Challenges in Knowledge Management in Libraries

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Abstract

Due to rapidly changing information and communication technology (ICT), library science has been incessantly evolving. The internet has further transformed the information society into to a global society. The knowledge explosion and ICT tools have equipped information and library science with immediate access to practically limitless sources, plus quick storage, retrieval and sharing tools. In this knowledge economy age information professionals' roles have therefore changed profoundly at both library practitioner and library school educator levels. On the library side information professionals have evolved from traditional cataloguer and research and reference service providers to value added service providers, teacher librarians and, most recently, knowledge managers. On the library school educators' side, there is the constant challenge to review the curriculum, keep up to date and extend personal capacity according to the needs of the knowledge society. This paper looks particularly at the importance of knowledge management for 21st century information professionals; their evolving new roles, skills and challenges, and finally recommends what is important to have in place for information professionals to be part of this knowledge management economy.

Keywords: *Librarians, Library school educators, Information professionals, Knowledge management.*

Introduction

Since the early 1990s, knowledge management has been a popular issue, relevant to and discussed amongst all disciplines at all levels, including the business, service, private and governmental sectors as well as libraries and information centres. Clearly much has already been written on the importance of knowledge management for libraries and information professionals (see for example: Chase, 1998; Broadbent, 1998; Balcombe, 1999; Schwarwalder, 1999; Rowley, 1999, Duffy, 2000; Shanhong, 2000; Milne, 2000; Townley, 2001; Koina, 2003; Al-Hawamedeh, 2002; Ajiferuke, 2003; Pantry & Griffiths, 2003; Whilte 2004, Watson, 2005, Jones, 2008). Earlier literature often questioned whether knowledge management was just another management fad or whether knowledge management represented librarianship in 'new clothes' (Broadbent, 1998; Wilson, 2002). However, Ponzi & Koenig (2002) established that knowledge management is at least living longer than typical fads and perhaps is in the process of establishing itself as a new aspect of management. It is now apparent that multi-disciplinary knowledge management is one of the hottest topics of discussion today. "Every information manager needs to appreciate fully the scope and opportunity that knowledge management (KM) offers to the extended enterprise" (Duffy,

2000) because it can be used as a competitive tool.

Sarrafzadeh et al (2006) noted an increased awareness among library and information science (LIS) professionals of their potential contribution to knowledge management, with a high level of agreement on its positive implications for both individuals and the profession. Many library and information science schools now include courses on knowledge management. The University of Botswana for instance now offers, as of August 2008, "Knowledge Management for the Information Professional". Increasingly conference themes are set on knowledge management. In the African context recent examples are the Standing Conference of Eastern, Central and Southern Africa Library & Information Associations (SCECSAL) 2004, the theme of which was 'Towards a Knowledge Society for African Development'; and SCECSAL 2006 'Libraries as a bridge to an information and knowledge society in eastern, central and southern Africa'. SCECSAL 2008's sub-theme was, 'Knowledge Management in the Context of the MDGs'. All of this reflects the growing recognition and awareness of knowledge management among information professionals, as well as the diversity of knowledge management. Progressively, it is being acknowledged that knowledge management is no more an optional extra or luxury for 21st century information professionals but a mandatory discipline if they want to survive or at the least remain effective, in the digital era. The underlying argument for knowledge management is that organizations benefit from identifying intellectual capital whether internal or external, necessitating capturing, organizing and sharing knowledge within the organization.

Knowledge economy is a knowledge-based economy. In the knowledge economy era, the management refers to effectively identify, acquire, develop, resolve, use, store and share knowledge, to create an approach to transforming and sharing of tacit and explicit knowledge, and to raise the emergency and innovation capability by utilizing the wisdom of the team. Since knowledge has become the driving force for social development, the attention of the society to information and knowledge is rising and people's demands for information and knowledge are increasing step by step. This has provided a good environment for library development [1]. Moreover, as information and knowledge has become an important productive factor for the modern economic system, the society will inevitably require intensified management of information and knowledge. How to manage knowledge will become an important subject facing libraries in the near future. Knowledge management in libraries should be focused on effective research and development of knowledge, creation of knowledge bases, exchange and sharing of knowledge between library staffs (including its users), training of library staff, speeding up explicit processing of the implicit knowledge.

