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Knowledge Management and Librarianship

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Introduction

Days are gone when means of generation of knowledge used to be limited with limited output. But knowledge by its nature of being dynamic, turbulent, continuum has been proliferating and getting cumulated in a unmanageable form. Today, there is no dearth of information and knowledge instead knowledge creation is becoming faster day by day which is considered as most important and primary commodity, rich resource and valuable capital having potentiality to solve any problems and offering multiples choices to give solutions to confronting problems. In fact it opens windows of options to perform certain actions. Scientific discoveries and innovations are multiplying at a terrific speed. Realizing that knowledge is becoming unmanageable, and its utilization is much below the average expectation, knowledge managers, knowledge workers, economists, industrialists and all others who are concerned with more production and outputs of knowledge started thinking about knowledge management to derive maximum benefit and value from the existing knowledge. Thus,

knowledge economy became the main objective particularly more in corporate sectors and educational and research institutions.

Value of knowledge is not in its creation but in its effective and meaningful utilization by every knowledge/ information consumer of knowledge society. Knowledge societies are about capabilities to identify, produce, process, transform, disseminate and use information to build and apply knowledge for human development. No body should be excluded from knowledge societies, where knowledge is a public good available to each and every individual (Unesco, 2005).

Knowledge management is a recent phenomenon in higher education with the first publication which appeared in 1997 (Hafstad, 1997). But use of knowledge management has been traced as early as during 1939 when Robert S Lynd (1964) wrote that people need to rebuild their organizations so that knowledge flows freely to create opportunities and solve problems. Peter Drucker (1993) was perhaps the first to use the term knowledge society, knowledge economy and knowledge workers. He wrote that the US has shifted from an economy of manufactured goods to a knowledge economy. In the new economy, the basic economic resource is no longer capital, but knowledge (knowledge as capital). It promises to lead to better decision making capabilities, improved academic and administrative services and reduce costs (Kidwell et al. 2001). The authors further state that central purpose of knowledge management is transforming information and intellectual assets into enduring value.

As noted by Allee (1997) that knowledge is an intellectual asset, which needs an effective and efficient process of capturing, organizing and distributing it within the organization; the whole process is indeed very challenging. Tangible asset such as copyright, patents

and trademark are only a few forms of knowledge assets. This knowledge asset, which is in the form of codified knowledge that is legally owned, is only like the tip of the iceberg. The full knowledge is much larger and floating around the organization. The iceberg takes the form of in-house 'expert', shared stories, working solution web of relation, communities of practice and experiences. This is the real asset of the organization. Finding an answer to the question: "What knowledge is most crucial for an organisational success?" remains the most difficult in knowledge management process. This is where Knowledge Gap analysis could be a useful tool (Zack, M 1999).

Before, definitional part of knowledge management is considered, it would be a better if concepts and definitions of data, information and knowledge are analysed and understood, though it is not strictly within the scope of this paper. Nevertheless, understanding of these concepts particularly concept of 'knowledge' has its relevance and the concept of other related terms like data and information be analysed before knowledge management is discussed.

Concept and Definition of Related Terms

Data

Data according to Ackoff (1989) is raw. It simply exists and has no significance beyond its existence (in and of itself). It can exist in any form usable or not. It does not convey any meaning in itself. For example, data in spreadsheet in itself does not mean anything but can be given meaning by relational connections. It is a string of elementary symbols, such as integers or letters (Meadows, 1992).

Information

Information is a slippery concept amorphous, loaded with connotations and implications and it has had a variety of meaning and we must have suitable definition even if it is at the most elementary level said Hayes (1969). However, many definitions of information have been attempted but there is hardly any single acceptable definition so far. Hans Wellisch (1972) while analyzing 39 definitions of information science found that only 8 of them defined information first while rest of them remained silent about the definition of the term (Chandel and Saraf, 1983). Shannon and Weaver (1959) defined it as essentially a measure of the absence of uncertainty. Information and knowledge are often used interchangeably because of the failure of making distinct difference between the two. Farradane (1980) has attempted to make the difference stating that information is physical surrogate of knowledge (i.e., language) used for communication. It is neutral in the sense that it does not have to be new to the recipient. However, some authors feel that information should have the characteristics of newness and should be able to impact the recipient. Peter Drucker (1969) while differentiating between the two says that only when man applies information in doing something, does it become knowledge. Knowledge like electricity or money is form of energy that exists while doing work. In computer parlance, a relational database makes information from the data stored within it. A shorthand description of present purposes would be that data is a record, while information uses data to give a message (Finnegan and Willcocks, 2007). Information is a raw data, the basic material for generating knowledge. It follows that information in a real sense be 'non-knowledge' (Unesco, 2005).

