Knowledge Management in Academic Libraries: Trends, Issues and Challenges

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Abstract—Knowledge has become a key drive force in our lives. Due to complicated nature of knowledge, it is difficult to estimate the value of knowledge management in academic libraries. Academic libraries occupy a central position in an institution to generate knowledge equipped academic community with knowledge to serve the society and enhance knowledge to mankind. This paper highlights the evolution of knowledge management, roles and objectives. The challenges posed to academic libraries and librarians for effective service delivery were also discussed.

Index Terms—Academic library, Challenges, Knowledge, Knowledge management, Skills, Service delivery.

I. INTRODUCTION

The word information is derived from Latin verb ‘informare’ which connotes meaning, to give shape or form to the mind. Information is a fact told, heard or discovered about factual practices. It is a piece of knowledge that can be received collected, provided and transferred for making its use (Peasal, 2002).

Savada (1997) considered information to be fundamental resource for social development and for the progress of information is the key to avoid uncertainty, to eliminate the degree and number of problems. An individual therefore can generate facts and opinions which cannot be restricted to natural language but can be communicated through art, facial expression, gesture, inform of instructions, documents, media outfit and other personal responses.

The information has therefore become complex, essential and extensive in our daily life. The information organized according to some logical sequence is referred to as body of knowledge and the body of knowledge is known as a structural form of information.

According to Kumar (2002), the society goes through four stages namely: pre-industrial society, industrial society, information age was of its highest between 1960 and 1990s and has been superseded by knowledge age. Druker (1993) further buttressed that we are entering the knowledge society as the basic economic resources is no longer capital or natural resources or labour but will be knowledge and where knowledge will play a central role. He also stressed that current development which started around 1960 will continue up to 2010 or 2020.

The present society can be labeled as knowledge society. Development in our society is depended upon the ability to capture, share, distribute and manage knowledge. This is equally applicable to individuals and organizations which plays a significant role for development. The age-old dictum like knowledge depreciates when no used are becoming part and parcel of the behavior of people and institutions alike (Bilwal, 2001)

The paper highlights the evolution of knowledge management, role and objectives. The challenges posed to academic libraries and librarians for effective service delivery were also discussed.

II. WHAT IS KNOWLEDGE

Knowledge is the full utilization of information and data, coupled with the potential of people’s skills, competencies, ideals, intuitions, commitments and motivations. In today’s economy knowledge is people, money, leverage, for action, performance and adaptation.

Knowledge has two basic definitions of interest. The first permits to a defined body of information depending on the definition, the body of information might consist of facts, opinions, ideas, theories, principles and model another framework.

Knowledge also refers to a person’s state of being with respect to some body of information. These states include ignorance, awareness, familiarity, understanding, facility etc. knowledge provides the ability to respond to novel situation. A holistic view considers knowledge to be presents in ideas, judgments, talents, root causes, relationships, perspective and concepts. Knowledge is stored in the individual brains or encoded in organizational processes, documents, products, services, facilities and systems. (Sharma 2004)

From the foregoing concepts there is no consensus of what knowledge is. Over the millennia, the dominant philosophies of each age have added their own definition of knowledge to the list. However, there are some thoughtful and thought-provoking definitions of “knowledge” including the important distinctions Bellinger (2002) make in “Data, information, knowledge, and wisdom” in which he defines states knowledge as a collation of the events and incidents to which an individual might be subjected to Nicolas further provides two kinds of knowledge parallel Michael Polanyis often quoted distinction between expliant knowledge (sometimes referred to as (formal knowledge), which can be articulated in language and transmitted among individuals and document while tacit knowledge is refers to informal knowledge that is personal knowledge rooted in individual experience and involving personal belief, perspective and values. This knowledge resides in the minds of individual and has not been documented.

III. WHAT IS KNOWLEDGE MANAGEMENT

Librarians are social organization where workers transform resources for use by users through the functions of teaching, research and service delivery. Also created is a growing amount of transactional information in databases, knowledge embedded in processes and documentation as well is explicit and implicit knowledge in the heeds of workers. As the pace
of change increases and people change jobs more frequently, information and knowledge that used to be concentrated in one person or process increasingly is being held multifunctional teams with limited life span operating with rapidly changing system and environments. Change is the order of the day. Knowledge loss becomes epidemic. Increases in organizational information and change have created a great need to manage knowledge to ensure effectiveness. And in higher education; librarians can play a key role in the knowledge management process.

