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Ranganathan's Five Laws and its Impact to the Technological Innovations of Library and Information Sciences

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ABSTRACT

This paper analytically reviews the five basic laws that appear in the field of Library and Information Science (LIS) that, introduced by Dr. S.R. Ranganathan, who was the first class Indian library scientist, and his laws theoretical impacts to the technological enhancements of the field of LIS. Technology transitions from conventional age to electronic age, and individual impacts on elements of R's laws for that, were analytically reviewed throughout the available literature. Finally, concluded that, most of the technological innovations available in the field of LIS have based Ranganathan's five laws, and his five laws are still on live of the library and information science domain.

Key Words: S.R. Ranganathan, Five laws in Library Science, Technological Innovations, LIS

1. Introduction

1.1 Recent Developments of LIS as a Public Domain

In 1900s, the libraries were began to more popular among general public, after liberated them from royal prerogatives, who ruled world before 1900s and transferred the management of the libraries into the progressive philosophers called librarians [1].

During this renaissance period, many researches and developments taken place toward information organizing and distributing, formulating standards for librarianship and form a better library management system. These were devilishly effected to the revolutionary development in the field of Library and Information science.

The contemporary period, the American Library Association (ALA) involved to introduce suitable standards and frameworks for libraries. Those also directly impacted to achieve the organization goals of the field. Under the industrial revolution, technology and instruments were invented to enhance the printing and publishing, also were remarkable support to the development of the Library and Information Science field [2].

In 1960s data communication via cables (ARPANET after World Wide Web & Internet) [3] was implemented and it affected to the massive change at the telecommunication industry. Information could be able to send one place to another very fast as packet data, and this technology gradually impacted to the field of LIS to store information and send to another party very quickly on requests.

As the result of above technology driven developments, the libraries were become most essential institutions among the people and societies. They continually used to visit the libraries to full fill their day to day information needs and gradually they become the most valuable communication centers worldwide. According to these enhancements, its shape also tremendously began to change day by day, and their staff also were used to find out the optimum solutions to provide correct information into correct user at the correct time with the aid of modern information and communication technology [4].

Present era called as "Information era" [5]. Therefore, information is considered as an important tool in every aspect of human life and very recently it has become the fifth need of human life. Today people are searching information from mobile devices which have connected to the super speed 4G internet. The shape of the libraries also have become an invisible mode (virtual library). Many cloud based

information clusters are waiting until users are requested information. Finally information has become a most important need of the human life.

1.1.1 What is Library and Information Sciences?

Library and Information Science is a profession that is full of people passionate about making a positive change in the world & they tend to be wildly happy about what they do. According to one recent survey, over 85% of information professionals questioned said if they had the choice, they had do it again. Librarians bridge the gaps that exist between people, information and technology. In their professional lives, librarians and information professionals work to: design and develop knowledge-organization systems, create reader's advisory resources to encourage young students to develop a lifelong love of reading and learning, help scholars locate archival and other resources crucial to their work, identify sources of assistance in family and personal crises and help doctors more quickly locate health information in critical situations [6]

1.1.2 What is Technological Innovations?

Technological innovations comprise new products and processes and significant technological changes of products and processes [7]. There is no doubt that technology has had a lasting impact on libraries. Once thought to be going the way of traditional bookstores, libraries have rebounded and are thriving in a technology fueled world. With the help of innovation, re-imagination and vision, libraries are embracing new technologies while creating dynamic community centers filled with life [8].

1.1.3 S.R. Ranganathan & Five Laws of LIS

Dr. Shiyali Ramamrita Ranganathan considered the father of library science in India cover certain facets of library and information science. He was a university librarian and professor of library science at Benares Hindu University (1945–47) and professor of library science at the University of Delhi (1947–55). The last appointment made him director of the first Indian school of librarianship to offer higher degrees. He was president of the Indian Library Association from 1944 to 1953. In 1957 he was elected an honorary member of the International Federation for Information and Documentation (FID) and was made a vice-president for life of the Library Association of Great Britain. As well as he was the author of many LIS text books and founder of Colon Classification system [9].

