

ISSN No. 0972-3668

IASLIC Special Publication

(Peer Reviewed)
Volume No. 58

Future of Library and Information (LI) Profession in India

SPECIAL INTEREST GROUP

- SIG 01 : Social Sciences Information**
Performance Appraisal of Libraries /
information Centres
- SIG 02 : Computer Applications in LIS**
Digital Archiving

PROCEEDINGS AND PAPERS

(Peer - Reviewed Post - Conference Publication)

IASLIC 32nd All India Conference 2019

held at University Library, Cochin University of Science and
Technology, Kochi during December 03-05, 2019



INDIAN ASSOCIATION OF SPECIAL LIBRARIES AND INFORMATION CENTRES (IASLIC)

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2019

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Selected peer-reviewed papers those are presented in the conferences / seminars are only included in the respective post-conference / post-seminar annual IASLIC Special Publication (ISSN 0972-3668) with a consecutive volume number (IASLIC Special Publication Vol No. 58)

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Price : Rs. 490.00

US \$ 80

Printed by Modern Graphica, 41, Gokul Boral Street, Kolkata – 700 012

What the Editors Speak About—

Prof S R Ranganathan, the father of librarianship in India, recognised ‘Librarianship’ as a noble profession. According to him ‘a librarian derives his joy by seeing the dawn of joy in the face of the readers who were helped in their search for the right information at the right time’. His disciple Dr Ganesh Bhattacharya, defining in detail, mentioned that a calling is to be considered as a profession, if a few things like specialised knowledge and skills acquired through learning of intensive methods as well as the underlying historical/ scientific/ scholarly principles are affirmed. Additionally, a profession must extend ample scope of continuous education and in-service training to a kind of work which has for its prime purpose — the rendering of public service. He has also pointed out that a profession encourages developing self-consciousness to establish co-ordination and co-operation among practitioners, avoiding bad workmanship and indifferent handling of clientele, to protest against lack of recognition where ever required, availing education and training for keeping themselves updated with the emergence of a new technology and/or different disciplines with wide application. Needless to mention that librarianship affirms these attributes to be a profession and owes a lot to immense contributions of these stalwarts. But the paradigm of the librarianship profession has been fast changing with the increasing application of information and communication technologies leaving the professionals to cope with the new situation. Nature of public service has been changing from oral communication type service to written manuscript based service, to print document based service, to electronic resources based services at the present day context.

A Greek philosopher Heraclitus said, “Change is the only constant in life”. Libraries are no exception. In the new paradigm of ICT era, not only the professionals are experiencing a sea change in the media of resources and the basic functioning of libraries, such as collection, organization, preservation and dissemination of information, they are witnessed of wide changes in users’ demands and information seeking pattern as well. Libraries are slowly transformed from a ‘Resource Centred Organisation’ to an ‘Accessed Centred Organisation’. Changes are expected in future in library services too. Basic laws and guiding principles may not change much, but information products and services based on those need are to be redesigned to blend with the changes to address the users’ need. The future of librarianship profession would depend how significantly its practitioners adopt and cope up with the transformation of library services blending with the essential changes as per the budget available. Thus ‘Future of Library and Information (LI) Profession in India’ was considered as the central theme of the IASLIC 32nd All India Conference 2019 for giving a platform to library and information professionals to discuss and decide about the future strategies for meeting the challenges in future.

Of two SIGs (Special Interest Groups), ‘Performance Appraisal of Libraries/Information Centres’ was selected for SIG01 (*Social Sciences Information*). Performance appraisal is required to evaluate libraries effectively. A comparison between ‘what is’ and ‘what ought to be’ should identify the present situation of libraries/ information centres.

Under SIG02 (Computer Applications in LIS), 'Digital Archiving' was considered to discuss on issues of preserving the cultural, historical and scientific heritage of civilization in digital age.

In the first tier of referring process, a total of 35 papers including eight (08) invited papers were accepted for oral presentation and none for poster presentation. Of oral presentations, 26 papers were under main theme (scattered among 14 sub themes), two papers were under SIG 01 and one paper was under SIG 02. Due to non-availability of full-text, one non-presented invited paper could not be included. Another presented paper raising doubts about LI profession is excluded as editors felt that the paper would generate wrong impression about the LI profession amongst neoprofessionals and others. All together twenty-eight papers (including of invited papers), - twenty-five presented papers of main theme, two papers of SIG 01 and one paper of SIG 02, are included in this post-conference volume after the final editing. Proceedings and the recommendations of this conference are also included which would give some insights of the future of LI profession in India with the intervention of performance appraisal towards its sustainability. Also papers on digital archiving of cultural/historical heritage would provide some guidelines to cope with the changes due to the emergence of digital technologies.