Knowledge

According to Ackoff (1989), knowledge is appropriate collection of information, such that its intent is to be useful. Knowledge is a deterministic process. Knowledge invariably has non-reducible tacit element (Polyanyi, 1966). In general usage, knowledge seems to represent a higher degree certainty or validity than information (Meadow, 1992). When someone "memorizes" information (as less-aspiring test bound students often do) than have amassed knowledge (Finnegan and Willcocks, 2007). New knowledge gets created/synthesized from the existing stored knowledge and information. In the background of understanding and memorized knowledge, new knowledge emerges out. In fact, new thoughts/knowledge get synthesized in the background of accumulated knowledge, experiences and understanding. The difference between understanding and knowledge is difference between 'learning' and 'memorizing' (Finnegan and Willcocks, 2007). According to Unesco Report (2005) the information is only raw data, the basic material for generating knowledge. It follows that information can in a very real sense be "non-knowledge". The distinction between knowledge and information would remain fairly simple if we were to focus simply on the transformation of information into knowledge. However, information is not only raw data but also the product of an operation by which it becomes such- namely, a shaping for packaging to make it manageable, transmissible and consumable.

Wisdom

Wisdom is an extrapolative, non-deterministic and non-probabilistic process (Ackoff, 1989). It beckons us towards gaining understanding about that of which there has previously been no understanding, and in doing so, goes far beyond understanding itself (Finnegan, et al., 2007). Wisdom is therefore, the process by which we also

discern, or judge, between right and wrong, good or bad authors further emphasize.

Types of Knowledge

Mainly there are two types of knowledge Tacit/non-coded knowledge and explicit knowledge. These two are not sharply divided, points out Polanyi (1966). Tacit knowledge can be possessed by itself, explicit/coded knowledge must rely on being tacit/non-codifiedly understood and applied. (Finnegan, 2007). Some state that these two types of knowledge are considered as opposite to each other. Nonaka and Takeuchi (1995) define explicit/codified knowledge as knowledge that can be articulated and in formal language including grammatical statements, mathematical expressions, specifications and manuals, symbols, objects, and artifacts. Such explicit/coded knowledge, can be transmitted easily and formally between the individuals whereas tacit/un-codified knowledge cannot be transmitted through written or oral form. It is personal and subjective knowledge, and it is immediate and specific. Tacit knowledge is accumulated experiences often not recorded but sometime more useful than explicit knowledge. Tacit knowledge is also considered as tricks of the trade which is mostly used by technologist and engineers. Some time explicit knowledge cannot find that solution whereas tacit knowledge can provide immediate solution. It is a procedural and technical know-how knowledge which is capable of meeting the requirements.

There is another type of knowledge; i.e., technological knowledge which is considered as specific knowledge to produce the product to market (Vincenti, 1993). Technological knowledge is further categorized into the following three categories:

1. Descriptive knowledge

2. Prescriptive knowledge
3. Tacit/Non-codified knowledge

Machlup (1980) has categorized knowledge as under:

1. Practical knowledge, which is useful in an individual's work, decision, and actions.
2. Intellectual knowledge, which satisfies intellectual curiosity.
3. Small talk and pastime knowledge, which satisfied non-intellectual curiosity or the desire for light entertainment.
4. Spiritual knowledge, which relates to religion and mystical experiences.
5. Unwanted knowledge, which is outside one's interests and is usually accidentally acquired.

Wiig (1999) suggests different types:

- public knowledge, which is explicit, taught, and shared routinely;
- shared expertise, which is shared by knowledge workers in their work; personal knowledge, which exists tacitly in peoples minds.

