

LIBRARIES AS PRECURSORS FOR EFFECTIVE KNOWLEDGE MANAGEMENT

Stella Amarachukwu Onwukanjo

Library and Information Technology Department,
Federal University of Technology,
Minna - Niger State, Nigeria.

ABSTRACT

The development of knowledge management in recent years has become the key concern for librarians and libraries. This paper reviewed the evolution of knowledge management, the various conceptualizations of KM by different scholars, the rise of KM especially with respect to tacit and explicit Knowledge management. It was clear that explicit knowledge is documented knowledge while tacit knowledge is the knowledge that resides in the head of the individual. KM was then discussed visa avis its relationship with libraries and librarianship, IT, Resources Sharing and Networking in libraries for effective KM, KM and library user satisfaction, lastly the paper encouraged the use of good library quality staff for effective knowledge management. This is because a good quality staff would be involved in transfer of knowledge both tacit and explicit from experienced staff to new staff members for maximum user satisfaction. . The paper concluded that librarians/libraries in the digital and knowledge age should be in charge of knowledge management in their respective organizations in order to leverage the intellectual assets of their organization and to facilitate knowledge creation.

INTRODUCTION

A **library** is a collection of sources of information and similar resources, made accessible to a defined community for reference or borrowing. It provides physical or digital access to material, and may be a physical building or room, or a virtual space, or both. A library's collection can include books, periodicals, newspapers, manuscripts, films, maps, prints, documents, microform, CDs, cassettes, videotapes, DVDs, Blu-ray Discs, e-books, audiobooks, databases, and other formats. Libraries range in size from a few shelves of books to several million items. Aguolu and Aguolu, (2002); Aina, 2004 ; all posit that It is organized for use and maintained by a public body, an institution, a corporation, or a private individual. Public and institutional collections and services may be intended for use by people who choose not to—or cannot afford to—purchase an extensive collection themselves, who need material no individual can reasonably be expected to have, or who require professional assistance with their research.

In addition to providing materials, libraries also provide the services of librarians who are experts at finding and organizing information and at interpreting information needs. Libraries often provide quiet areas for studying, and they also often offer common areas to facilitate group study and collaboration. Libraries often provide public facilities for access to

their electronic resources and the Internet. Modern libraries are increasingly being redefined as places to get unrestricted access to information in many formats and from many sources. They are extending services beyond the physical walls of a building, by providing material accessible by electronic means, and by providing the assistance of librarians in navigating and analyzing very large amounts of information with a variety of digital tools.

The library is the principal instrument for the conservation of recorded knowledge. Proper fulfillment of this role provides a sound basis for the transmission and advancement of knowledge. A library is a house of knowledge that stores various information materials, and supports the academic programmes of the users through the provision of relevant reading materials. The library has to collect materials published and unpublished, print and non print, and in some depth and globally in almost all fields of knowledge. The value of the records of human communication lies in the information they contain. Information can be stored in books, periodicals, technical reports, pamphlets, microforms, conference papers of learned societies and professional associations, disks machine readable databases, manuscripts, CD-ROMS, maps, archival materials and many other formats. Information required by users appear in a variety of formats as mentioned earlier and they are generally referred to as information carriers. Other information carriers acquired by libraries are cartographic materials, graphic materials, sound recordings, motion pictures, video recordings and digital materials.(Aguolu and Aguolu, 2002; Idiodi and Igbiosa, 2003; Aina ,2004). The library is a service organization and the users have of necessity to be the central focus. Adequate services should be rendered by the library staff to support the intellectual, cultural and technical development of its users.

Evolution of Knowledge Management

KM emerged as a scientific discipline in the earlier 1990s. It was initially supported solely by practitioners, when Skandia hired Leif Edvinsson of Sweden as the world's first Chief Knowledge Officer (CKO) The objective of CKOs is to manage and maximize the intangible assets of their organizations. Gradually, CKOs became interested in practical and theoretical aspects of KM, and the new research field was formed. Discussion of the KM idea has been taken up by academics, such as Ikujiro Nonaka (Hitotsubashi University), Hirotaka Takeuchi (Hitotsubashi University), Thomas H. Davenport (Babson College) and Baruch Lev (New York University). In 2001, Thomas A. Stewart, former editor at *Fortune* magazine and subsequently the editor of *Harvard Business Review*, published a cover story highlighting the importance of intellectual capital in organizations. Since its establishment, the KM discipline has been gradually moving towards academic maturity. First, there is a trend toward higher

cooperation among academics; particularly, there has been a drop in single-authored publications consequently. (Stewart, Thomas 1998; Mcinerney (2002).