The editors would like to express thanks to all those who have helped them in innumerable means in bringing out this volume. They are especially thankful to Smt. Banasree Roy, Convenor Serials Division for her tireless, methodical and sincere effort in compilation of this volume. Editors are also thankful to Ms Mayuri Das Biswas for her support in this work . The help of IASLIC Staff Sri Chayan Samaddar and Sri Subhas Sinha in different level of activities in bringing out the volume in its present shape are also acknowledged.

IASLIC 32ND ALL INDIA CONFERENCE 2019
December 03-05, 2019
**University Library, Cochin University of Science and
Technology, Kochi**

On

***Future of Library and Information (LI)
Profession in India***

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Address of the Conference President – IASLIC 2019
**Library and Information Profession in India: Future
Challenges**

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“If you want a future of libraries, it is within you, the librarians. If you want a healthy community that seeks out knowledge, and seeks informed conversation, then advocate for it beyond your walls.”

- Prof R David Lankes

1. Introduction

The most impactful technology of the new millennium, the outreach and virtual platform, the “World Wide Web” and its version “Web 2.0” have rechristened libraries to a new avatar and transforming the world by providing access to information and knowledge to people in remote corners of the world. Every space of the present world is progressing at its own speed and every individual has now opportunity to access to ‘his or her’ (Recalling Ranganathan’s Second Law -Every Reader his or her Book) information. The contemporary world has observed and being considered libraries as outdated and underutilized due to the impact of online technologies. But in reality, the use of libraries has enhanced with the access to Web OPAC and Virtual Libraries. The only difference is that users at large are using the libraries from their own access points. Though, it is presumed libraries are hard pressed for delivering effective and efficient services to the users, the profession has been adopting and has to adapt to the changing times. This demands that the LIS professionals must be more confident and competent to withstand the test of the changing times. Over the centuries, along with the changing forms of libraries and their content, the libraries have also been evolving methods and techniques to organize their content, in all forms and formats. They did profess cataloguing practice at the time of manuscript library and now they have developed Web OPAC. Another important fact that reminds us that all these methods and techniques innovated by the library profession have been instrumental in creating parallel technology-oriented means, methods and tools. The Catalogue codes have been, for example, are the sources for schematizing the Metadata and that speaks of its wealth of knowledge in organizing and preserving knowledge from past to the present. Licklider (1965) has made a detailed research on concepts and problems on “Libraries of the Future” records the result of a two-year inquiry into the applicability of some of the newer techniques for handling information to what goes at present by the name of library work — i.e., the operations connected with assembling information in recorded form and of organizing and making it available for use.

2. Legacy of Libraries

The libraries are the only institutions which have retained their past existence and still profess with the current and modern conditions and situations. Two questions would arise from my thought process:

- If Libraries had not existed, where all output of human knowledge stored and accessed where all books would have been stored and made available???

- If Librarianship was not professed, who would have organized and preserved all the knowledge that has been created over centuries of human effort, zeal?

To exemplify the facts further, the British Museum and Library has preserved the Clay Tablets of the times of King Ashurbanipal of Assyria d. ca. 626 and the second most famous surviving specimens of Cuneiform writing (oldest script) are code of Hammurabi, now in the Louvre Museum of Paris. Our own 'Oriental Research Institute' at Mysuru has the Manuscript of Chanakya's 'Arthshastra' the famous treatise on "Political Economy". Now we have the biggest public library of the world the "Library of Congress" the catalogue of which can be viewed worldwide. These statements and facts simply profile the legacy of libraries as the one of the oldest surviving social institutions connecting the past with the present.