Characteristics of Knowledge Management in Libraries
The role of knowledge management in libraries will become more and more important along with the development of knowledge economy. It is a new management mode, boasts the following superiority and characteristics incomparable with conventional management:

Human Resource Management Is the Core of Knowledge Management in Libraries

The most important resource in the knowledge economy system is the talents who grasp knowledge. The talent competition has become the focus of market competition in the knowledge economy era. In the knowledge economy era, the libraries will attach importance to vocational training and lifelong education of library staffs to raise their scientific knowledge level and ability of acquiring and innovating knowledge. They also will and fully respect the human value, guide and bring into play wisdom potentialities of library staffs, take developing knowledge resources in the brains of library staffs as an important way for rising work efficiency. An all-round improvement of library staff's quality and positioning of the human value will become important objectives of knowledge management in libraries.

The Objective of Knowledge Management in Libraries is to Promote Knowledge Innovation

Knowledge innovation is the core of the knowledge economy society. As bases for collection, processing, storage and distribution of knowledge and information, libraries represent an indispensable link in the scientific system chain, an important link in the knowledge innovation. Secondly, libraries take part in scientific research process directly. The library work is a component of knowledge innovation. Thirdly, libraries must pay attention to diffusion and conversion of knowledge. They act as bridges for turning the results of knowledge innovation into realistic productive forces. 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. In the knowledge economy era, libraries will carry out researches on development and application of information resources, construction of virtual libraries, protection of intellectual property rights in the electronic era etc., thus founding the base for knowledge innovation [2].

Information Technology Is a Tool for Knowledge Management in Libraries

Knowledge acquisition is the starting point of knowledge management in libraries. The application of information technologies enlarges the scope of knowledge acquisition, rises knowledge acquisition speed and reduces knowledge acquisition cost. It is impossible to accomplish such important tasks by using man's brains only in the modern society in which the knowledge changes with each passing day. It will be possible to link closely knowledge sources and knowledge workers by computer networks, thus constructing knowledge networks in libraries based on realization of single-point informatization [3].

The knowledge acquired must be accumulated and converged into knowledge warehouses of libraries. The priority of information technologies in the field of knowledge storage not only finds expression in quantity, but also in retrieval, sorting and security of the knowledge. Information technology is also indispensable in the application and exchange of knowledge and other fields. It functions as a source and tool for knowledge innovation.

Contents of Knowledge Management in Libraries
As a completely new method of management, knowledge management in libraries leaves

much to be desired in its theoretical system. In my opinion, knowledge management in libraries should include such respects as follows:

Knowledge Innovation Management

Knowledge innovation management in libraries refers to the management of the production, diffusion and transfer of knowledge as well as of the network systems constructed by related institutions and organizations. It includes three aspects, namely, theoretical innovation management of knowledge, technical innovation management and organizational innovation management.

Theoretical innovation management is to enrich and enlarge the theoretical and practical research fields of library science and information science through pursuing the latest development trends in library science the world over. Technical innovation management is to manage the network systems constructed by institutions and organizations that relate to the full course of technical innovation. In their evolution from conventional libraries to electronic libraries, or digital libraries, Libraries should make technical breakthroughs and progress and build up technical facilities to support knowledge management. Organizational innovation management is to create a set of effective organizational management systems adaptable to the requirements in the electronic library era to support and strengthen knowledge management activities, by optimizing the functional departments and operation procedures of libraries.

In these systems, it firstly requires that leaders who take charge of knowledge management activities should undertake to formulate the management plans and coordinate all knowledge management related activities. Secondly, it requires establishment of special leading groups of knowledge flow for accomplishing all tasks relating to knowledge management activities. Electronic resources committees are established composed of various types of specialists to take charge of evaluating, procuring and creating the electronic resources on the one hand, and coordinating activities of business departments and spurring them on to close cooperation in such fields as procurement and organization of the electronic information resources as well as providing services on the other hand [4].