Whatever the categorization of knowledge is, all types of it has to be organized and managed for effective use globally. Everyone has the right to access knowledge irrespective of its existence and availability and types. Utilization of information and knowledge presupposes efforts and initiatives especially by knowledge workers. All leadership needs, the best use of knowledge in the interest of their organizations and human resource development. This operation can be performed equally in respect of knowledge and non-knowledge. Badenoch *et al.* (1999) while summarizing the number of definitions of 'information' and 'knowledge' treat that the relationship

between the two is complex, i.e., information is the link between information and observed phenomena; information supplies and supports knowledge; information is an expression of knowledge; and information is a useful knowledge. Stonier (1990) treats knowledge as organized information in people's mind. In this process of commoditization, knowledge acquires a material dimension that makes it more operational and easier to process. It, thus becomes the means for producing new knowledge. 'Information is what is transformed, through appropriate processing, whereas knowledge is what is produced-knowledge production always being based on a level of knowledge and on the transformation of information. While knowledge production arises from a kind of transmutation of information, knowledge itself is transformed into information so that it may be processed and produce new knowledge. The innovation that gives rise to new knowledge productivity gains is located precisely within this "virtuous circle" (Unesco, 2005).

In the light of the above description and attempting to make differences among various terms relating to knowledge, let us now understand the definitions and concept of 'knowledge management' in the context of different organizations and various other fields and disciplines including and libraries.

Knowledge Management

Knowledge Management is still considered relatively new concept and phenomenon viewed differently by different writers in the field of management and other fields. It also continues to be undefined and lacks precise definition. Based on these observations, the absence of a general, agreed definition for knowledge management risks clouding rather than clarifying its raison d'etre to new and existing audiences and thus losing credibility.

The correct meaning and definition of various terms associated with knowledge such as data, information and knowledge itself have different interpretation. Plato viewed knowledge as 'justified true belief.' whereas Nonaka and Takeuchi (1995) treats knowledge as a 'dynamic human process of justifying personal belief towards the truth. Bell (1973) defined knowledge as a set of organized statements of facts or ideas, presenting a reasoned judgment or experimental result which is transmitted to others through some communication medium in some systematic form. Michael Earl (2004), recently presented views on knowledge management in an article for 'The Financial Times'. Over the course of his work and having studies more than 40 companies, which have implemented Knowledge management initiatives over the past 15 years. He found that there previous a degree of confusion in organisations in defining knowledge management, which affects their ability to decide on what comes with it and 'where they should start to make it work'. He finally arrives at conclusion that in such complexities, it is necessary to set out a working definition of knowledge management in advance of assessing processes and providing recommendations. This definition has been developed following extensive analysis over a number of years of knowledge management theory and practice stating that Knowledge Management is a process of creating, storing, sharing and re-using organisational knowledge (know-how) to enable an organisation to achieve its goals and objectives. Knowledge management is not just about implementing "bits and pieces", it is a complex process to achieve the main aim of benefiting the organization.

Murray and Myers (1999) treat knowledge management as a slippery term for exact connotation as was used for 'information' by Hayes while setting that information is a slippery concept amorphous loaded with

connotations and implications. Authors continue to state further that in the last few years, management theories and academics have burst blood vessels and budgets analyzing what it means - and there are a host of definitions, even embryonic philosophies, circulating and executive hot-desks and boardrooms of the world. Owen (1990) defines knowledge management as intensive organizations, whereas Townley (2001) treats knowledge management as a set of processes that create and share knowledge across an organization to optimize the use of judgment in the attainment of mission and goals. It is also considered as a process through which organizations generate value for their intellectual and knowledge-base assets. Most often, generating value from such assets involves sharing them among employees, departments and even with other companies in an effort to devise best practices (Girgis, 2004).

Barc and Murray (1997), though say that it is difficult to define knowledge management yet may be defined as a business activity with two primary aspects:

1. Treating the knowledge management component of business activities as an explicit concern of business reflected in strategy, policy, and practice at all levels of the organization.
2. Making a direct connection between an organization's intellectual assets- both explicit (recorded) and tacit (personal know-how) and positive business results.

It is different from information management in its concern with sharing and mapping the information experiences of many individuals towards the betterment of an organization, rather than information remaining with different individuals working separately towards the same goal. Not differentiating between data and knowledge Randeree, (2006) states that knowledge management essentially consists of processes and tools

to effectively capture and share data as well as share the knowledge of the individual within the organization

Role of Knowledge Management

Penrose (1959) is said to be the first one to recognize the role of knowledge management in business organizations stating that acquiring knowledge is a social learning process. 'This increase in knowledge not only causes the productive opportunity of a firm to change in ways unrelated to changes in the environment, but also contributed to the 'uniqueness' of the opportunity of each individual firm'. Firms that develop and leverage knowledge resource achieve greatest success than firms who are more dependant on tangible resources (Autio, 2000). If knowledge is determined to be most important resource of the firm, then clearly the need to secure that resource must be primary responsibility (Randeree, 2006).

