting skilled and competent knowledge workers and empowering them to manage the knowledge assets effectively.

Keywords: Knowledge Management, Libraries, Universities, Bangladesh

Introduction

As we have stepped into a new century as well as a new millennium - new thoughts, ideas and innovations are shaping and reshaping the world. In the wake of the emergence of a 'knowledge society', 'knowledge' and 'information' are being considered as essential ingredients of development. As far back as in the early 1960s and 70s, economists like Fritz Machlup and Marc Porat assessed the impact of knowledge on the economy, while management theorists like Peter Drucker explored the use of knowledge from management and organisational perspectives. Drucker (1992) maintained that land, labour and capital – the

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classical factors of production have become secondary to knowledge as the primary resource for the new economy. It is now widely accepted that value added in most organisations today is in the form of knowledge, not 'things' or 'objects'. Knowledge therefore, has emerged as the central focus in institutional and organisational planning and management. Universities, as the highest centers of education, learning and research, need effective management of their intellectual and knowledge assets. Management of these assets is becoming more and more important as universities are striving to ensure quality education and research within their limited budget.

Knowledge, Knowledge Management and Knowledge Workers

Although many people view knowledge and information as interchangeable, in fact there are considerable differences between the two. While information is generally viewed as processed data, knowledge is viewed as processed information. If we look at the definitions of 'information' provided by different authorities, we will see a lot of variations in the definitions. It has been defined as 'data that makes a difference' (King, 1993); 'data with special relevance and purpose' (Drucker, 1995); 'data in context' (Gallup et al., 2002), and 'data that has relevance, purpose, and context' (Smith, 2001). On the other hand, knowledge has been defined as 'information whose validity has been established through test of proofs' (Liebeskind, 1996); 'social actions' (Stacey, 1996); 'a human, highly personal asset representing the pooled expertise and efforts of networks and alliances' (Smith, 2001); and 'a set of insights, experiences, and procedures considered true and appropriate' (Bourdreau and Couillard, 1999; Liebowitz and Wilcow, 1997). McDermott describes six characteristics of knowledge that distinguish it from information:

1. Knowledge is a human act.
2. Knowledge is the residue of thinking.
3. Knowledge is created in the present moment.
4. Knowledge belongs to communities.
5. Knowledge circulates through communities in many ways.
6. New knowledge is created at the boundaries of old (McDermott, 1999, 105).

Increasing recognition of knowledge in all spectrums of human activities has given birth to new thoughts and concepts regarding the use of knowledge for accelerating growth and development. One such concept is 'knowledge management' which has become quite popular in the academic as well as business circle. Although there are differences of opinion regarding the true nature of knowledge management, it is generally accepted that since knowledge is considered to be a critical factor for an organisation's survival, it should be captured, managed and utilised is a way that fosters organisational development. Darroch and McNaughton (2002) view knowledge management as a management function that creates or locates knowledge, manages the flow of knowledge and ensures that knowledge is used effectively and efficiently for the long-term benefit of the organisation. Therefore, effective organisation of knowledge is in the heart of knowledge management and the significance of knowledge management lies in the most gainful use of knowledge for organisational purposes.

Knowledge workers are people who are engaged in knowledge management activities. In Debowsky's (2006, 18) view, knowledge workers are those people 'who spend most of their

time generating, applying or conveying knowledge'. Knowledge worker is an umbrella term which includes people from a wider spectrum of knowledge activities, including librarians, database administrators, public relations staff and people specifically engaged in various knowledge management activities.