Since Knowledge Management was started and popularized in the business world during the last decade of the 20th century, It was the business world that first recognized the importance of knowledge in the “global economy” of the “knowledge age”. In the new knowledge economy, the possession of relevant and strategic knowledge enables businesses to gain competitive advantage. Ojedokun (2007) posits that Knowledge driven economies demand higher level skills in the work force. The skills of the nations workforce and the quality of infrastructure are what makes it unique and uniquely attractive. Nations demand high level skill in the work force. The applications of knowledge management have now spread to other organizations including government agencies, research and development departments, universities, and others.

The management of information has long been regarded as the domain of librarians and libraries. Librarians and information professionals are trained to be experts in information searching, selecting, acquiring, organizing, preserving, repackaging, disseminating, and serving. However, professionals in information technology and systems have also regarded information management as their domain because of the recent advances in information technology and systems which drive and underpin information management. Stephen Abram (1997) sees the process for knowledge creation and use as a continuum where data transforms into information, information transforms into knowledge and knowledge drives and underpins behavior and decision-making.

Below are simple definitions of Data, Information, Knowledge, and Wisdom— which are available within every organization:

- **Data:** Scattered, unrelated facts, writings, numbers, or symbols.
- **Information:** Selected, organized and analyzed data.
- **Knowledge:** Information combined with user’s ability and experience that is used to solve a problem or to create new knowledge.
- **Wisdom:** Forward looking and thinking based on one’s values and commitment. The differences between **information** and **knowledge** can be summarized as:
- Information is visible, independent from action and decision, different in format after processing, physical product, independent from existing environment, easily transferable, and duplicable.

- Knowledge is invisible, closely related to action and decision, different in thought after processing, spiritual product, identified with existing environment, transferable through learning, and not duplicable.

Knowledge Management Conceptualized

Knowledge management is the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical & strategic requirements; it consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge.

Knowledge management (KM) therefore implies a strong tie to organizational goals and strategy, and it involves the management of knowledge that is useful for some purposes that creates value for the organization.

Expanding upon the previous knowledge management definition, KM involves the understanding of _ where and in what forms knowledge exists; what the organization needs to know; how to promote a culture conducive to learning, sharing, and knowledge creation; how to make the right knowledge available to the right people at the right time; how to best generate or acquire new relevant knowledge; how to manage all of these factors so as to enhance performance in light of the organization's strategic goals and short term opportunities and threats.

KM must therefore create/provide the right tools, people, knowledge, structures (teams, etc.), culture, etc. so as to enhance learning; it must understand the value and applications of the new knowledge created; it must store this knowledge and make it readily available for the right people at the right time; and it must continuously assess, apply, refine, and remove organizational knowledge in conjunction with concrete long and short term factors.(Alan Frost (2010) From this knowledge management definition it could be deduced_ that it depends upon the management of the organization's knowledge creation and conversion mechanisms; organizational memory and retrieval facilities; organizational learning; and organizational culture.

Knowledge management is still a relatively new concept and viewed differently by different writers from different focuses, therefore its definitions vary. Jennifer Rowley (2000) posits that

“Knowledge management is concerned with the exploitation and development of the knowledge assets of an organization with a view to furthering the organization’s objectives. The knowledge to be managed includes both explicit, documented knowledge, and tacit, subjective knowledge. Knowledge management entails all of those processes associated with

the identification, sharing and creation of knowledge. This requires systems for the creation and maintenance of knowledge repositories, and to cultivate and facilitate the sharing of knowledge and organizational learning. Organizations that succeed in knowledge management are likely to view knowledge as an asset and to develop organizational norms and values, which support the creation and sharing of knowledge.”

