

NEED OF KNOWLEDGE MANAGEMENT IN DIGITAL LIBRARY: SKILLS, ROLE AND BARRIERS

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Abstract:

In the rapidly changing information and knowledge era, knowledge is the most vital factor, in the development and growth of both individuals and organizations. The conventional function of academic libraries is to collect, process, disseminate, store, and utilize information to provide service to the community. However, the environment in which academic libraries operate today is changing. Today the use of ICT (Information, Communication and Technology) has absolutely changed the role and responsibilities of library professionals. The development of knowledge management in recent years has become the key concern for librarian and libraries. A well-established library management is necessary for any academic organization. Application of knowledge management in digital age is necessary to maintain relationship in between library and the user. The modern academic libraries are now focusing to deliver the information in the digital form through web, Online Public Access Catalogue via internet. Knowledge management is a viable means in which academic libraries could improve their services in the present knowledge era. In the age of digital era library, professional's role is also changing and they are posed many challenges. This paper deals with knowledge management in digital library. This paper mainly describes the different aspects about need of knowledge Management in digital library. This paper also tries to reflect skills, current trends and challenges required for the library professionals working at digital library environment.

Keywords: Knowledge, Knowledge management, Digital library, explicit knowledge, tacit knowledge.

1.0 Introduction:

The concept of 'knowledge management' was started and popularized in the business world during the last decade of the 20th century. It is the business world that first recognizes the importance of knowledge in the "global economy" of the "knowledge age". As a subject discipline of the knowledge economy, knowledge management is completely new concept and method of management. The applications of the knowledge management have spread to many organizations, which include the government agencies, research and development departments, universities etc. In library and information science, Dr. S R Ranganathan was the first to advocate that a universe of subjects is synonymous to a universe of knowledge and therefore proposed the concept of knowledge management in libraries. A library, of whatever type it is –is the first place for organizing knowledge. Each library model has its pivotal role towards organizing knowledge and disseminating it. Users of the 21st century expect that they should get the information they need, right at their desks, whether it is from online databases, or the intranets. Libraries need to develop their resources access and sharing strategies from printed to electronic and digital resources in concert with their mission. A well-designed and implemented knowledge management system is essential for aggregating disconnected pockets of information to strengthen the effectiveness of an organization. In this course, a library professional must develop the skills and processes to build knowledge management solutions that leverage organizational and individual knowledge.

2.0 Objectives:

1. To define the concept of Knowledge Management and Digital Library.
2. To discuss the need of Knowledge Management in digital library.
3. The main objective of this paper is to explore the changing roles of the library professionals to meet the changes and challenges in the digital environment.
4. To discuss about the various skills needed for the library professionals to meet the digital need of the user.

3.0 Definition:

Digital libraries may be defined as electronic information collections containing large and diverse repositories of digital objects, which can be accessed by many geographically distributed users.

The Association of Research Libraries (ARL) in definitions and purposes of a digital library has defined a digital library as having these qualities.

1. The digital library is not a single entity.
2. The digital library required technology to line the resources of many.
3. The linkage between the many digital libraries and information services are transparent to the end user.
4. Digital library collections are not limited to document surrogated: they extend to digital artifacts that cannot be represented or distributed in printed formats.

From the above definition, it may be briefly said that an ideal digital library is one in which all the information exists in digital form and all the functions are automated using advanced technologies.

4.0 What is knowledge:

Knowledge is a form of information, which can exist only within an individuals' mind. It must be converted into information being subjective, cannot be directly transferred or communicated from one person to another, but must be converted into information first. Information is then regarded as the objective and therefore communicable and recordable form of knowledge. It can be defined as "the facts, feelings or experiences known by a person or a group of people."

4.1 Management:

Management is a mental process. Management as the process of coordinating total resources of an organization towards the accomplishment of desired goals of that organization through the execution of a group of inter-related functions such as planning, organization, staffing, directing, and controlling.

4.2 Knowledge Management:

Knowledge management is a process that helps organizations identify, select, organize, disseminate, and transfer important information and expertise that are a part of the organizational memory that typically resides within an organization in an unstructured manner. This enables effective and efficient problem solving, dynamic learning, strategic planning, and decision-making. Knowledge management focuses on identifying knowledge, explicating it in a way so that it can be shared in a formal manner and thus reusing it.

According to Ouitas et al., (1997) knowledge management is to discover, develop, utilize, deliver, and absorb knowledge inside and outside the organization through an appropriate management process to meet current and future needs.

According to Petrash (2) "Knowledge Management is getting the right knowledge, to the right people, at the right time," This is seeming to be like Five Laws of Library Science formulated by S.R. Ranganathan.

5.0 Types of Knowledge Management:

Knowledge is classified into two types.