The Libraries therefore being the oldest ancient social institutions, have evolved from Clay Tablet Libraries to Chained Libraries then to the present Open Virtual Libraries. So, they have been playing an unstinted vital role in preserving the social memory and functioning to inform, educate and entertain the humankind from the dawn of civilization. It is well said that "In place of the wise man of the tribe, the library has become a corporate memory of a civilization". With the change of time the social role of the libraries has also changed. Libraries are considered the repositories of human thoughts and societal memory. The historical development of human communications has been well explained by Marshall McLuhan in his book, "Guttenberg's Galaxy: The Making of Typographic Man" (1962). He has divided the whole process into four phases:

Phase 1: Oral Communication Era represented the phase wherein the total communication system was through the word of mouth. Man was equivalent to a book and the spread of social memory was confined to a specific space.

Phase 2: Written Manuscript Era was the phase where the ideas were recorded on the naturally available materials for the preservation of thoughts, for the use of future generation. This gave scope for transfer of ideas and understanding across the space.

Phase 3: Printing Era was the phase wherein the printing technique was developed by Guttenberg in the fifteenth century and helped tremendously in the multiplication of knowledge resources and the movement of the same, across the space and time. The printing press revolutionized the scholarship and simultaneously printing enabled the task of copying and fostered the spread of ideas resulting in better understanding.

Phase 4: Electronic Technologies Era represented the phase where technology played a predominant role in swifter dissemination of knowledge. For McLuhan, electronic technologies were limited to radio, television and early personal computers, which was reflected in his book 'Guttenberg's Galaxy'. But today, these basic electronic technologies have been superseded by the rapid growth and expansion of networks, social media, artificial intelligence, machine learning, etc.

The development of social media along with the electronic technologies can now be taken as the fifth phase of human communication, complimenting the earlier four phases as stated by McLuhan.

Thus, libraries have traversed a long way in the development of human communication system. Today, all types of libraries are in the process of transition as they are shifting from 'Resource Centered Organizations' to 'Access Centered Organizations'. They are the repositories of media that are less confined to place, paper and print. The contemporary and emerging technologies have enabled the libraries to link information and knowledge available locally and remotely empowering the user community to become self-directed learners. User friendly search engines have facilitated the swift and

productive search for information, at the users' place of convenience. Dramatic advancements in technology have resulted in computers connection to TVs, Internet, cloud computing, online classrooms and mobile devices with fast computing power, thus enabling access to information from anywhere, anytime and in any format. The perceptions of library value from managing collections to supporting teaching-learning and research has paved the way for research productivity and learners' success.

3. Landmarks that transformed the libraries:

Human activities have undergone a change due to the innovations happening at a swift pace. Right from the printing press to the digital tablet, these innovations have transformed the human evolution to a great extent. Gutenberg's printing press is one of the greatest inventions that had revolutionized dissemination of ideas and knowledge and has had a huge impact on scholarly communication. Currently, the information world is witnessing the rapid growth and expansion of Internet, Web 2.0 and Social networks, etc. 21st Century Libraries are changing from what they have been to what they must be. Thus, the Libraries are transforming as learning resource centres due to the advances in digital technologies. Simultaneously, libraries need to focus on the challenges like cutting cost and optimum utilization of time by increasing efficiency of the staff and effectiveness of the services. Critics often discuss the relevance of traditional libraries in the digital uprising. Library science professionals need to relook, reflect and reorder their professional roles to provide a paradigm shift which will help to sustain the profession due to emergence of new disciplines, merging of existing disciplines and percolation of swanky digital devices in day to day life of the users. It is therefore discussed by Lorcan Dempsey (2015) that the "importance of thinking about the library in the life of the user instead of the traditional model of thinking the user in the life of the library".

4. Transition of libraries of the future - Some Studies

A study conducted in Israel from 1998 to 2000, investigated through a Delphi panel of forty experts from USA, Canada, Europe and Israel. The experts were asked to grade the desirability and probability of statements relevant to the transition of libraries from traditional to virtual model, the shift from library centered approach to user centered approach and the skills and roles of the information science professionals. It was interesting to note that 77% of the experts believe that it is highly probable that the traditional library model will not be replaced by the virtual model. Nevertheless, traditional model continues to undergo some serious transformations. 87.5% of the experts believe that it is highly desirable that libraries remain 'Society's memory' by amassing and preserving valuable information for the use of future generation. As websites get redesigned often and content management format and techniques change frequently, evaluating information sources seems increasingly complex. 85% of the experts believe that it is highly desirable that LIS professionals devote themselves to understand how people seek and consume information. 73.8% see that this transformation is highly probable. 75% of the participants believe that it is quite probable that in the near future librarians will work at home, communicating with users via email, phone, or skype and 85% of the panel think it is highly desirable that LIS professionals serve their public not only at the library but also beyond the library. 95% of panel saw this transformation as highly desirable. LIS professionals need to develop new skills in offering the services, planning for organizing 'outreach' activities. LIS professionals cannot remain passive waiting for the users to come to the library for assistance. 90% experts view as highly desirable the marketing and promoting of skills and services within the communities or organizations. 77.5% of the experts believe it is quite probable the LIS professionals' roles in the corporate settings will become more analytical and advisory in nature. Another direct result of the Internet revolution has been the need for many users to obtain initial training and continuing support and guidance in information and technology