Rowley’s definition was based on the four different types of perspectives on knowledge management identified by Thomas H. Davenport et al in their study of a number of knowledge management projects. From the analysis of the projects’ objectives, Davenport et al were able to categorize them into four broad types of perspectives:

1. **To create knowledge repositories**, which store both knowledge and information, often in documentary form. These repositories can fall into three categories:
 - Those which include external knowledge, such as competitive intelligence.
 - Those that include structured internal knowledge, such as research reports and product oriented marketing materials, such as techniques and methods.
 - Those that embrace informal, internal or tacit knowledge, such as discussion databases that store “know how”.
2. **To improve knowledge access and transfer**. Here the emphasis is on connectivity, access and transfer.
 - Technologies such as video conferencing systems, document scanning and sharing tools and telecommunications networks are central.
3. **To enhance the knowledge environment** so that the environment is conducive to more effective knowledge creation, transfer and use. This involves tackling organizational norms and values as they relate to knowledge.
 - Increase awareness on sharing knowledge embedded in client relationship and engagements.
 - Provide awards for contributions to the organization’s structured knowledge base.
 - Implement decision audit programs in order to assess whether and how employees were applying knowledge in key decisions.
 - Recognize that successful knowledge management is dependent upon structures and cultures.
4. **To manage knowledge as an asset** and to recognize the value of knowledge to an organization.

Others, however, sought to take a process view to define knowledge management.

For example, Jan Duffy (2000) defines it as “a process that drives innovation by capitalizing on organizational intellect and experience. A discipline that promotes an integrated and collaborative approach to the process of information asset creation, capture, organization, access and use.

According to Galagan (1997) ; the following are knowledge management processes;

- Generating new knowledge.
- Accessing knowledge from external sources.
- Representing knowledge in documents, databases, software and so forth.
- Embedding knowledge in processes, products, or services.
- Transferring existing knowledge around an organization.
- Using accessible knowledge in decision-making.
- Facilitating knowledge growth through culture and incentives.
- Measuring the value of knowledge assets and the impact of knowledge management.

There are two types of knowledge. They are **explicit knowledge** and **tacit knowledge**. Jan Duffy (1999) in agreement with many scholars of knowledge management, posit that **explicit knowledge** is “knowledge that is documented and public; structured, fixed-content, externalized, and conscious” and **tacit knowledge** as “personal, undocumented knowledge; context-sensitive, dynamically-created and derived, internalized, and experience-based; often resides in the human mind, behavior, and perception. This set of definitions can be applied to all other human endeavors and intellectual activities.

Nonaka and Takeuchi (1995); Nonanka, (1991) ; all posit that knowledge can be viewed as a spectrum which extends from completely tacit to totally explicit . Explicit knowledge refers to knowledge that has been articulated and written down. Examples are knowledge published in books, journals, manuals, guidelines, databases, and so forth . On the other hand, tacit knowledge refers to personal knowledge which resides in individual’s head in the forms of experience, know how, insight, expertise, personal believes and so on . This type of knowledge can be found in everyday discussions, face to face informal meetings, and reports. Unlike explicit knowledge, tacit knowledge is more dependent on its human carrier

The main issue of KM is associated with managing tacit knowledge rather than explicit knowledge. Tacit knowledge resides in human minds, highly individualized and personal, Learnt through experiences, skills, observation, Intuitive feeling, mental modes, beliefs, and values, Unstructured, difficult to see, codify, estimate, investigate, formalize, write down, capture and communicate accurately, Unconscious knowledge (Both known and unknown to the holder) Job specific, context

specific experience based, knowledge, in action. It is transferred through conversation and narrative (story telling, discussions, etc.) Know how or what could be referred to as expert's knowledge.