Knowledge Dissemination Management

Knowledge dissemination is of equal importance as compared to knowledge innovation. Knowledge creators do not have much time and energy to look for knowledge users. Though there are a multitude of knowledge users, it is very difficult to acquire knowledge that already exists in the minds of knowledge creators as restricted by various objective and subjective conditions. Therefore, libraries may play the part of knowledge tosser, use diverse media and channels to disseminate various new knowledge. In the 21st century, the Internet, with its mass information and extensive contents, will provide people with the main approach to searching knowledge and acquiring information. But now there emerge absurd, salacious,

false and uncivil information resulting from seeking for commercial profits and political objectives on the Net. Therefore, it is necessary to strengthen knowledge dissemination management in libraries as follows:

1. uninterruptedly strengthening the creation of libraries' own document resources and deepening the development of document information resources;
2. continuously raising the quality of libraries' staffs and strengthening continuous engineering education of working staffs;
3. giving full play to the special role of the expert system in knowledge dissemination;
4. making a comprehensive utilization of all media to ensure security of operation of networks, and prevent online criminal activities and online dissemination of inapropriate information [5].

Knowledge Application Management

In the 21st century libraries should also attach importance to provision of services for people to acquire knowledge and achieve maximum functions and efficiency of knowledge information. Therefore, knowledge services based on high-speed information networks should be carried out by:

1. Setting up virtual libraries or information centers for enterprises, governments, public organizations and scientific research institutions. It is difficult for an enterprise or a social organization to put sufficient manpower, material and financial resources on information gathering, organizing and developing. It is also impossible and unnecessary to spend a large amount of funds on information resources for their own use. Libraries can create virtual libraries or information centers for these organs separately according to their respective information requirements by using abundant information resources on the high-speed information networks.
2. Setting up digitized knowledge services which is actually a development trend of libraries in the 21st century. This presupposes: creating step by step the users-oriented information service systems such as information dissemination, information search and special supply of information; quickening the creation of digitized libraries; studying the methods, means and techniques of information distribution and search with the Internet as the base and WEB technique as the core.
3. Digitizing libraries' resources. The electronic libraries or digitized libraries are the technical modes and development trends of libraries in the knowledge economy era. The knowledge services of libraries in the future will start with creation of databases comprising electronic journals and books in different languages that have discipline features and can operate on high-speed information networks. Great efforts should be made to transform all existing large non-electronic information resources into electronic information and integrate them into electronic libraries.

Human Resources Management

Human resources management takes it as its basic starting point to train high quality specialized talents and to revitalize the library undertaking. In practice, we should pay full attention to diversity and variation of library staffs' requirements, strengthened management of different library staffs by applying contingency management approach. That is, to some people, rigid management method is applied, rigorous supervision and control imposed, and quantity and quality requirements of work according to regulations and procedures are made clear. And, to the rest of people, more flexible management method is applied to let them participate in decision-making and consultation and undertake more jobs so as to bring their management abilities into full play and realize organizational and personal objectives. Doing well in continuous engineering education of specialized staffs, which should not only focus on the theory of library science and related disciplines, but also cover the latest technical knowledge. And strengthening professional ethics education [6].

New Roles of Information Professionals

The 21st century brings with it new roles and requirements for different competencies and skills for information professionals, beyond those traditionally practiced and understood, thus requiring increased intellectual flexibility. Information professionals now need to be equipped as, or capable of performing or adapting to, the following new roles:

- Technology experts both in using and training technology.
- Knowledge mappers/engineers: representing or mapping tacit and explicit knowledge to enable its classification, dissemination and identifying the gaps in the knowledge.
- Knowledge gatekeepers: acting as subject experts and familiar with evolving vocabulary (taxonomies, metadata, metatags and filtering etc.).
- Knowledge editors to repackage knowledge into the most accessible, appropriate formats.
- Networkers and Knowledge Brokers, with good networks of contacts within and outside the organisation.
- Web designers to display and share knowledge in eye-catching ways.
- Programmers to customise their instructions and services according to their customers' needs.
- Knowledge and information disseminators rather than custodians of information.
- Researchers both for personal and professional development and for providing up to date assistance to patrons.
- Knowledge consultants to provide expert advice beyond the usual operational zone.
- World knowledge content experts to keep updated with international news in their specialised areas
- Metadata specialists able to describe and dictate management and preservation strategies for digital information
- Knowledge Asset Managers to identify evaluate advice upon and manage a portfolio of knowledge assets, such as patents, trademarks, copyrights, etc.