Ultimate role of knowledge management is to increase the productivity of the organization/business firms/ industries etc. It is not only limited to recorded or otherwise produce knowledge but personal knowledge of every individual is also be utilized. Harnessing the information and knowledge contained in the warehouse is one method to achieve industry-leading performance (Matusik and Hill, 1998)

Sharma (2004) has summarized the end for K M stating that it is essential to serve clientele well and remain in business, companies must reduce their cycle time, operate with minimum fixed assets and overheads (people, inventory and facilities), shorten product development time, improve customer service, empower employees, innovate and deliver high-quality products, enhance flexibility and adoption, capture information, create knowledge, and share and learn knowledge.

Knowledge Management and Academic Institutions

Knowledge management in business sectors for more productivity, more profit and always try to be more and more competitive with similar firms in quality as well as in quantitative. But academic institutions have different mandates and missions. But knowledge management has been accepted and recognized in academic sector also. All institutions are taking efforts and initiatives to better their academic performance and aim at quality education and research which is only possible by using right information and knowledge at the right time. It is not possible to achieve academic excellence without proper knowledge management. Today many educational institutions are seeking better ways to transform that knowledge into effective decision-making and action (Petrides and Nodine, 2003). The focus of universities, is based on making individual knowledge reusable for the achievement of the missions of the university. The compilation of institutional repositories are likely to play significant role in this direction. However, universities do not generally manage information well as being experienced by many authors. Universities tend to lose it, fail to exploit it, duplicate it, don't always share it, do not always know what they know and do not recognise knowledge as an asset. It is now being regarded as increasingly important features for organisational survival. In addition, knowledge is a fundamental factor, whose successful application helps organizations deliver, creative products and services. Today organisations are fundamentally different as compared to organisations existed in one or two decades ago in terms of their functions, structures and style of management. Change management is the only way to survive in this competitive knowledge society. Old techniques are being replaced by new ones. Yu (2002) pointed out that organizations put more emphasis on understanding, adapting and managing changes and competing on the basis of

capturing and utilising knowledge to better serve their markets. The central argument around which knowledge management revolves is that people hold a wealth of knowledge and experience that represents a significant resource for an organisation. It is important for organisations to determine who knows what in an organization and how that knowledge can be shared throughout the organization. It required turning personal knowledge into corporate knowledge that can be widely shared throughout an organisation and applied (Skyrme, 1997). Formalizing knowledge management activities in an organisation may help create consistency of methods and the transfer to best practices. Furthermore, knowledge should add value and visibility to the organization. Organisations are faced with in the challenges of global knowledge economy. Knowledge management is a viable means in which organizations could improve their performance in the global economy. The success of organisations depends upon utilization of internal and external knowledge resources.

Knowledge Management and Libraries

Libraries aim at organization of knowledge for effective and maximum use. Their functions are to collect, store, display and disseminate recorded and unrecorded knowledge contained in any form. This includes all types of knowledge described above. The first term used to denote this concept of library management was 'library economy' used as early as in 1976, with more emphasis on physical handling of printed material mainly books (Chandel and Saraf, 1983). Today whole world is talking about knowledge economy. Libraries have to meet the challenge of organization of knowledge using modern techniques, devises and methodologies offered by new technologies. In fact libraries have conversed with computer, information technology and many other disciplines. Knowledge organization and management is

not a new term for library professional nor it is conveying different meaning to us. In knowledge society today, knowledge management is getting special attention due to its added value and importance. Paradigm change from industrial society to knowledge society has influenced library scenario. What knowledge management conveys to us is that knowledge be made accessible to all and everyone overcoming the barriers of communication and other hassles in accessing information irrespective of locations of viability which includes identification, collection, analysis and synthesis, effective storage, dissemination and maximum usage and utilization. The definition of knowledge management encompasses all these activities which are performed in the libraries. Loughbridge (1999) points out that many aspects of knowledge management practice bear a close resemblance to well practices in librarianship and information management. If knowledge management process involves creation, capturing, sharing and utilization of knowledge, this is exactly what library and information professionals are performing right from the beginning. The only difference is that scope has widened or may say has become unlimited covering management of every resource: printed to web-resources. Knowledge explosion has direct implication on libraries. Libraries have to meet many challenges imposed by the knowledge society. The central focus of librarianship has been organization of knowledge for effective retrieval and dissemination and would continue to do so in future too. Therefore, there is nothing new for the profession except reiterating that every bit of information/knowledge should be fully exploited and should reach to everyone anywhere. For doing so, working experiences, professional knowledge and skills among the staff be shared to promote efficiency by way of consultancy, discussions and any other methods applicable. In this context Lee (2000) rightly points out that the knowledge and experiences of library staff are the assets of any