Explicit knowledge is articulated, structured and documented. It could be learnt through instruction, recitation, or repetition easy to recognize, codify, formalize, store, share, communicate, and use. It can be found in books, journals, databases, etc. It is consciously accessible, Know that, know what, academic knowledge sources. Nonaka, Ikujiro; von Krogh, Georg (2009)

The Rise of Knowledge Management

Around 1965, Peter Drucker had already pointed out that “knowledge” would replace land, labor, capital, machines, to become the chief source of production. His foresight did not get much attention back then. It was not until 1991 when Ikujiro Nonaka raised the concept of “tacit” knowledge and “explicit” knowledge as well as the theory of “spiral knowledge” in the *Harvard Business Review* that the time of “knowledge-based competition” finally came. In his latest book, *Building Organizational Intelligence: a Knowledge Management Primer*, Jay Liebowitz stated:

In today's movement towards knowledge management, organizations are trying to best leverage their knowledge internally in the organization and externally to their customers and stakeholders. They are trying to capitalize on their **organizational intelligence** to maintain their competitive edge.

The thrust of knowledge management is to create a process of valuing the organization's intangible assets in order to best leverage knowledge internally and externally. Knowledge management, therefore, deals with creating, securing, capturing, coordinating, combining, retrieving, and distributing knowledge. The idea is to create a knowledge sharing environment whereby **sharing knowledge is power** as opposed to the old adage that, simply says knowledge is power.

Knowledge Management and Libraries: An Interplay

While the business world is changing in the new knowledge economy and digital age, libraries of all types are undergoing drastic changes also. The new role of libraries in the 21st century needs to be as a learning and knowledge center for their users as well as the intellectual

commons for their respective communities., “people and ideas interact in both the real and virtual environments to expand learning and facilitate the creation of new knowledge.

Knowledge driven economies demand higher level skills in the work force. The skills of the nations workforce and the quality of infrastructure are what makes it unique and uniquely attractive. Nations demand high level skill in the work force. The skills of the nations library staff, and the quality of their output is what makes the nation unique and uniquely attractive. As a learning organization, libraries should provide a strong leadership in knowledge management. Unlike those business organizations whose goal for knowledge management is for competitive advantage, most public, academic, and research libraries, with the exception of company libraries (which may be known or called corporate libraries, special libraries, or knowledge centers), have a different orientation and value. Instead of competition, internal use only, and little sharing of knowledge with others outside, the most important mission of public, academic, and research libraries is to expand the access of knowledge for their users. Charged by this mission, libraries should aim their knowledge management goal high.(Ojedokun 2007)

Because of the exponential growth in human knowledge in a variety of formats, libraries need to develop their resources access and sharing strategies from printed to electronic and digital resources. Restricted by limited funding, technology, staff, and space, libraries must carefully analyze the needs of their users and seek to develop cooperative acquisition plans to meet these needs. The changing concept from “ownership” to “access” and from “just in case” to “just in time” should be the goal of a sound resources development strategy.

An integrated online public access catalog (OPAC) with both internal and external resources as well as printed and other formats of knowledge should be developed and maintained. Useful websites and knowledge sources should be regularly searched and selected from the Internet and included in OPACs by hard links. A system for the reviewing and updating of these resources should be performed. Liebowitz, (2000)

Going beyond explicit knowledge, libraries should also develop means to capture all that tacit knowledge that is of importance to their users, their organizations, and to the internal operation of libraries. The web site of each library should serve as a **portal** for all sources of selective and relevant knowledge and information whether explicit or tacit, whether on site or remote, and in all formats.

The term “portal” has been defined by Michael Looney and Peter Lyman (2000)

“as means of gathering a variety of useful information resources into a single, one-stop Web page, helping the user to avoid being overwhelmed by **information glut (infoglut)** or feeling lost on the Web.”

In the current digital and networked knowledge age, the size of information resources on the Web is growing exponentially. No one really knows exactly how many Web pages are on the Internet because new Web pages are added every second. Most of the frequently used Internet search engines have also expanded their index sizes by leaps and bounds. Combined coverage of search engines is estimated at 42 percent of the relevant resources. It is also very frustrating that many of the results found--in the tens of thousands of hits--are irrelevant. One has to comb the large number of findings in order to find the few relevant pieces of information. Still, information on the Web can be very useful if only we can employ advanced artificial intelligent tools to surf the Internet and to select, find, arrange, classify, and automatically deliver the needed information to each user based on his/her special interests and needs. One has to comb the large number of findings in order to find the few relevant pieces of information. Still, information on the Web can be very useful if only we can employ advanced artificial intelligent tools to surf the Internet and to select, find, arrange, classify, and automatically deliver the needed information to each user based on his/her special interests and needs. Many such new knowledge management systems are under development and testing and hold great promises for greatly enriched knowledge resources, improved user services, and the more efficient use of knowledge for creation and decision-making.