Knowledge management as the world implies, according to Sharma (2004) is the ability to manage ‘knowledge’, we are all familiar with term information management which is a source that can and needs to be managed to be useful in an organization. Literature revealed that the concept of knowledge management was perceived in different ways by different scholars. Corral (1998) is of the opinion that a lot of confusion arises over what knowledge management is and what it involves. Knowledge is valued-added behavior and activities. For knowledge to be value, it must be focused, current and shared. Knowledge therefore is increasing in every facet of the society. Nevertheless, it remains the most neglected asserts.

Sharma (2004) identified two basic definition of knowledge, first as body of information, which consists of facts, opinion, ideas, theories, principles, and models. Secondly, he refers to it as a person’s state of being with respect to somebody of information. These states include ignorance, awareness, familiarity, understanding, facility etc. Belinger (2000), regarded it as data, information, knowledge and wisdom in which he defined it as a collection of events and indicates to which an individual’s might be subjected to. Jantz (2001), viewed knowledge as full of information and data coupled with the potential of people’s skills, competence, ideas, intuitions, commitments and innovations. In today’s economy, knowledge is people, money, loaming, flexibility, power and competitive advantage. Knowledge is stored in individual brain or encoded in organizational process, documents, products, services, facilities and system.

In a relevant concept, based on the view of Yunnusa (1999) knowledge management has become the driving force of school development. The attention of the society to information and knowledge is rising. Likewise, people’s demand for information and knowledge are increasing step by step. Sveiby (2000), conceived it is the cry of creating value form an organization intangible asset. It serves as an organization infrastructure that captures and leverages existing information and knowledge into day-to-day business process. Gartner Group (2000) described it as a discipline they promote an integrated approach to identify, managing and sharing all of enterprises information assets. These information assets may include database, documents, policies and procedures as well as previously unarticulated and experience resident, in individual worker. However, Davenport and Prusat (1998) distinguish knowledge from information and information from data, on the basic of value adding processes which raw materials for example, transaction records, and then into knowledge and other higher-order concept. Shanhong (2000), stated that as information and knowledge has become an important productive factor for the modern economic system, the society will inevitably required an intensified management of information and knowledge.

From the foregoing concept which scholars enumerated above, one key word featured in their definitions ‘information’ knowledge management is essentially absent getting the right knowledge to the right person at the right time. Knowledge management also include new knowledge creation, on it may solely focus on knowledge sharing, storage and refinement.

IV. EMERGENCE OF KNOWLEDGE MANAGEMENT

The history of knowledge management can be traced to a number of notable management theories such as Peter Drucker, Paul Strassman, and Peter Senge etc. who have contributed to emergence and development of knowledge management as a subject immensely. Drucker and Strassman (1993) stressed the role of knowledge as organizational resources, while Senge (1994) on the other hand posited the idea of “learning organization”.

The 1970s saw certain conscious attempt made by scholars to examine the factors of knowledge management. (Bolwt, 2002). Such researchers include Chris Arhyris, Christopher Bartleft and Leonard Barton all at Harvard Business School, while Thomas Allen’s research at MIT in Information and Technology Transfer as far back as late 1970s. These researchers have contributed to an understanding of how knowledge is provided, used, and diffused within organization. During this period, computer technology was also introduced, and the field of knowledge management development system was developed. One such system was designed by Rob Acksyn and Don McCraken. It was opened distributed hyper-media tool. Another notable example and one that predates World Wide Web by a decade is that of Dong Engelbert’s; Augmenting Human Intelligence System known as (AUGMENT) which was introduced in 2978. It was hypertext/groupware application and system.

In 1980s, there was a steady growth in the development of knowledge management system. These systems started to use the concept and research work done in the field of Artificial Intelligence and Export System. The phrase Knowledge Management became an established one in the Dictionaries and Lexicons. Books and articles began to appear in the field, giving us such concepts as “Knowledge Acquisition”, ‘Knowledge Engineering’, Knowledge-Base System and Computer-Base Ontologies. In 1989, a Consortiums of U.S. companies started the initiative for Managing Knowledge Assets to provide a technological base for Managing Knowledge. The development of knowledge management as a discipline began appearing in journals like ‘Sloan management Review’, ‘Organizational Science’, ‘Harvard Business Review’ and others and the first book on Organizational Learning and Knowledge Management were published. For example, Senge’s The Fifth Discipline and Sakaiya’s; The Knowledge Value Revolution.