related issues. This calls for LIS professionals to become Internet trainers, and advisors, including the information literacy instructions to the users at different levels.

The stress on skill development in the LIS professionals as identified in the above study is supported by another study, titled 'KALIPER (Kellogg ALISE Information Professionals and Education Renewal Project) conducted around the same time in the United States of America. The trends identified by KALIPER project are quite similar to conclusions reached by the Delphi Study in Israel. They felt that LIS professionals should concentrate on their skills and roles and view themselves beyond the library/information centres with a broader information environment and should also be able to cope with new roles and skills and focus on user centered approach. They said that LIS schools need to concentrate on new information technologies and expand the LIS students' specialization options. Only then the future LIS professional will be able to confront the transformations the LIS profession is undergoing.

After a decade of these landmark studies, in 2012 a collaborative project to explore the future of library and information profession had been initiated by Australian Library and Information Association (ALIA). The project investigated the relevance of libraries to users and the changes experienced by individuals and institutions as well the sustenance of library and information profession. The project concluded that the future is not certain and LIS professionals need to be the architects of our own destiny, anticipating change and adapting our library and information services to be in sync with the developments.

5. Libraries in India – The Present Scenario

The evolution of libraries and the various studies conducted to understand the future of libraries due to various factors like information overload, globalization and adoption of emerging technology, have made a huge impact on the future of LIS profession all over the world. The following discussion will focus on the aspects that have emerged as a result of the above-mentioned factors, in the Indian context. First, being the transition of libraries from the past and, secondly the adoption of technology and finally the need to develop the relevant skills and knowledge by the LIS professionals to ensure a sustainable future to organize, manage and to provide information to the new categories of users, being denoted as "Millennials".

Quality of information is the determining factor in the context of information overload. Common people are content with the information they can find on the web. But academicians and researchers looking for quality and scholarly information from the web resources become despair with the vast amount of information found on the web. They are the ones who feel the impact of information overload, which affects the LIS fraternity and the user community. Most of the information seekers are content with whatever information they get on the web without bothering to verify the quality of information and the credentials of those who have uploaded the content. This calls for a proactive role of LIS professionals wherein Information Literacy programmes are focused and customized to suit the user community. The LIS professionals should also succeed in attracting those users who have not been going to the library and cater to their information needs in such a way that they appreciate the relevance of LIS expertise in selecting quality content for them.

Many Indian libraries cannot afford to buy or license every document that their users need. Therefore, sharing of resources through library networks at national and international levels becomes essential for libraries. This helps in managing access to information resources that are out of reach to their users. Thus, resource sharing adopted by various libraries helps in reducing information overload in most economical way. The librarians presently are relevant as they can package information for their users

and are helping them in knowledge creation processes. LIS professionals were fluent with the published resources in the pre-Internet era. But the creation of huge online resources is weaning away the LIS professionals from the skill of fluency of published resources. Basic awareness of technologies like computers, networks, etc. ensured that LIS professionals used their intellectual prowess along with the technology to carry out their functions efficiently.

The unprecedented development in ICT and the advent of networked information services have prompted a thorough review of the LIS profession. During the past three decades' technological developments, newer storage devices, Electronic Databases and the vast adoption of Internet have radically transformed access to information. Greater expertise in retrieving and analyzing the relevant information is therefore essential. The information field has spread beyond libraries and information centres and has been transformed into an industry that creates, organizes, processes and sells information.

The continuous development of the librarians and faculty is being ensured through various Faculty Development Programmes, Orientation Programmes, Refresher Courses, etc. But the challenge is how creative and innovative are these programmes and how do they empower the librarians and faculty in bringing in new dimensions to their work.