library and should be valued and shared. It means that knowledge and experiences of the staff should be fully explored and utilized for effective be improve. Knowledge society has thrown many challenges on library profession which is the only profession. Effective management presupposes knowledge creation, discovery, organization, storage, dissemination/diffusion and sharing. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organisation and applied (Skyrme, 1977). Academic libraries have a unique window of opportunities to re-engineer library's educational and knowledge management roles to add prestige to their services. The present speed of knowledge transfer has generated an increasing demand from professionals and businesses for continuing education (CRUE, 2002). Educational institutions are engaged in creation of knowledge, and libraries play significant role in that direction by way of meeting the research and teaching needs of the institutions. Therefore, libraries have to gear up to meet the varied demands of all users. Libraries have to support formal as well as virtual learning.

Scope of Knowledge Management and Relevance to Libraries

The main processes of Knowledge Management are as follows:

1. Knowledge generation/creation/discovery
2. knowledge storage/organization/representation
3. Knowledge utilization/sharing/transfer/synthesis

Knowledge Generation: The purpose of knowledge generation is to increase the wealth of knowledge available within the organization. The knowledge creation process as a spiral, dynamic, and continuum, encompassing implicit and explicit knowledge both. It is

also being realized that all knowledge should also be utilized. Time has gone when library profession was confined to recorded knowledge only but now the province of library profession is all pervasive where any form of knowledge useful to the society must be made available. Though creation of knowledge is not strictly and directly under its purview, but it is an active partner in the creation of the knowledge also. Its core areas comprises of knowledge identification, acquisition, capturing and synthesis. Knowledge identification is essential element of knowledge management which we may call 'collection development' in library terminology. Store of world knowledge is before us, but identification and acquisition of required knowledge useful to the institution is a complex and challenging job which needs professional competence and knowledge. Identification of knowledge resources lays the foundation of the profession. Libraries are now renamed as knowledge centres/resources centres due to the changes taken place in the present era.

Knowledge Storage/Organization: The acquired knowledge needs to be codified and stores in the databases and warehouses where it can be easily accessed and utilized by the organization. Knowledge needs to be organized for storage and retrieval using most effective techniques. Effective retrieval depends on how databases have been created. Knowledge society is confronted with retrieval problems which is mostly dependent upon computerized processing and indexing. Knowledge is growing so fast that human indexing and anlaysis is becoming more difficulty. Equally problematic area is storage. Digital as well as physical storage of knowledge is becoming more and more complex seeking new and innovative solutions.

Knowledge Utilization/Sharing/Transfer/Synthesis: Knowledge sharing means retrieving knowledge from the knowledge repositories and making it available and

accessible to users. Tacit knowledge is shared through interaction among people working together in an organization while explicit knowledge can be shared through databases, expert systems, knowledge bases, knowledge warehouses, etc. Knowledge society demands maximum utilization rather exploitation of resources irrespective of forms and formats. For libraries, knowledge management mainly means knowledge sharing. Libraries have to find ways and means to share knowledge nationally and globally by using information technology to its fullest extent.

Use of Technology: Present society may also be called network society and network has reduced whole world into a global village. Impact of information technology on knowledge creation, processing, retrieval and sharing is quite visible. There is unprecedented expansion of networks and whole world is connected through various channels. The knowledge economy underlies organizational and technological complimentaries between expanded possibilities for information codification, storage and transmission offered by new technologies, the human 'capital' of the workers likely to use these technologies and a 'responsive' organization of the enterprise (thanks to the progress of knowledge management that makes possible for productivity (Unesco, 2005). There is a clear message to the library and library professionals in the above statement. Library in the present era is not supposed to serve its own community of the institution but world community at large. It would not be wrong to say that information technology has changes the whole scenario of library profession and has been greatly impacted as compared to many other professions. Knowledge management does not imply only applications of information technology in libraries for sharing of knowledge but it also essentially conveys that technological know-how or 'tricks of the trade' has also be learnt and shared for effective organization of knowledge.