In 1931, he introduced the five laws to LIS, and most of the contemporaries were accepted those laws as the basic fundamentals of the library management system. These laws are as follows:

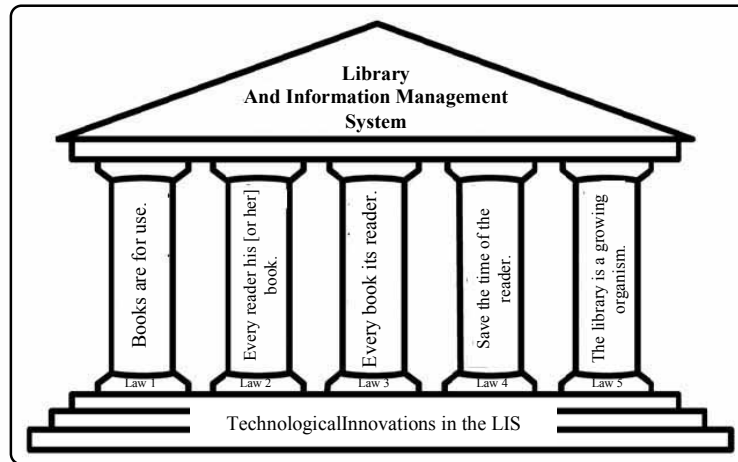
1. Books are for use.
2. Every reader his [or her] book.
3. Every book its reader.
4. Save the time of the reader.
5. The library is a growing organism.

The Five Laws of Library Science are some of the most influential concepts in the field (*see illustrator 1*). Since they were published in 1931, these five laws have remained a centerpiece of professional values of LIS. These basic theories of LIS continue to directly impact the development of this discipline and the service of all libraries.

1.2 Methodology

When consider the past several decades, it can be seen the field of LIS has developed by multiple ways especially through technological innovations. This paper plans to discuss the interrelationships and impacts of Ranganathan five laws with those enhancements. Latest developments of products and services in field of LIS are considered as technological innovations and compared effectiveness and efficiency of those innovations with his basic learning of five laws.

Illustrator1: Five pillars of Modern Library Management System



1.2 Technological Innovations in Library materials

Modern libraries are increasingly being redefined as places to get unrestricted access to information in many formats and from many sources. They are extending services beyond the physical walls of a building, by providing material accessible by electronic means, and by providing the assistance of librarians in navigating and analyzing very large amounts of information with a variety of digital tools. Modern e-books has substituted for printed books. Mobile communication and digital technology have made good bridge for users to read e-books via kindle or ipads. People are used e-library to access into the information and their reading environment has totally changed by the modern technology.

At the present information era, the shape of the information materials already has changed and becoming a smallest. Many e-books are existed without any printed equivalent. Commercially produced and sold e-books are usually intended to be read on dedicated e-readers. However, almost any sophisticated electronic device that features a controllable viewing screen, including computers, tablets and smartphones can also be used to read e-books.

E-book reading is increasing in the US; by 2014 28% of adults had read an e-book, compared to 23% in 2013. This is increasing because 50% of Americans by 2014 had a dedicated device, either an e-reader or a tablet, compared to 30% owning such a device by the end of 2013 [10].

Ranganathan's first 4 laws discussed about the library materials and their effectiveness to save the users' time. After he raised the importance of open the books for public readers, it was directly impacted to material enhancements of the libraries. Therefore todayit has totally changed the environment of the libraries.

With the acceptance of his laws, the general public were invited to use libraries and theirinformation materials more and more affected to enhance the research and developments of its technology. With these enhancements there were many organizational, structural and management changers at the libraries. After the law published, books were very user friendly information sources, and publishers also were started to think about convenient of readers. They used to adopt technology to publishing industry as well. New systems for book loans, circulation rules and technologies, fine system, user recording system and resource verification systems also were reformulated accordingly.

2.4 Technological Innovations in Library services

The internet has become the most technological innovative factor in LIS. It has already had a major impact to small the library and expand their services. As an added service to the lending books the libraries can be able to start e-mail alert information services, Selective dissemination of information (SDI) services and Current Awareness Services (CAS). With this massive change of the LIS field it has become reverse impact like libraries are becoming smallest and services and storage of information are becoming larger. What Ranganathan says in his fifth law "Libraries are a growing organism" now starts to become a shape up with new technology (*see illustrator2*).