6. Challenges of the Future Libraries:

Many libraries are unable to achieve their goals due to lack of staff as well as staff lacking technological and simultaneously professional skills. Building an exclusive digital collection and giving access to the same by providing relevant search facilities is crucial. But the limited funding is a dampener. LIS professionals need to address the ever-demanding users as well as their searching skills through customized information literacy programmes. Managing the data which is an outcome of the various research carried out in academic institutions as well as R & D organizations. Being abreast of research data management tools is the call every library must take to retain their position in the institutions. Creating value for the scholarly work that every library does and contribute to the parent institution is essential for library professionals specially in the academic sector is another challenge which help libraries stay relevant. LIS professionals need to take active part in the scholarly communication by developing the required skills and competencies or else the context of libraries to their user community, especially in the academic libraries, will be a challenge. LIS professionals develop an expertise in the subjects of the user community of the parent organization would be a prerequisite to help the library transform specially in the Indian context. Accepting the rewards that open access movement is offering is the need of the hour. Its indeed a challenge to the LIS professionals to convince their user community to be a part of the open access movement. The core challenge is addressing the quality of LIS education which will produce quality LIS professionals. Incorporating right ingredients of cutting-edge technology, management techniques and communication skills is the key to address the challenge of uniform quality in the curriculum of LIS schools.

7. Future of LIS Profession –Some thoughts

The future of libraries depends how significantly the transformation of library services happens without disturbing the present setup. For this, it's essential to re-evaluate of electronic resources which will add to the core collection as per the budget available.

Appropriate information products and services need to be designed to market the electronic information resources. The LIS professionals need to have more interactive sessions with the users on a regular basis to understand their information needs and accordingly modified their services as a blend of virtual and on demand services. In most of the bigger and modern libraries, one comes across technology rich

virtual service points, staffed pop ups, extended service hours, proactive chat and many offer complimentary virtual reference services of telephone, email, chat and face to face interactions.

Rapid adoption of technology has resulted in transformation of library's traditional roles of preserving, cataloguing, classifying and readers services. Recently smart technologies have percolated in all areas of our lives. The future will be characterized by 'Smart Digital Networks' as indicated by the technology trends and these three keywords will design the future. Invariably professionals, gadgets, content and services will be a part of these networks and thereby succeed in bringing tremendous overhaul in almost all aspects of life – right from the input to the output, the process to the product.

Digital and virtual resources will continue to play a predominant role in the libraries of the future as the upward development graph of the digital technology indicates. At the same time, print media will continue its presence in the library collection. Only caution for the future libraries and library networks would be the provision of customized services to the user community at their preferred places. Electronic communication will be the highly preferred mode of communication by the future libraries even as collection development, conservation, preservation and retrieval will be the priorities of the future libraries, knowledge centres and networks.

In future, libraries will have to upgrade their infrastructure as the technology develops, as users' queries become more complex, as archiving of essential content becomes necessary for each library. Content management skill will be predominantly the expertise of LIS professionals. Importance of library is maintained by offering relevant content to users. If it is not maintained, the users are forced to use other service agencies who can provide the tailor-made services. Quality content creation and quality service becomes the benchmark for the future. Knowledge has always been considered as an important source for intellectual and economic development. In today's world, knowledge is basic to economic social, political, scientific and technological development. Augmented reality emphasizes the need to combine content with technology to provide a greater experience. We can feed local history information into travel guides, so when a traveler points the smart device at a building, it will not only tell the traveler what it is, but also what it was and who lived there, providing the tour with an experience of the past, present and the future.

8. Need of the Hour: Developing new professional skills and techniques:

Scientific and technical advances are more interdisciplinary in nature giving way to diversity of thinking and increase the output by using advanced technologies. These professional schools have been re-approached for providing education that is outdated and inappropriate to meet the needs of the modern age. Library and information professionals should be intelligent, well educated, skilled and experienced and they handle knowledge which is critical to most organizations.

LIS professionals to handle knowledge efficiently should develop relevant soft skills and digital competencies and gain enough experience which is crucial to most of the organizations. Along with these skills and competencies, they need to develop marketing skills, be keen to demonstrate their adaptability in changing environment or when change is imposed on them. Library professionals with diverse talents can be trained to face the challenges of the future libraries. An ideal LIS professional is the one who is ambitious and assertive, who is willing to learn and collaborate, is highly committed, equipped with the necessary technological and leadership competencies, be enthusiastic about the needs of real technology and at the same time, not being emotionally attached to any one system. LIS professionals should be ready to participate in the process of generating, organizing and distributing

information and knowledge in the quest for education for all. They must unite to take head-on, the information revolution occurring in the information and communication fields.