1. **Explicit knowledge:** Explicit knowledge: Explicit knowledge is knowledge, which is any thought or experience, which is documented or coded.
2. **Tacit knowledge:** Tacit knowledge: Tacit knowledge can be considered as personal or implicit knowledge, which resides in the human mind and difficult to communicate.

5.1 Need of Knowledge Management in Digital Library:

The digital age and the increasing volume of information available today calls for new strategies in the libraries through which the services they provide meet better users' needs and access to knowledge is improved. The main aim of implementing knowledge management in digital libraries is to promote relationship in and between libraries; between library and the user; and to provide right information to the right user at the right time. As a learning organization, libraries should provide a strong leadership in knowledge management. Libraries whatever its type should improve their knowledge management in all the key areas of library services. The technology and innovation give the institutional libraries a modern viewpoint. Institutional repositories are being changed in to digitized forms. The modern libraries are now focusing to deliver the information in the digital form through web, WEBOPAC via

internet. Libraries should be developed and maintained an integrated Online Public Access Catalogue (OPAC) to deliver the information in the digital form through web

The need of Knowledge Management is as follows:

- To improve Library service, empower professionals and innovate.
- To deliver high quality resources, enhance flexibility and adoption, capture information, create knowledge, share, and learn.
- Improved Decision Making
- Improved Strategic Planning
- Faster Development of New Technical Approaches
- Reduced Cost of professional Training.

6.0 Contents Of Knowledge Management In Digital Libraries

Following are the contents of knowledge management in digital library: -

7.0 Knowledge Innovation Management:

Knowledge innovation management in library refers to the management of the production, creation, diffusion, transfer and remove of knowledge as well as the network system constructed by related institutions and organizations. It includes three aspects namely.

- (i) Theoretical Innovation Management,
- (ii) Technical Innovation Management, and
- (iii) Organizational Innovation Management.

7.1 Theoretical Innovation Management:

Theoretical innovation management is to enrich and enlarge the theoretical and practical research fields of library and information science through pursuing the latest development trends in library science the world over.

7.2 Technical Innovation Management:

Manages the network systems constructed by institution. It supports the evolution from conventional libraries to electronic or digital libraries.

7.3 Organizational Innovation Management:

Support to create an effective management system adaptable to the operation procedures of libraries.

8.0 Knowledge Dissemination Management:

Knowledge dissemination is of equal importance as compared to knowledge innovation. Dissemination or communication of knowledge is an integral part of knowledge management. Knowledge dissemination has different meanings to different people. Its most common definition is the transfer of knowledge within and crosswise settings, with the expectation that the knowledge will be used as learning, enlightenment, or the acquisition of new perspectives or attitudes or in the form of modified or new practices.

9.0 Knowledge Application Management:

Knowledge application management is a structure for assessing; capturing, managing, and distributing the knowledge essential to construct maintain and use information system. In the 21st century, libraries should also attach importance to provision of services for users to acquire knowledge and effectiveness of knowledge information based on high-speed networks. Libraries can create virtual libraries or information centers for enterprises, government, and public organizations. Setting up digitized knowledge services, which is a development trend of libraries. The knowledge services of libraries in the future will start with creation of databases comprising electronic journals and books in different languages that have discipline features and can operate on high-speed information networks.

10.0 Human Resources management:

Human sources are those sources in which any human or individual serves as a source of information. Human Resources management brings out the important values of trust, care, teamwork, encouragement, and development,

which help the libraries meet the principle of being a good librarian and thereby motivating staff to give their best. A great amount of expert knowledge and accumulated experiences of library staff members from the intellectual assets of any library and should be valued and shared. The library staff members who share their tacit knowledge and experiences through writing, publishing, or mentoring should be properly recognized and rewarded.

11.0 Skills of Library Professionals in Knowledge Management in Digital Library:

For successful implementation of Digital Library, it is essential that library professionals are well trained and possess requisite knowledge and skills in this respect.

11.1 Technology Skills

Technology skills means those skills which are required to handle information technology and its other related fields such as computer operations, telecommunication media, creation of online database, designing of websites, searching information from internet etc.

11.2 Technological Tools Using Skills

Digital library environment means the advanced application of information technology on the library, so the librarian should have to be familiar with skills to handling information technology products, particularly keyboard, operating system, software, physical handling of gadgets, telecommunication products, DBMS, data and file management, DTP word processing, generation of reports, etc.

11.3 Skill of Using Internet

Skills of handling different computer communication networking architectures and systems i.e., LAN, MAN, and WAN as well as using of internet and other library related networks like INFLIBNET, CALIBNET, DELNET etc are required for a modern library professional working in IT environment to tackle the problems and challenges raised in building and maintaining a digital web-based library.

11.4 Skill of Using Computer Communication Networks

Speedy resource sharing and dissemination of information is possible only with the proper computer networking skills. Moreover, the library and information professionals should have the knowledge of network protocols like TCP/IP, UDP, HTTP, FTP etc.