Role of Leadership: It should be remembered that knowledge agents/knowledge workers know more about the technical know-how of the work they are performing, than the manager provided he himself has the expertise in that particular job. Therefore, it is the responsibility of the manager/leader to make best use of their knowledge. Everybody has his/her own personal experiences and knowledge (tacit, or any other type) about the library operations which are to be shared for better utility and results. Knowledge society demands from the leader (Chief Libraries, Directors of library services) that personal abilities of all professionals within the library or outside must be effectively utilized. Whenever, expertise are not available within the library/organization, consultancy services must be sought. Manager shall have to identify 'what to do' and prioritize their action plan through strategic planning. It is the duty and responsibility of the leader then to devise/innovate best techniques and methodologies to perform such actions. Knowledge management enables organizations/firms to increase productivity whereas libraries implicitly contribute towards creation of knowledge.

Training and Education: Library and information professionals are facing many challenges and it is not easy to cope up with the ever increasing demand of information/knowledge users in the present knowledge society. But it cannot be denied that acquisition of knowledge through professional trainings and education lead to increased skill and competencies. University of Warwick has rightly included learning process in the definition of knowledge management which includes acquisition, sharing, and use of knowledge within organizations, including learning processes and management of information systems. Library education is also facing problems to prepare suitable manpower who could face the challenges of knowledge management in libraries. Scope of librarianship is ever changing with

the growth of knowledge and changing dimensions of information technology. Developments are too fast to cope with unless such challenges are successfully met. Professional knowledge and competence has to be updated through in-service training and education. Shanhong (2000) stated that knowledge management in libraries should include the following:

1. *Knowledge Innovation Management:* It refers to the management of the product, diffusion and transfer for knowledge as well as of the network systems constructed by related organizations.
2. *Knowledge Dissemination Management:* It refers to strengthening the creations of libraries' own documents resources and development of document information resources, raise quality of libraries' staff, utilization of all media to ensure security of operation of networks and prevent online criminal activities. Knowledge dissemination management plays the role of knowledge tosser, use diverse media and channels to disseminate various new knowledge.
3. *Knowledge Application Management:* Knowledge services based on high-speed information networks by setting up virtual/digital libraries.
4. *Human Resource Management:* Library staff should be trained with latest technical knowledge.

The scope of librarianship is ever increasing and more and more competencies, skills and abilities are required to manage knowledge and information. Library is the only institution/agency, which can fulfill the requirements and mission of knowledge society and mandates of various knowledge commissions. Chase (1997) found that application of knowledge management in libraries improve decision making, increase responsiveness to customers, improve efficiency of people and operations, improve innovation, improve products and services.

Conclusion

The scope of librarianship has been ever expending from library economy to documentation, from documentation to information science/library studies/ information studies. Bradford (1950) had observed while considering documentation as an art (may be considered as branch of librarianship) that area of operation of documentation is collecting, classifying, making readily accessible the records of all kinds of intellectual activity. Profession has to discover new methods and techniques of 'managing intellectual capital'. This is what profession is confronting today at to identify, collect, organize and making accessible all intellection activities/intellectual capital implying all types of knowledge including tacit knowledge for human development which ultimately results in knowledge economy and increased productivity which knowledge society aims at. Foskett (1967) had forecasted that 'these services may take many form (which we have today) and often reach the highest level of scholarship and it is my opinion that information officers who organize and perform them has taken librarianship to its most advanced state but has not found new and qualitative profession. Profession has been learning various methods of organizing knowledge, growth and development of knowledge. Most of the universities in India even today include 'Universe of Knowledge' in their curricula introduced by S R Ranganathan. The profession revolves around knowledge and its management which needs new techniques, methods and devices for improved accessibility. Knowledge management needs highly sophisticated tools for its organization and management. New techniques of knowledge management are to be evolved based upon sound principles of librarianship. Many universities are engaged in higher learning and research in the field of library and information science and large amount of

research literature is being generated but there is hardly any practical utility of the research findings. Proper utilization of knowledge is minimum whereas large amount of funds are being used for research. Library profession in the present knowledge society is facing big challenges which can me met with new methods of controlling would literature and make it easily searchable with precision and relevance. Manpower sharing in the form of expertise has become essential to build common repository of professional knowledge to be shared among professionals. Sharing of tacit knowledge in technological age has gained importance which includes technical know-how of using different equipments, machinery including computer etc. operation of which cannot be learnt from written knowledge. Tacit knowledge is gained by practice and experience which needs to be shared and utilized.