Future of Information Professionals

The future of information professionals is full of opportunities as well as challenges. The new knowledge era has provided tremendous opportunities to shine and cement a special niche in the ever evolving information world. Information professionals need to carve out a place for themselves within the core business processes of organizations rather than being content to offer a traditional service from the sidelines (Milne, 2000:149). The challenge is to constantly keep abreast of the latest technology developments and subject knowledge. Due to information overload, information professionals are needed more than ever to quality filter and provide required information in an actionable or usable form (Abels, et al, 2003). Wilson (2002) also observed knowledge management as an opportunity for enhancing professional status and career prospects; the flipside being the potential risks of non-involvement. Envisioning the future of information professionals, Southon and Todd (2001) emphasised that "it will be a difficult but essential task for information professionals to contribute their skills and understanding of information and knowledge processes and roles to enable organisations to appreciate the role that technology is able to play. Information professionals will, however, require a strategic view of the organisation and the ability to work co-operatively with a range of other professionals with whom they are potentially in conflict". Information professionals are therefore in the forefront of the digital revolution; they should be leading the transformation into knowledge-based enterprises. It is now up to them how they make their future.

Conclusions

Economic environment and information environment is changing quickly today. Knowledge management has become a powerful tool for promoting innovation and realizing reengineering the various walks of life. It occupies very outstanding position in the creation of the knowledge innovation systems of a country. How for the library circles to meet the challenge of knowledge economy and to build the knowledge management systems of libraries is a subject that demands our urgent study and solution.

From the foregoing debate it is apparent how information professionals are challenged to move from librarianship to the cyberianship; from traditional classroom-based face to face teaching to online and e-learning. To keep the pace with the knowledge economy age and facilitate assisting the parent organization's competitive edge, it is important to appreciate and practice knowledge management. "Librarians and information professionals are in a position to transform themselves into value-adding knowledge professionals. However, this will require a radical change in how they view their roles and jobs within knowledge-based organizations. It will require them to visualize a world of rapid change, instantaneous communications, and the transformation of organizations from those based on identifiable boundaries to networks of business relationships" (Chase, 1998). The thrust of knowledge management in relation to information professionals is to enhance accessibility of information, to promote strong relationship with customers and relevant stakeholders by strengthening knowledge flow, offering value adding services and training cost and time-

effectively, customized to organisational needs. Creativity and innovations in teaching, learning and research are essential in the transfer of knowledge. Since, there is a close relationship between teaching schools and practising information professionals, together they can contribute considerably to knowledge management. It is essential for 21st century information professionals to acquire the above discussed competencies and skills. This requires a total dedication to professional development, training and re-training, and changes of attitude to adapt and adjust.

Referring to 21st century skills, (Ferreira et al, 2007) stress, "if these were more commonly taught in library, archival, or information studies courses, could help bridge the gap between the skills acquired in classrooms and those required by labor markets. Although it is a major shift, it can make information professionals more relevant to their parent organisation. This paper concludes with Abell and Oxbrow's (2006:150) suggestion that, "the ability to work across organisational boundaries and the willingness to take opportunities to try different roles and ways of working are essential for information professionals in knowledge environments, but it requires an understanding of organisational dynamics and a particular mindset".

Recommendations

In order to contribute and catch-up with 21st century knowledge economy information professionals need to have in place the following:

- Balance education, research and practice
- Balance between people and technology
- Internationalisation of library and information school syllabus to fit in global market
- Constant learning for all information professionals whether LIS practitioners or educators
- Conducive working environment
- Appropriate infrastructure

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