Web information by cooperative efforts, other new methods such as data mining, text mining, content management, search engines, spidering programs, natural language searching, linguistic analysis, semantic networks, knowledge extraction, concept yellow pages, and such techniques in information visualization as two-dimensional or three-dimensional knowledge mapping, etc. have been a part of recent developments in knowledge management systems. Looney, Michael and Lyman, Peter. (2000)

Universities and research organizations are themselves knowledge reservoirs. These highly valued intellectual assets, regardless of whether they are explicit or tacit, should be inventoried, archived, indexed, frequently updated, and made accessible in digital form.(Looney, Michael and Lyman, Peter. (2000)

Information Technology, Resources sharing and Networking for Effective Knowledge Management in Libraries

Libraries have had a long tradition of resources sharing and networking. These have been greatly expanded by the rapid development of computer, telecommunication, networking, and

digital technologies. In the U.S. it is very common for libraries to be a member of several consortia at the same time for various types of cooperative work and resources sharing. The best examples of these are the OCLC Online Computer Library Center and Ohio Library and Information Network. (OHIOLINK)

The traditional methods of cataloging and classification are hardly adequate to handle the finite number of books, journals, and documents, but are inadequate to deal with the almost infinite amount of digital information in large electronic databases and on the Internet. Using the Dublin Core metadata and the Cooperative Online Resources Catalog (CORC) has been a new way to capture Web information by cooperative efforts. Other new methods such as data mining, text mining, content management, search engines, spidering programs, natural language searching, linguistic analysis, semantic networks, knowledge extraction, concept yellow pages, and such techniques in information visualization as two-dimensional or three-dimensional knowledge mapping, etc. have been a part of recent developments in knowledge management systems. Hsinchun Chen (2001)

The CORC project of OCLC should be especially useful for libraries to cooperatively capture digital resources of all types, describe them in a standard format, and make them easily searchable by users. To facilitate the implementation of knowledge management, a well-designed and operational knowledge management system should be in place. Latest information technology should be used as an enabler. In this regard, the Chief Librarian should consider him/herself as the chief knowledge officer of the entire organization and should work together with the , heads of the planning department, the computer and information technology center, the human resources management department, the finance department, and others, to design and develop such a system. Such a knowledge management system should be built on existing computer and information technology infrastructures, including upgraded intranet, extranet, and Internet, and available software programs to facilitate the capture, analysis, organization, storage, and sharing of internal and external information resources for effective knowledge exchange among users, resource persons (faculty, researchers, and subjects specialists, etc.), publishers, government agencies, businesses and industries, and other organizations via multiple channels and layers. In recent years, many of the newly developed information technologies for database and information/document management can be utilized in knowledge management; such as, data warehousing, data mining, text mining, content management, knowledge extraction, knowledge mapping, groupware, and information visualization, etc. It was observed by Hsinchun Chen (2001) that “since the mid 1990s, the

popularity of search engines and advances in web spidering, indexing, and link analysis have transformed IR systems into newer and more powerful search tools for content on the Internet.” The successes of most of these examples in resources sharing and networking are largely the result of the full cooperation and participation of all member libraries without selfishness. Large and major libraries must take the lead in such an endeavor. Supports in policies and funding from the government or parent organizations are also critically important. Experiences indicate that all libraries, regardless of size and specialties, have been benefitting by library cooperation and resources sharing.