Now libraries are being renamed as knowledge centres/resource centres. Consequently designations of library professionals are also being considered to be changed to information manager/information scientist/ knowledge managers/information specialists etc. in the light of their changing roles.

In view of the above discussion and similarity of knowledge management with librarianship, what do we find new? A definition arrived at, endorsed by 73% of the participants in the survey conducted by Cranfield School of Management that knowledge management is the collection of processes that govern the creation, dissemination, and utilization of knowledge to fulfill organizational objectives (Murray and Mayers, 1999). what else librarianship does? Koenig (1996) has very right said that knowledge management is just a new mane for librarianship.

REFERENCES

1. Ackoff, R L (1989) From data to wisdom. Journal of Applied System Analysis, 16, 3-9. In: Implementing CRM from technology to knowledge/David Jesse Finnegan and Leslie P Willcocks. NJ: John Wiley, 2007.
2. Allee, Verma. (1977) The Knowledge evolution: expanding organizational intelligence. Newton: Butterworth-Heinemann. In: Preliminary study of knowledge management in a library: a case study of the national library of Malaysia/Suraya Hamid and Jamaliah Mohammad Nayan.
3. Autio, E, Sapienza, H J and Almeida, J G (2000) Effects of age at entry, knowledge intensity, and imitability on international growth. Academy of Management journal, 43(5), 909-24. In: Knowledge management: securing future/Ebrahim Randeree, *Journal of Knowledge Management*, 10(4), 2006, 145-156.
4. Badenoch et al. (1994) The value of information. In: The values and impact of information ed. by M Feeney and M. Grieves. London: Bowker-Saur, pp.9-77. In: Knowledge management, librarians and information managers: fad or future/Loughridge, Brendan. *New Library World*, 100(1151) 1999, 247.
5. Barclay, Rebecca O. and Murray, Philip C. (1997) What is knowledge management? [Available at: *http://www.media-access.com/whatis.html; viewed* on: 26 August, 2009].
6. Bell, D (1973) The coming of post-industrial society: A venue in social forecasting. NY: Basic Books.
7. Drucker, Peter (1993) The post-capitalist society. Oxford: Butterworth. In: Preliminary study of knowledge management, in a library: a case study of the national library of Malaysia/Suraya Hamid and Jamaliah Mohammad Nayan, 3.
8. Earl, Michael (2004): "Tantalised by the promise of wisdom", Financial Times, 25 August. [Available at" *http://news.ft.com/cms/s/284c2fec-f6b7-11d8-a879-00000e2511c8.html*]
9. Hayes, R M (1969) Information science in librarianship. Libri, 19(3), 217. In conceptual approach to information science/ A S Chancel and Venna Saraf, Herald of Library Science, 22(-4), 1983, 192.

10. Autio, E, Sapienza, H J and Almeida, J G (2000) Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 4395), 909-24. In Randeree, p. 146.
11. Badenoch et al. (1994) The value of information. In Feeney, M and Grieves, M (Eds). The values and impact of information. London: Bowker-Saur, pp.9-77. In Loughridge, Brendan. Knowledge management, librarians and information managers: fad or future. *New Library World*, 100 (1151) 1999, p. 247.
12. Chandel, A S and Saraf, Veena (1983) Conceptual and definitional approach to information science. *Herald of Library Science*, 22(4), 190.
13. Chase, R.L. (1997) The knowledge-based organization: an international survey. *Journal of Knowledge Management*, 1(1), 38-49.
14. CRUE (2002) The University and knowledge management. [Availableat" *http://www.crue.org/bolet_educ_ING23.html*; viewed on: 23 January, 2009]
15. Drucker, Peter (1993) The post-capitalist society. Oxford: Butterworth. In Preliminary study of knowledge management. In a library: a case study of the national library of Malaysia/ Suraya Hamid and Jamaliah Mohammad Nayan, 3.
16. Earl, Michael (2004) Tantalised by the promise of wisdom. Financial Times, 25 August. [Availableat: *http://news.ft.com/cms/s/284-c2fec-f6b7-11d8-a879-00000e2511c8.html*]
17. Fosket, D. J. (1967) Information services in libraries. In: Conceptual approach to information science/A S Chancel and Veena Saraf, *Herald of Library Science*, 22(4), 1983, 192.
18. Girgis, Nagat William (2004), "Library and Information Professionals and Knowledge Management Applications". *http://www.ieeexplore.org* (Accessed on 17 January, 2009).
19. Hayes, R M (1969) Information science in librarianship. Libri, 19(3), 217. In: Conceptual approach to information science/ A S Chancel and Veena Saraf, *Herald of Library Science*, 22(-4), 1983, 192.
20. Lee, Hwa-Wei (2000) The role of libraries in knowledge management. [Available at: *http://www.white-clouds.com/iclc/cliej/c1191ee.html*; viewed on: 5 December, 2008]