12.0 Information Retrieval Skill

The library professional should have the professional technology skills required to apply information technology for service. This involves collection and organization of data in electronic form, indexing techniques, selection and evaluation of sources, searching techniques, updating techniques. The librarians should be able to help its diversified user community by providing retrospective searches, ready reference services, bibliographic service, selective dissemination of information services etc.

12.1 Managerial Skill

As the librarians are the manager of a library and information center, they should have some basic managerial skills for managing the different sections like Finance, Human resource etc. They should have to apply some of this managerial skill in planning, decision-making, motivation etc. Time management skill is one of the important managerial skills required for a successful librarian.

12.2 Preservation Skill

Like in the traditional library, the library professional in a digital library too should have the preservation skill for the E-Resources. They should have the knowledge of cryptography, firewall, and different anti-virus software for prevention and preservation of e-resources.

12.3 Software Skill

Software skill is required to create bibliography, content pages, abstracts and full-text electronic databases and their networking. It also needed to create various union catalogues and to develop efficient software to online user's queries.

13.0 Role of Library Professionals in Knowledge Management in Digital Library:

According to Abel and Oxbro, Library professionals must identify, acquire, and evaluate internal and external sources of knowledge and integrate, organize, and make relevant knowledge available to the right person at the right time. The responsibility of the library professionals has increased in terms of packaging and repackaging of information, electronic publishing, advising users about the strategy to identify relevant electronic sources, etc. In such a new environment, it will be very difficult for the librarian to decide what should be organized. How to give citation? How to organize the collection? etc. Thus, library professionals must change himself/herself and acquire more skills and additional role. The role of libraries and information centers in the modern technology links between the producers and users of information, between institution, communities and even between countries. Recent development in telecommunications, computer networks and electronic media are changing the way of libraries to serve the users through resource sharing networks and disseminate information /knowledge to a wide range irrespective of distances and location.

14.0 Leadership Role:

One primary role of library professionals is to provide leadership and expertise in the design, development, and ethical management of knowledge-based information system to meet the information needs and obligation of the patrons. He/she should enrich his management skills for organizing, managing, and disseminating e-literacy to users.

14.1 Resource Person for Information, Editor and Publisher:

The key role of library professionals to work in a digital environment is as under: Libraries must cumulate all the relevant information from various resources on the different aspects that are of his/her scholar's interest or in the interests of the organization, with which it is associated. Before collecting information, he/she must into consideration the following aspects for the product, which they have to offer.

- It must be according to requirement of its users.
- It must be equipped with powerful, easy to use, intelligent search engines.
- It must have attractive user interfaces.
- It must be reasonably priced.
- It must allow access from, and delivery to the users workstation.

14.2 Role of Library Professional as Masters of Web:

Library professional should be able to satisfy all type of users. Especially research scholar and young generation who uses internet frequently for the latest upgradation of the information. He should have knowledge of designing, developing, launching, and maintaining of digital content management and assess, evaluate, recommend, and test various methodologies policies and standards for utilizing computer software in the process of creating and preserving digital collections and resources.

14.3 Proactive Information Professional Role:

The modern trend is for the role of the library professional to move from that of a passive intermediary role responsible for guiding patrons to appropriate information resources, towards that of a much more proactive professional role, which includes analyzing and repackaging information, content information management and institutional digital repository management.

15.0 Barriers to implementation of Knowledge Management in Digital Library:

Every library professional who works in any type of libraries wants to achieve organizational goal and provide better services to their users but some barrier they are not able to do that due to: -

- Lack of skill in Knowledge Management techniques
- Lack of funding for Knowledge Management
- Lack of qualified professionals
- Poor technological infrastructure
- Lack of initiatives by the authority
- Lack of awareness
- Reluctance of library professionals to accept the change
- Lack knowledge sharing culture.

16.0 Conclusion:

This paper attempts to describe how knowledge management is necessary for Digital library. The new role of Libraries in the 21st century needs to be as a learning and knowledge center for their users. As a learning organization, libraries should provide a strong leadership in knowledge management. I also attempt to reflect skills, current trends and challenges required for the library professionals working at digital library environment. This paper suggests that in this digital environment, electronic reference services and other support services with various expertise and digital repositories are becoming necessary. The traditional functions and services of the library are undergoing drastic changes and a new concept of library is emerging. Library professionals should improve their knowledge management in all of the key areas of library services. Knowledge management has become a powerful tool for promoting innovation, realizing and reengineering the various aspects of day-to-day actions of an institution. The environment in which libraries operate is changing and it is essential for librarians to realize the potential of Knowledge management and should train themselves and their staff to develop the appropriate Knowledge management systems and use information technologies to equipped libraries to provide better, faster services to its users. Library professional should improve new skills and knowledge about new technologies that will be needed to provide responsive library services in the digital environment.

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