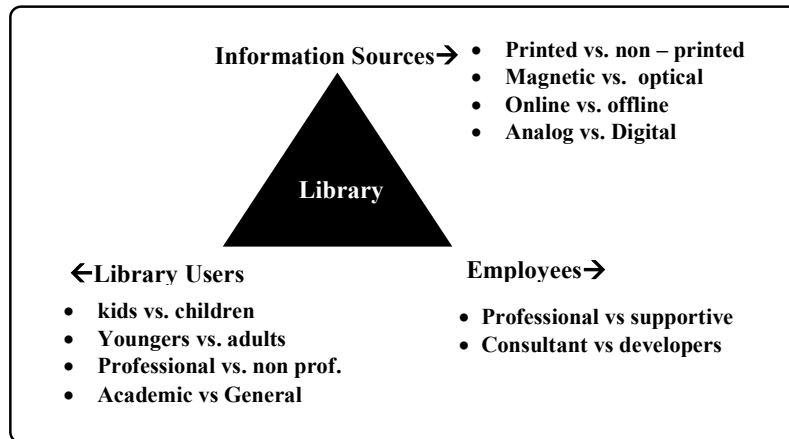
E-borrowing, e-reading, and online "ask a librarian" research services are another most innovative developments in LIS. Many librarians now can connect with their readers online to solve their information needs. Saving readers' time has become a most important factor of the LIS. This need has pointed out by Ranganathan on his fifth law. This law is a recognition that part of the excellence of library service is its ability to meet the needs of the library user efficiently. He paid more attention about users and always directed to the librarians to minimize the users' time from begin of information search to finish his or her information need. The base of this law was adopted by alternative information providers also to complete their organization goals.

Many technological innovators in LIS domain used to base this law before design their product or service. Library classification schemes, indexing & abstracting services and every kind of selective dissemination of Information services are based on saving the users' time. Because saving time is the major satisfaction factor of every kind of customers in product and services.

Librarians' reference skills are most impacted to save the users' time. Library cross-reference services, cataloguing technologies, online public access catalogues (OPAC) are can be named as technological innovations of LIS which accompany with Ranganathan's forth law.

As the growing organism the libraries facilitate to their users to access information in correct format and in time [11]

Illustrator 2. Library is a growing organism



The R's fifth law of library science "the library is a growing organism" means that a library should be a continually changing institution, never static in its outlook. Books, methods, staff and the physical library should be updated over time. He supposed that libraries should be growing at least its users, materials and staffs.

3 Conclusion

At this information age, the libraries have been in the most prominent information and communication dissemination centers, collection development centers and latest technology using centers. Libraries acquire and secure ownership of digital content (typically through license), store the content as the local services, and make it accessible to a target community. Libraries attempt, as technological innovators, to ensure fully access to the digital collection through their various kind of information services, and to migrate the content according to latest technology. In the meanwhile, libraries host as a social partners, and growing organism of this global era.

As a result of above approaches, domain of LIS is always renew with the modern developments of technological innovations. E-books, e- journals, web 3.0 technology, social media interaction, online user feedback systems, worldwide catalogue searching facility (world cat), and web based library circulations, cloud library initiatives, library access via iPhones, kindles, QR code, 3M library gates are the main approaches they applied with modern technological innovations in this information era [12].

Dr. S.R. Ranganathan's five laws of Library Science are still suit for the modern library developments due to their liveliness. Those laws contain whole library management skills and especially as a growing organism, libraries can be able to shape up their basic organization structure according to the users' needs. It is revealed that most of LIS oriented innovations have being started using conceptual framework of R's five laws. Most of the new technology innovations happening on the LIS field based on these five laws foundation.

When consider individual law it is shown interconnection between each law with others. As an organization, they library cannot be avoid any of law as thinking they are unusual. These interconnectivity has manipulated the organization culture according to the current requirement as well as productivity of newer innovations.

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