Nature and Scope of Organisational Knowledge

One of the central themes of knowledge management is that, knowledge held by individuals working in various capacities in the organisation is a valuable commodity for the organisation (Lang, 2001, 44; Debowsky, 2006, 17). Contrary to the general consideration of information as an 'object' or 'thing', knowledge management theorists do not usually view 'knowledge' as an object. Churchman (1971) notes, 'To conceive of knowledge as a collection of information seems to rob the concept of all of its life. Knowledge resides in the user and not in the collection.' This places human beings in the center of knowledge creation and acknowledges the fact that without active involvement and intellectual contribution of human beings, no knowledge management endeavour can succeed. Blacker (1995) maintains, 'Rather than talking of *knowledge*, with its connotations of abstraction, progress, permanency and mentalism, it is more helpful to talk about the process of *knowing*''. From the knowledge management perspective, only possessing the right information is not enough, it must be blended with "insight", and inner process taking place in the mind of the knowledge user, which blends memories, experiences, beliefs, expertise and attitude of the knowledge user to make the information meaningful, worthwhile and effective. Moreover, although most of the 'thinking' and 'learning' is done on the individual level, the process of 'knowing' has a far wider implication which builds on the ideas of other people. Knowingly or unknowingly, people put their ideas against the ideas and beliefs of other members of the community to handle and critique. This brings forth new ideas and beliefs, generate new knowledge and enriches the knowledge domain. Lang articulates the idea more succinctly, 'Meaningful knowledge cannot be simply retrieved from some database but must be actively reconstituted in the moment, in context of who the interlocutors are, and what the community's particular needs are at that particular moment. Knowledge work is dominated by communication and discussion, deliberation, argumentation, debate, and negotiation. At the boundaries of the old where clashes of perspectives occur when received wisdom does not quite work, new knowledge tends to emerge (2001, 45).'

Knowledge workers, working at various levels of the organisation, must be aware of this particular nature of knowledge. They should also have specific strategies for dealing with the two major types of organisational knowledge: explicit and tacit. Explicit knowledge is knowledge that can be captured and shared with others. It is 'documented and public; structured, fixed-content, externalised, and conscious (Duffy, 2000)'. On the other hand, tacit knowledge is embedded in the behavior, attitude, perception, ideology and beliefs of individuals. It draws on the accumulated experience and learning of a person and is hard to reproduce or share with others. It is clearly evident that, management of tacit knowledge which resides in the minds of organisational staff poses the greatest challenge to any organisation. Therefore, organisations should have clearly defined strategies to deal with this kind of knowledge and knowledge workers also should be effectively oriented for managing tacit knowledge. Organisations rely on a range of authoritative sources to meet its knowledge

demands. These sources include data stored in organisational records and systems, explicit knowledge which is documented and accessible, and tacit knowledge held by employees, clients and other organisational stakeholders. Information databases, organisation's web site, the library and archives are major components of corporate knowledge system. Any knowledge management system must have clear guidelines and techniques for drawing on these sources.

Knowledge Management in Universities

Academic institutions, particularly higher educational institutions like the universities are seen as 'knowledge hubs', where diverse activities are carried out for the generation, preservation, diffusion and application of knowledge. Teachers, students and researchers are integral parts of academic institutions and all of them are engaged in the above activities. However, from knowledge management perspective, another group of people are considered crucial for setting and implementing the 'knowledge agenda' of the university. They are the knowledge workers, who work across the sectors of the university community and provide support to Communities of Practice (CoP), professional and inter-disciplinary groups and individuals seeking to enhance their professional skills. Universities are complex academic institutions which undertake a whole plethora of activities other than classroom teaching. Among these, 'research' is the most important activity which sets universities apart from other academic institutions. Research requires the presence of huge information repositories and accessibility to online and offline sources of information. University knowledge management systems must take adequate measures to foster creation and sharing of knowledge among the researchers as well as the teaching and non-teaching staff, students, patrons and other stakeholders.

As far as knowledge management is concerned, foremost task of the universities is to have a clear understanding of desirable strategic knowledge (expertise and understanding that support the strategic direction of the university) and the sources of such knowledge in the community. Greengard (1998) suggests, 'An organisation aiming to develop a knowledge base first needs to identify the sources of knowledge available, and then to capture and manage these resources properly'. Although the knowledge acquired by teachers and researchers are regularly captured by scholarly journals, books, compilations, etc., these knowledge usually remain scattered without necessary links and correlations made among them. This is the task of the knowledge management team to establish these links and correlations and manage the knowledge in a coherent form. This part of the task is rather easy because it deals with explicit knowledge which is easy to capture and preserve. But capturing the tacit knowledge of not only the teachers and researchers, but also the non-teaching staff and students, poses a different challenge altogether. Modern universities are complex organisations, with faculties, departments, institutions, research labs and administrative branches performing diverse activities. When a distinguished teacher, a competent administrator or an accomplished librarian retires or leaves the university, a big vacuum is created. The people who fill their places are frequently compared to their predecessors and, in many cases, are found inadequate or inappropriate. Although it is true that, knowledge is an essence of a sustained effort of learning and problem solving over a long period of time, and hence it cannot be automatically transferred to someone else by pressing a button; but at the same time, experience and expertise can be shared with others, and when this sharing takes place within an organisational setting, following specific rules and procedures, coordinated by designated professionals and