9. How to keep staying updated – Some key factors

As Indian libraries undergo transformation, LIS professionals need to be proactive and remain updated regarding the happenings in the profession the world over. There are interesting websites like Top Tech Trends, Web Junction, Library Technology Guides - documents, databases, news, Cites and Insights and some important Library websites. Blogs are also an important source for the professionals to stay in tune with the latest developments and some noteworthy blogs are ALA Tech Source Blog, Digital Libraries, Resource Shelf, LIBRARYTECHTALK, Tech Soup, Musings about Librarianship and many more. Product reviews like Library Technology guides, Library resource guide, Individual vendor websites and reviews, Library associations product newsletters are also essential for the professionals to be abreast with the latest product details. Discussion Lists like Web4 Library, LITA-L, SLA-DITE, LIS-Forum, Current Cites also serve as a platform to discuss common issues concerning their libraries, solve queries, get information about professional events and solutions for the problems. The most effective tool is reading the Journals and magazines available in the various fields of LIS and developing their interest or expertise in a specific area. Efforts should be made to attend continuing education programs like the workshops, seminars, conferences, etc. LIS professionals need to attend conference exhibitions and trade shows and make it a point to visiting libraries and meet peers and know what kind of unique work they are doing. Along with these efforts, LIS professionals need to be a part of library network organizations through their libraries and take memberships of various professional associations.

Technology alone cannot bring the required change. Attitudes, practices and policies need to change if libraries in India are to truly benefit themselves and their community of users by the application of technologies. In order to stay current and relevant, every library and information centre must meticulously create new facilities, services and innovations like:

- Create a niche in their collection according to the needs of the parent institution and design services exclusive to make best use of this niche collection.
- It's important for every library to network with other libraries and professionals and optimize the use of their resources
- Create models for utilization of funds and resources to the optimum and which can be thereby adopted by other libraries
- Interact with the user community and assure them about all possible assistance from the library regarding their information requirement
- Technology should be understood and made use of as a tool rather than as a product for fulfilling the information needs of the user community.

10. Concluding Remarks

Present day libraries are hybrid in nature as the latest content is mostly available in the digital form and print content still holds significant to some users. As LIS professionals, we need to blend the physical and virtual environments to allow our users to interact with us wherever they are located via any means they may prefer. Tremendous changes brought about by the knowledge age, demand a thorough revision of the nature of the LIS profession. Revamping is certainly needed, and we are witnessing a series of changes occurring within the LIS environment in this direction.

In future, all kinds of libraries will have to align their infrastructure to that ubiquitous technology which will offer plenty of viable opportunities. The users' queries will become unpredictable. The archival of scholarly content becomes essential for each library and managing content will be an essential competency that needs to be mastered by the LIS professionals. Libraries are going to be evaluated not only based on the amount of content they possess and have access, but also how they serve their users who are scattered around the globe. Campus will become global for truly modernized libraries in the future which can be aptly summed up with Ivan Illich's quote 'The future depends more upon our choice of institutions which support a life of action than on our developing new ideologies and technologies.'

References :