To implement knowledge management, a well-designed and operational knowledge management system should be in place. Latest information technology should be used as an enabler. In this regard, the chief librarian should consider him/her self as the chief knowledge officer of the entire organization and should work together with the heads of the planning department, the computer and information technology center, the human resources management department, the finance department, etc. to design and develop such a system. Such a knowledge management system should be built on existing computer and information technology infrastructures, including upgraded intranet, extranet, and Internet, and available software programs to facilitate the capture, analysis, organization, storage, and sharing of internal and external information resources for effective knowledge exchange among users, resource persons (faculty, researchers, and subjects specialists, etc.), publishers, government agencies, businesses and industries, and other organizations via multiple channels and layers. In recent years, many of the newly developed information technologies for database and information/document management can be utilized in knowledge management; such as, data warehousing, data mining, text mining, content management, knowledge extraction, knowledge mapping, groupware, and information visualization, etc. Hsinchun Chen (2001)

Knowledge Management for User satisfaction in Libraries

The utmost goal of knowledge management is to provide users with a variety of quality services in order to improve the communication, use and creation of knowledge. As much as possible these services should be tailored to the interest and needs of each user. Information about each user can be obtained by analyzing the records of user registration, surveys, circulation and interlibrary loans, frequently asked reference questions, and the use of e-journal and digital resources, etc. User satisfaction and needs should be collected through periodic users' surveys. The findings should be used for the planning and redesign of library services. It is very important, however, that user's privacy should always be protected.

Some of the manual services such as “new publication alert” and “selective dissemination of information,” which libraries have been providing, can now be done automatically by employing the “**push technology**” with great efficiency and convenience. Each library user can also set up his/her virtual “**MyLibrary**” enabled by library systems and networks for collecting and organizing resources for personal use and to stay informed of new resources provided by the library, LITA (2005).

The Library and Information Technology Association (LITA) has defined My Library-like services as the number one trend “worth keeping an eye on.” It further stated that “Library users who are Web users, a growing group, expect customization, interactivity, and customer support. All approaches should be user -focused instead of library-focused .(LITA, 2005)

5.5 Library Staff Quality For Effective Knowledge Management

A great amount of expert knowledge should be possessed by library staff so as to serve their users, both in and outside the libraries. In university and research communities such expertise is abundant and should be inventoried, indexed, and updated regularly and be made searchable and accessible through electronic databases created and maintained by libraries. The knowledge and accumulated experiences of library staff members form the intellectual assets of any library should be valued and shared. An organizational culture for sharing of knowledge and expertise should be established with appropriate rewards and incentives. Those staff members who share their explicit and tacit knowledge, and experiences through writing, publishing, lecturing, tutoring, or mentoring should be appropriately recognized and rewarded. An organizational culture which emphasizes cooperation, sharing, and innovation can only be established by strong leadership and commitment from the library director and a shared vision by the library staff. As a learning organization, libraries should allocate annual funding to provide continuing education and staff training to all staff members. Knowledge must be renewed and expanded to prevent it from becoming stagnant. Lawrence, and Giles, (2009).

Libraries should also encourage the transfer of knowledge and experience from experienced staff to new staff members. A mentoring system should be in place to help newcomers to learn from experienced library staff. Informal seminars and brownbag sessions where staff can interact and exchange “**lessons learned**”, “**best standard and global practices**” and other specific experiences and knowledge should be scheduled at regular intervals and at convenient times. Special interest groups and chat rooms can be created through intranet. Since many valuable experiences have been accumulated over time, libraries should pay attention to favorable working conditions and environment, which will contribute to better staff retention.

Conclusion

Since *knowledge management* in a nutshell involves the systematic process and strategy for finding, capturing, organizing, distilling and presenting , information and knowledge for a specific purpose and to serve a specific organization or community, libraries and librarians as experts in finding and organizing information and interpreting users information needs, should take the lead in anything to do with knowledge management.

Libraries often provide quiet areas for studying, and they also often offer common areas to facilitate group study and collaboration. Libraries provide public facilities for access to their electronic resources and the Internet. Modern libraries are increasingly being redefined as places to get unrestricted access to information in many formats and from many sources. They are extending services beyond the physical walls of a building, by providing materials accessible by electronic means, and by providing the assistances of librarians in navigating and analyzing very large amounts of information with a variety of digital tools. Knowledge management cannot thrive outside the libraries, therefore armed with professional knowledge and experiences, libraries should take the driver's seat in knowledge management.