In 1990, several well-known management consulting firms such as in U.S., European and Japanese had instituted focused knowledge management programmes. Similarly, mid-1990s witness a spurt in knowledge management initiatives, with the impact of internet. The International Knowledge Management Network (IKMN) which started in 1989, went online 1994 and was later joined by the US based Knowledge Management Forum and other knowledge management
conference and seminars increased as organizations focus on managing and leveraging explicit and tacit knowledge resources to achieve competitive advantage.

By 1994, International Knowledge management Network (IKMN) published the result of a knowledge management survey conducted among European Firms. As a result of it, the European Community began to offer funds for Knowledge Management (KM) related-project through the ESPRIT programme in 1995.

Today, knowledge management, which appears to offer a higher desirable alternative to Total Quality Management (TQM) and business process re-engineering initiatives, has become big business for such major international consulting firms as Ernst and Young, Arthur Anderson, and Booz-Allen and Hamilton amongst others. In addition, number of professional organizations interested in such related areas as bench marking, best practices, risk management, and change management are exploring the relationship of knowledge and management to the area of special expertise. Hence, the advances in information technology such as internet and the World Wide Web has increased organizational interest in the topic of knowledge management (Sharma, 2004)

V. OBJECTIVES OF KNOWLEDGE MANAGEMENT

The objectives of knowledge management have been identified by notable scholars to create added value for parent organization/institution at different level. Owen (1999) outlined three distinct levels, which are:

- Improvement of existing business processes, cost reductions (what can we do better)
- Development of new products and services (what can we do more)
- Improving the strategic position, aimed at developing unique knowledge, applying knowledge to innovative products and service, strengthening the competitive position, safeguarding the organization’s conductivity.
- Improving flexibility, creating an attractive work environment and making the organization independent of the individual employee’s knowledge.

Similarly, Davenport, and Punsakand (1999) provides another categorization of knowledge management objectives into four broad areas:

- To create knowledge repositories; which store both knowledge and information, often in documentary form, eg external knowledge such as competitive intelligence structured internal knowledge, such as research reports etc
- 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.
- To improve knowledge access, or to provide access to knowledge or to facilitate its transfer amongst individual. The emphasis here is on connectivity, access and transfer. Eg video conferencing, document scanning, sharing tools and telecommunication networks etc.
- To manage organizational knowledge.

However, it is note worth that Chase (1998), summarized objective of knowledge management as related to library and information service profession as follows:

- To promote knowledge innovation is the core of the knowledge economy society. As basis for collection, processing, storage and distribution of knowledge and information and libraries represent an indispensable link in the knowledge innovation.
- That since library take part in scientific research process directly, the library work is a component of knowledge innovation.
- Libraries pay attention to diffusion and conversion of knowledge, thus act as bridge for turning the result of knowledge innovation into realistic production forces. Above all, knowledge management in libraries is to promote relationship in and between libraries, between library user, to strengthen knowledge internetworking and to quicken knowledge flow.

The foregoing objectives of knowledge management outlined by Daveport, Punsakand, Chase as related to libraries poses a challenge to library and information science profession. The service of the libraries will become more and more important along with the development of professional skills and techniques for effective service delivery, thus improving employees’ performance in library’s daily activities and creating an environment, exchange, study and application of the knowledge.

VI. ROLES OF KNOWLEDGE MANAGEMENT

Knowledge management is today a cross disciplinary discipline. Many different disciplines have joined the band wagon of knowledge management where each of them tends to claim knowledge management itself. Owen (2005), observed that economist argue that knowledge management is all about operating in a knowledge economy and therefore knowledge management is the domain of the economist. Human resources professionals, argue that the aim of knowledge management is to ensure that the people in the organization have the right of knowledge and skills. They therefore claimed responsibility of knowledge management while Information Technology (IT) professionals and Librarians also claimed knowledge management themselves. They argue that knowledge can be managed by means of storage and retrieval systems, distribution networks etc.