21. Loughridge, B. (1999) knowledge management- the new librarianship? From custodians of history of gatekeepers to the future. *Library Management*, 24(8/9), 433-440.
22. Lynd, Robert S (1964) Knowledge for what? The place of social science in American culture. New York: Grove Press. In Preliminary Study. op. cit. p. 3.
23. Machlup, F (1980) Knowledge: its creation, distribution and economic significance. Princeton, NY: Princeton University Press. In: Knowledge management in academic libraries: special tools and processes to support information professionals/Rom Kantz. *Reference Service Review*, 29(1), 2001, 34.
24. Meadow, Charles T (1992) Text information retrieval. NY: Academic.
25. Nonaka, I and Takeuchi, H (1995) Knowledge-creating companies: how Japanese companies create the dynamics of innovation. New York: OUP In: Implementing CRM op. cit (1)
26. Orlikowaski, W J and Tyre, M J (1999) Windows of opportunities: temporal patterns of technical adaptation in organization. *Organization Science*, 5(1), 98-118. In: Implementing CRM *op. cit.* (1)
27. Penrose (1959) Theory of the growth of firm. New York: OUP.
28. Petrides, L. A and Nodine, T.R. (2003) Knowledge management education: defining and landscape. [Available: at: *http://isknowledge* managemente.path.net/knowledge managementeducation.pdf; viewed on: 27th January, 2009].
29. Polanyi, M (1966) The tacit dimension. London: Routledge and Kegan Paul. In Implementing CRM.
30. Randeree, Ebrahim (2006) Knowledge management: securing future. *Journal of Knowledge Management*, 10(4), 145-156.
31. Shanhong, Tang (2000) Knowledge Management in Libraries in the 21st Century. [Available at: *http://www.ifla.org/IV/ifla66/papers/057-110e.html*; viewed on: 12 December, 2008].
32. Sharma, P. (2004) Knowledge Management, New Delhi: APH.
33. Smith, L (2000) Knowledge discovery, capture and creation. Bulletin of the American Society for Information Science, 6(2), 11-12. In: Knowledge management in academic libraries: special tools and processes to support information professionals/Rom Jantz, *Reference Service Review*, 29(1), 2001, 34.

34. Skyrme, D (1997) Knowledge management: making sense of an oxymoron, management Insights [Available at: *http://shyrme.com/insights/22knowledge management.html*; viewed on: 21 January, 2009].

35. Townley, C.T. (2002) Knowledge management and academic libraries. *Colleges and Research Libraries*, 62(1), 44-45.

36. Koenig, M.E.D (1996) Intellectual capital and knowledge management. *IFLA Journal*, 22(4), 299-301. In: Knowledge management, librarians and information managers: fad or future/Brendan Loughridge. *New Library World*, 100(1151), 249.

37. Unesco (2005) Towards knowledge societies: Unesco World Report. Paris: Unesco.

38. Vincenti, W G (1993) What engineers know and how they know it: Analytical studies from aeronautical history. London: The John Hopkins Univ. Press.

39. Wiig, K (1999) What future knowledge management users may expect. Journal of Knowledge Management, 3(2), 155-65. In: Knowledge management in academic libraries: special tools and processes to support information professionals/ Rom Jantz. *Reference Service Review*, 29(1), 2001, p34.

40. White, Tatiana (2004) Knowledge management in an academic library: Case study of knowledge management within oxford University Library Services (OULS).

41. Zack, M.H. (1999) Developing a Knowledge Strategy. California Management Review, Vol. 41, No. 3, Spring, 1999, 125-145. [Available also online: *http://web.cba.neu.edu/%7Emzack/articles/kstrat/kstrat.htm*, also: *http://web.cba.neu.edu/-mzack/articles/kstrat/ksfig3.jpg*; viewed on 25 August 2009).