using appropriate technologies, we can say that, knowledge management is happening. In the university environment, knowledge is shared through the use of teaching-learning methodologies and the university provides an environment in which university staff and students develop skills, understanding and common values. Universities are higher learning centers bear the responsibility of creating human resources who would contribute to the nation's goal of building a knowledge-based society. Mikulecky and Mikulecka (1999) observe that, by its nature, university environment is suitable for the application of knowledge management principles and methods because universities usually possess modern information infrastructure, knowledge sharing with others is natural for teachers and the desire of students is to acquire knowledge from accessible sources as fast as possible. Metaxiotis and Psarras, (2003) outline three major missions of universities:

- Teaching- to prepare students to become successful lifelong learners,
- Research- to expand the frontiers of human knowledge and to promote creativity, and
- Service- to serve on communities and in leadership positions within the university and in professional organisations, and to participate in outreach activities that serve the local, national, and international communities.

These days, universities are assuming new roles not only in education and research, but also as a think tank for policy formulation and decision making at various levels. The society expects new ideas and concepts to be emanated from the universities. To fulfill this demand, universities are investing more and more in building knowledge management infrastructure and pursuing knowledge management practices. This enables the universities in doing fundamental and applied research, teaching suitable curricular programs, utilising knowledge for management decision support to increase the level of knowledge dissemination and utilising knowledge for a qualitative change in the educational process. Rowley (2000) maintains that, the university management needs to consciously and explicitly manage the processes associated with the creation of their knowledge assets in order to successfully manage the knowledge management initiatives and to recognise the value of their intellectual capital to their continuing role in the society. Pan and Scarborough (1999) suggest that knowledge needs to be seen as intrinsic in social interaction, rather than as a resource disseminated from one person to another. In their view, organisational knowledge is socially constructed and shaped by the reciprocal interaction between technological and organisational elements. Therefore, the implementation of socio-technical elements on knowledge management could unfold the interaction between technological, informational and organisational components. They propose that these socio-technical components comprise three major layers of knowledge management system:

- Infrastructure – comprises of technical components such as hardware and software that enables the physical and communicational contact between people using network,
- Info-structure – incorporates the formal rules governing exchanges and sense making between people; and
- Info-culture – the background knowledge embedded in social relations and work group process (Pan and Scarbrough, 1998).

Mohayidin et al (2007) observe that, these three layers or factors, which influence the level of success or failure of any knowledge management initiative, may eventually determine the university's overall performance in fulfilling its functions as knowledge providers.

Role of Knowledge Workers

For coordinating different streams of knowledge activities which are performed in various parts of the university, competent knowledge workers are recruited in the universities of the developed countries. These knowledge workers work across the sectors of the university community, providing support to communities of practice, professional and inter-disciplinary groups and individuals seeking to enhance their professional skills. Bergeron (2003) suggests that knowledge workers support knowledge management activities in five roles, which are:

1. The **Chief Knowledge Officer** provides strategic leadership for knowledge management and builds political alliances to promote knowledge sponsorship.
2. **Knowledge Analysts** identify knowledge practice and trends.
3. **Knowledge Engineers** or Knowledge technicians support the knowledge management service and its use.
4. **Knowledge Managers** coordinate the task of knowledge management implementation.
5. **Knowledge Stewards** operate locally as knowledge champions and enablers.

In addition, members from different strata of the organisation may contribute in the knowledge management and knowledge service activities without essentially becoming a formal member of the core group. These knowledge workers are constantly involved in fostering the university's learning culture and promoting knowledge sharing. Based on the assumptions made by Davenport and Prusak (1998), the following roles of a University Knowledge Workers may be suggested:

- Given the important role of knowledge in the strategies and processes of modern universities, the knowledge workers can advocate knowledge discovery and use. They can champion changes in organisational cultures and individual behaviors relative to knowledge.