Despite the fact that many disciplines claimed responsibility of knowledge management, Barckley and Murray (2007), identified four basic roles of knowledge management. These are Externalization, Internalization, Intermediation and Cognition.

- Externalization: This is capturing knowledge in an external depository and organizing it according to a classification system. Technologies like imaging system, database, etc. are used to capture knowledge and store it in on line. Powerful search tools are used to indentify similarities among separate information sources.
- Information: That is extracting knowledge from the external repository and filtering it to identify what is
relevant to the knowledge seeker. The extracted knowledge is reformatted and presented to the seeker in the most suitable manner, perhaps with some level of interpretation.

- **Intermediation:** This focuses on the transfer of tacit knowledge. It links people needing information in some specific-subject with the people who appear to harbor knowledge in that area. Intermediation is automated through technologies such as Groupware, Intranets, Workflow and Document Management Systems.

- **Cognition:** This on the other hand is the application of knowledge that this been gained and exchanged through the preceeding three roles mentioned above. There are few technologies available to automate the process of cognition, some that exist employ an expert system or use some component of artificial intelligence.

From the forgoing, knowledge management is like another specialization perceived by different people working in different area discipline. Knowledge management therefore can take on quite different meanings to operating at different level of professional discipline such as Library and Information Service, Marketing and Sales, Administrative System etc in the organization where they are located. The role of knowledge management in Libraries during this global economic meltdown therefore will become more and more important element along with the development of libraries. Our profession library and information service naturally needs to embrace it.

VII. **OBJECTIVE OF KNOWLEDGE MANAGEMENT IN ACADEMIC LIBRARIES**

The conventional role of library and information professionals was to acquire, process, organize, store, disseminate and utilize information to provide multidisciplinary services to the personnel and professional need of the library users. But now their role is not restricted to information management only. They play major role in knowledge management programmes and identifying, acquiring, developing, resolving, storing and sharing of knowledge.

The main objective of knowledge management in Academic Libraries is to ensure that the right information is delivered to the right person just in time, in order to take the most appropriate decision. The objectives identified according to Raja, Ahmad and Sinha (2000) includes:

- To promote collection, processing, storage and distribution of knowledge.
- Faster and easier recovery of data and disseminate the information.
- Retreiving skills and errors

An academic library is a library that is attached to a higher education institution which serves two complementary purposes to support school’s curriculum, and to support teaching and research of the University faculty and students. The support of teaching and learning requires materials for class readings and supplement lectures as prescribed by the lecturers.

Academic library must determine a focus for collection development since comprehensive collections are not feasible. Libraries do this by identifying the needs of the faculty and students as well as mission and academic programmes of the University.

Academic libraries are established to select, acquire, process and organize book and non-book materials to serve academic institutions or community (Adeniyi and Oshinalle 2009). Dean (1999), also states that academic libraries should be operated of such levels and relevance that can facilitate research especially when research as an important aspect of teaching is regarded as enquiries, searching for information need and drawing certain conclusion. This is particularly true of universities and other higher institutions where knowledge is generated, stored, shared and used by the academic community where such institution is located. They are therefore regarded as ‘heart or live wire’ of the university.

The global wind of change due to technological innovation across all professions is certainly inevitable. Library as provider of information needs users is not an exception. The application of knowledge management as implies to library involves selection, acquisition, organization, storing, sharing and dissemination of information to users. One of the aims of knowledge management in libraries is to promote the knowledge exchange among library staff enthusiasm and abilities for learning, making the knowledge most efficiently applied to business activities of the library, and rebuilding the library into a learning organization. (Shanhong, 2000).

Arising from Shanhong assertion it implies that the current trend in library is how to present resources that is information to library clientele at the right time and at the same time improve service delivery in library operation. However, in recent years academic libraries are pinched on both side reduced budgetary allocation and at the same time increase demand from faculty members, students and university administration are having a greater expectation of academic libraries, due in part to the advancement of information technology and on the other part to the explosion of knowledge in the digital age.

Gosh and Sambeker (2003) observed that to provide the right amount of information at the right time and to fulfill the mission of academic libraries and their parent institution. In other words inadequate provisions of budgetary allocation, lack of subject specialist, among others are the major obstacles. Thereby hindering provision of efficient information and internet based delivery to both faculty members and students.