References

- Abram, Stephen. (1997). "Post Information Age Positioning for Special Librarians: Is Knowledge Management the Answer?" *Information Outlook* (June 1997):20-2
- Aguolu,C.C. and Aguolu,I.E.2002. *Libraries and information management in Nigeria: seminal essays on themes and problems*. Maiduguri:Ed-Linform Services.
- Aina, L.O.2004. *Library and information science text for West frica*.Ibadan:Third Information services.
- Chen, Hsinchun. (2001). *Knowledge Management Systems: A Text Mining Perspective*. Tucson, Arizona: University of Arizona.
- Chiu, M. H. Hsu, and Wang (2006) "Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories," *Decision Support Systems*, 42, pp. 1872-1888
<http://blog.searchenginewatch.com/blog/041111-084221>
- Davenport, Thomas H., DeLong, D.W., and Beers, M.C. (1998). "Successful Knowledge Management Projects," *Sloan Management Review* 39,no.2:43-57.
- Drucker, Peter. (1993). *Post-capitalism Society*. Oxford, Great Britain: Butterworth-Heinemann. <http://blog.searchenginewatch.com/blog/041111-084221>

- Duffy,Jan. (1999). *Harvesting Experience: Reaping the Benefits of Knowledge*. Prairie Village, KS: ARMA International. Also from her article, “Knowledge Management: To Be or Not to Be?” *Information Management Journal* 34,no. 1:64-67.
- Duffy, Jan Duffy. (2000). “Knowledge Management: To Be or Not to Be?” *Information Management Journal* 34,no.1:64-67.
- Krogh, Georg Von, Ichijo, Kazuo, and Nonaka, Ikujiro. (2000). *Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Innovation*. New York: Oxford University Press.
- Lawrence, S. and Giles, C.L. (1999). “Accessibility of Information on the Web,” *Nature* 400:107-109. <http://www.educause.edu/pub/er/erm00/article004/looney.pdf>
- Liebowitz, Jay. (2000). *Building Organizational Intelligence: A Knowledge Management Primer*. Boca Raton, FL: CRC Press. Available - <http://www.educause.edu/pub/er/erm00/article004/looney.pdf>
- Looney, Michael and Lyman, Peter. (2000). “Portals in Higher Education: What are They, and What is Their Potential?” *EDUCAUSE Review* 354:30. Available online from <http://www.educause.edu/pub/er/erm00/article004/looney.pdf>
- McInerney, Claire (2002). "Knowledge Management and the Dynamic Nature of Knowledge". *Journal of the American Society for Information Science and Technology* 53 (12): 1009–1018 retrieved April 2012 from [http:// doi:10.1002/asi.10109](http://doi:10.1002/asi.10109)
- Nonaka, Ikujiro. (1991). “The Knowledge-Creating Company,” *Harvard Business Review* (Nov.-Dec. 1991):96-99.
- Nonaka, Ikujiro and Takeuchi, Hirotaka. (1995). *The Knowledge-creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- Ojedokun,A.A . 2007. *Information literacy for tertiary education students in Africa*. Ibadan : Third World Information Services.
- Rowley, Jennifer. (1999). “What is Knowledge Management?” *Library Management* 20,no.8:416-419. <http://blog.searchenginewatch.com/blog/041111-084221>
- Rowley,J and Farrow,J. (2000). *Organizing knowledge:an introduction to managing Access to information*.3rd.ed. England: Gower.
- Stewart, Thomas A. (1998). *Intellectual Capital: The New Wealth of Organizations*. Crown Business Publishers. <http://blog.searchenginewatch.com/blog/041111-084221>
- "Tacit Knowledge and Knowledge Conversion: Controversy and Advancement in

Organizational Knowledge Creation Theory". (1999) *Organization Science* **20** (3): 635–652. Retrieved April 2012 from [http:// doi:10.1287/orsc.1080.0412](http://doi:10.1287/orsc.1080.0412).

Technology and Library Users: LITA Experts Identify Trends to Watch,”(Chicago: LITA