- They can design, implement and oversee the knowledge infrastructure of the university, including its libraries, knowledge bases, human and computer knowledge networks, research centres, etc.

- They can manage relationships with external providers of information and knowledge and negotiate contracts with them. In the context of a university, these external partners include developers and suppliers of educational materials, software and hardware, other universities, research organisations, commercial and other organisations (potential employers of the students), etc.

- They can provide critical input to the process of knowledge creation and use around the university and facilitate efforts to improve such processes if necessary.

- They can design and implement the university's knowledge codification process. they goal is to specify key categories of information or knowledge that the university would address, and entails mapping both the current knowledge inventory and future knowledge models.

- They can measure and manage the value of knowledge, either by conventional financial analysis or by comparing the knowledge inputs and outputs in the context of a university.

In the context of universities, the group of people who most obviously qualify as knowledge workers are the university library staff. Traditionally, library workers have not only been playing an important role in the management of knowledge products like books, periodicals and databases, but also in the sharing of knowledge, information and ideas among teachers, students, researchers, university staff and people from outside who interact with the above-mentioned groups of people. Therefore, the onus of designing and maintaining a successful knowledge management infrastructure in the university should primarily lie with the library professionals. However, the role of other stakeholders, particularly teachers, staff members, students and the university authority is also crucial for knowledge management in universities.

University knowledge workers must have clear understanding of the intricate relationships existing among various sections and components of the university administrations including the outside partners. They must not ignore the significance of human relationships existing among the members of the university family, because by doing so, they will fail to grasp the essence of knowledge management. Lang observes, 'Knowledge is not information and knowledge sharing is not information sharing. Therefore, knowledge management cannot be reduced to information management. Because knowledge, at rock bottom, resides with the knower and not some hardware or software, knowledge must flow among knowers. This means that human relationships within an organisation are crucial considerations with regard to knowledge creation and utilization within that organisation. To succeed, knowledge management must emphasize the management of these human relationships (2001, 50). The university's web portal can act as a unique means for capturing, categorizing, sharing knowledge generated by various stakeholders of the university, and more importantly, for inspiring these stakeholders to be an active participant of the knowledge management activities. Constant flow of information and ideas among the university community will result in the generation of innumerable facts, ideas, data and information. Knowledge management team, in close collaboration with the university authority and by following set rules and principles would determine which parts of this huge body of information could be dubbed as 'knowledge' – which are considered to be valuable for the operation and future progress of the university. Once identified, these knowledge should then be captured, codified, categorized for preservation and sharing. However, there is a common misconception that knowledge management means the storing of all the corporate knowledge of an organisation on a huge server and making it available to all members of the organisation like a giant hyperlinked encyclopedia. This notion completely ignores tacit knowledge which cannot be copied and pasted into a computer system like ordinary data. Tacit knowledge consists of skills, faculties, and know-how we possess in our brain that cannot be easily expressed but which are amplified and shared through interpersonal interaction and social relationships. Universities, therefore, must focus more on tacit knowledge and experiment with new organisational forms, cultures and reward systems to enhance interpersonal interaction and social relationships within which

tacit knowledge gets expressed, shared and augmented (Lang 2001, 48). One way to ensure that is encouraging creative thinking among the students, teachers, staff and other stakeholders of the university and to promote the development of teams to solve problems creatively so that members can develop trust in the team.

As it has been mentioned before, the role of university libraries in knowledge management in universities is a fundamental one. Barquin (2007) argues, 'Librarians or information scientists are trained precisely in the skills that a knowledge manager or a business intelligence analyst often needs ... they recognize the importance of metadata, or context, in facilitating the correct identification of a document after it has been contributed to a digital library or an online repository.' As centers of knowledge preservation and distribution, libraries are uniquely placed to show the role of knowledge in the university. Library professionals could play this role as knowledge champions by coordinating all knowledge-centered activities taking place in the university. They can link teachers, students and others not only to the vast resources stored in information repositories on the cyberspace, but also to the ideas and experiences of people from other organisations and other domains. Citing Yi, Shanhong (2009) suggests, 'Knowledge management in libraries is to promote relationship in and between libraries, between library and user, to strengthen knowledge internetworking and to quicken knowledge flow'. Therefore, the libraries role as a hub of knowledge management in the university could hardly be over-emphasized. However, library needs to have full backing of the university authority to make this happen. With the decreasing budget of the university libraries and the increasing workload, university libraries would find it an uphill task to engage themselves in university knowledge management, let alone take command of the whole intervention. That is why the patronization of the university authority in this regard is so crucial.