In the world today, there are concern about some internet-based companies that provide reference services or electronic books/journals and audio-visual materials. They are not an imminent threat as their services are fee-based. However they serve as a challenge, yet the library have an edge due to free services provided for all and sundry. In this digital information era, libraries and library professionals needs to look within and beyond and better information delivery services through technology application fulfilling mission and vision parent institution and immediate user constituents.

How to manage knowledge in the present dispensation of information technology will become an important challenge facing the academic libraries and this will provide a good
environment for library development. Knowledge management as it implies to academic libraries should focus on effective research and development of knowledge between staff, users and training of staff, speeding up explicit processing of implicit knowledge and realizing of its sharing.

Knowledge management is a viable means in which academic libraries could improve their services in the knowledge economy. This can be achieved through creating an organizational culture of sharing knowledge and expertise within the library. However, organizations including face innumerable challenges in nurturing and managing knowledge. The success of academic libraries depends on their ability to utilize information and knowledge of its staff to better the needs of the academic community. Lee (2000) pointed out that the knowledge and experiences of library staff are the intellectual assets of any library and should be valued and shared.

Academic libraries as constituents of the parent University need to explore ways to improve their services and become learning organization in which to discover how to capture and share tacit and explicit knowledge within the library.

VIII. SKILLS REQUIRED FOR KNOWLEDGE MANAGEMENT IN ACADEMIC LIBRARIES

The changing role of academic libraries as knowledge managers emphasizes the need to constantly update or acquire new skills and knowledge to remain relevant to today’s library environment. Academic libraries may need to restructure their functions, expand their roles and responsibilities to effectively contribute and meet the need of a large and diverse university community.

The successful implementation of knowledge management initiatives in the workplace requires knowledge manager to apply several skills sets (TFPL, 1999). In the perspective of academic libraries, there is a need for academic librarians to extend their expertise. The transformation from librarian to knowledge manager is clearly underway (Chrch, 1998). However, this impending shift of incorporating knowledge management in library activities requires a great deal of preparation. Bishop (2001) pointed out that the challenge for the information professional lies in applying competencies used in ‘managing information’ to the broader picture of managing knowledge. The greater challenge is managing the knowledge of organizational members, which they require through years of experience.

The sources of academic libraries depend on the capabilities of its staff to serve the needs of the University community more efficiently and effectively. To be successful in this environment, individual needs to acquire new combination of skills (TFPL 1999). Bishop (2001) however argued that managing knowledge require a mix of technical, organizational and interpersonal skills. In making knowledge more accessible, it is useful to have knowledge of the organization customer service orientation and training skills (Koina 2003)

However, Ten and Hawandeh (2002) identified five basic skills needed by the information professional in a knowledge based environment:

- Information Technology (IT) literacy, that is knowing how to use the appropriate technology to capture, catalogue, and disseminate information and knowledge to the target audience and knowing how to translate that knowledge into a central database for employees of the organization to access;
- A sharp and analytical mind;
- Innovation and inquiring;
- Enable knowledge creation, flow and communication within the organization and between staff and public.

Above all, it is important for academic libraries to encourage information professional to constantly update their skills and competence in this changing environment.

IX. CONCLUSION

Knowledge management is concerned with the way in which knowledge is captured, catalogued, retrieved and utilized. It also deals with creating, securing, coordinating, combining, and distributing knowledge. The basic idea is to create a knowledge sharing environment whereby sharing knowledge is power as opposed to the old adage that, simply knowledge is power. Today, the emphasis has moved from continuous training to continue learning, instead of waiting to be trained, the employees seek out knowledge on their own. The present day information providers should aim to become tomorrow’s most successful knowledge workers or knowledge managers.

Librarians may be, it is impossible for him/her to be an expert in all disciplines. Academic libraries therefore need to prove their relevance, and increase their operational efficiency in order to meet information needs of their numerous users in this present information millennium. Lee (2005) is also opinion that the best knowledge creators are the academic. Knowledge creation is best performed by universities. As a learning, and knowledge organization, universities should empower their academic libraries to develop campus-wide knowledge management systems. It now time for library to reposition themselves in the central stage of and as a leading player in knowledge management.

REFERENCES

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