Knowledge Management in Universities: Some Observations

Admittedly, proper management of tacit and explicit knowledge in an environment as varied and extensive as a university is a challenging task. It might be a good idea to focus on a particular group of people (teachers, researchers, etc) at the initial stage rather than attempting to build an all-pervasive knowledge management framework by accommodating each and every section and groups of people in the university. It is more important to start building a knowledge culture, where free and widespread sharing of knowledge among the various groups of people is not only allowed, but encouraged and respected. But whatever section or group of people are chosen first, they must get constant assistance and encouragement from the university knowledge workers in generating, recording, sharing their knowledge. The following tasks may be performed by the universities to ensure effective knowledge management:

1. The university should inspire the students, teachers and staff to take part in the sharing of explicit as well as tacit knowledge. Regular problem solving and idea sharing sessions may be organised to encourage sharing of knowledge, information, ideas and inspirations.
2. A culture of sharing knowledge and information across the various sections, departments, institutes and centres of the university should be developed. This can not be done overnight, but constant and consistent support from the authority would eventually help create such a culture.

3. A number of software are now available which facilitate the capturing, processing, organizing and sharing of knowledge assets of an organisation. Besides, web portals and various services of the Internet (group mail, Usenet, chatting, social networking, bookmarking, etc.) are helping in the management of diverse information and data. Universities can utilise these software and services to enable its students, teaching and non-teaching staff as well as outside partners, to take part in knowledge management activities.
4. University library staff can play a crucial role in coordinating the knowledge management functions. They can help various stakeholders explore the information repository of the university, provide information literacy training to the library users, arrange idea-sharing sessions and carry out documentation and distribution activities to make knowledge management efforts a success. Therefore, while choosing or appointing dedicated knowledge workers, library staff must be given priority.
5. The knowledge workers should have the ability to work in close collaboration with students, researchers, teachers and staff members of the university to gradually develop an effective knowledge management infrastructure as well as culture in the university.
6. No knowledge management initiatives can be successful without proper assistance and support from the university authority. Only providing money and manpower is not enough; the university authority should be involved in various knowledge management activities and contribute to the development of an environment conducive to knowledge management.
7. Proper coordination and collaboration among the members of the university family is essential for effective sharing and management of knowledge. If they do not spontaneously take part in the exchange of information and ideas, then many bottlenecks would be created which would foil all knowledge management initiatives.

Like any other organisation, the task of knowledge management in universities is quite challenging. This is more so in the universities of developing countries like Bangladesh. The universities have to continuously grapple with limited budget, weak and inadequate infrastructure, lack of resources and facilities, manpower problems, etc. Naturally, they can pay little heed to the issue of knowledge management, which call for considerable investment in terms of money, time, planning and efforts. Some universities of Bangladesh are developing online databases and information repositories, while some have developed information portals for ensuring access to the university's intellectual resources and academic services. But these are only the very first steps towards knowledge management. Creating a culture of knowledge sharing, acquiring appropriate hardware and software, building information and communications infrastructure and developing human resources – all are mostly absent in the universities of Bangladesh. It is expected that, with the growing recognition of 'knowledge' as the most important ingredient of social progress, initiatives for knowledge management would gain more momentum in the coming days.

Conclusion

There is little doubt that the role of universities in this increasingly competitive global landscape needs to be rethought and reassessed. As the highest centres of learning, universities must continue their role as critic and conscience of the society, but at the same time, they must

pay heed to the need of a changing time and a changing society. As Loh et. al. (2003) point out, the main challenge of the universities in the 21st century is to, 'stay relevant in a rapidly evolving techno-economic environment.' Knowledge management, as the previous discussions have showed, could help today's universities add value to their services to the society and the nation, by playing a central role in research, development, policy analysis and implementation. As information reservoir and communication hub of the universities, libraries could prove their worth by taking leadership of university knowledge management initiatives. This calls for considerable skill development and capacity building of the library professionals which would give them an additional edge to stay competitive on a broader scale.

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