1. ALIA. *Future of the Library and Information Science*. (2014). Australian Library and Information Association.; Canberra. <https://www.alia.org.au/sites/default/files/documents/advocacy/ALIA-Future-of-the-Profession-ALL.pdf>
2. BEST QUOTES About Libraries Librarians and Library and Information Science. <https://www.librarianshipstudies.com/2018/05/quotes-libraries-librarians-library-information-science.html>
3. BARUCHSONARBIB (S) and BRONSTEIN (J). A view to the future of the library and information science profession: a delphi study. *Journal of the American society for Information Science and Technolog* .53, 3; 2002. p397-408. Doi:doi/abs/10.1002/asi.10051
4. CHAN (D L) and SPODICK (E F). (2016). Ttransforming libraries from physical to virtual. In :BAKER (D) and EVANS (W), Ed. *Digital information strategies: from applications and content to libraries and people*. 2016. Elsevier; Chicago. p103-16. doi:10.1016/B978-0-100251-3.00007-X
5. DEMPSEY (Lorcan). From infrastructure to engagement: thinking about the library in the life of the user. 2015. <http://www.slideshare.net/lisld>
6. GATES (Jean Kay). *Guide to the use of Books and Libraries*. 1979. 4th ed. McGraw-Hill Book Company; New York p.4-5.
7. ILLICH (Ivan). *AZQuotes.com*. <https://www.azquotes.com/quote/1285945> (Retrieved on: Nov 15, 2019)
8. KAUL (H K). *Empowering libraries: strategies for the future*. 2017. DELNET; New Delhi.
9. KUMARI (M). Role of library professionals in today's digital world. *International Journal of Advanced Educational Research* .2,5; 2017.
10. LICKLIDER (J C R) . *Libraries of the future*. 1965. MIT Press; Cambridge.
11. MCLUHAN (Marshal). *Gutenberg galaxy: the making of typographic man*. 1962. University of Toronto Press; Toronto
12. MOMOH (E O) and FOLORUNSO (A L). The evolving roles of libraries and librarians in the 21st century. *Library Philosophy and Practice* . 2019. <https://digitalcommons.unl.edu/libphilprac/2867/>

ST- 1 : LIBRARY AND INFORMATION PROFESSION IN NEW ENVIRONMENT

Paper Ref : ST - 1/2

LIBRARY-BASED RESEARCH FOR A KNOWLEDGE SOCIETY WITH THE NET-GENERATION : A RESPONSE TO THE DRAFT NEP 2019

John Neelankavil CMI¹ and S Ally Sornam²

Abstract

Purpose : National Education Policy (NEP) 2019 emphasises on the research culture, especially at the level of higher education. Despite its well-resourced architecture for higher education, NEP urgently requires an imaginative, flexible exposure to some crucial, practical and ideal concepts on library and library-based research, which would promote to take creative leadership overcoming 'knowledge disaster', otherwise that may adversely affect the entire humanity.

The National Education Policy 2019 should take up appropriate steps to face the challenges positively and implement the recommendations to produce, protect, and promote the quality knowledge for a better humanity.

Methodology : Primary source of data has been used for the study. Field survey method and interview techniques were employed for the collection of primary data from the librarian and the experienced library experts. Both quantitative and qualitative techniques are used for this study.

Findings : This survey has found that majority of the present space management in the university libraries are relevant, though there are areas for betterment.

But the space requirements of the present and for the future is ambiguous and in metaphysical nature. So findings would help in university library space management which is essential to think towards modernization in the present context. Expert opinions are recorded as recommendations for library space management for the present and for the future as well.

Originality : The following 'Five Laws' with special thrust to the university library space management may be useful in today's context : 1) University library is a space for research; 2) Every researcher in the University and his/her research space; 3) Every University library space and its researcher; 4) Catch the mind and provide maximum facilities for the researcher and 5) University Library is a growing research-ecology. This paper also provides recommendations to the Govt. of India, UGC, NAAC and other Institutions of Higher Education to modernize the library space in the university with maximum research facilities for research habitats to facilitate discussion, silent study. ICT facilities are needed to produce quality outputs by continuous research works.

Keywords: Net-generation; Research ecology; Research habitats; Knowledge mission; Knowledge disaster; Knowledge flow; Library space

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ST - 3 : ROLE OF LIBRARY AND INFORMATION PROFESSIONALS AND PROFESSIONAL BODY

Paper Ref : ST - 3/3

EVOLVING ROLE OF LIBRARIES WITH REFERENCE TO TECHNICAL INFORMATION RESOURCE CENTRE (TIRC) OF NPOL

P Geetha¹, Binu P John² and Wilson K Cherukulath³

Abstract

Purpose : The Information Communication Technology (ICT) has changed the formats of information resources and the way of their access. This in turn has influenced the information needs of users. Librarians have to act proactively and satisfy the information requirements of readers. This paper describes the changing information needs of users of Technical Information Resource Centre (TIRC) of Naval Physical and Oceanographic Laboratory (NPOL) in the present scenario. It also identifies the new services to be provided as well as the infrastructure facilities and services to be upgraded to meet the users requirement.

Methodology : Data collected from the login registers and the Questionnaire method have been used to conduct the study. The questionnaires were distributed among 123 scientists (various categories), of which 115 responded. This survey has been conducted to find out the preference of users for print and digital media, problems faced while accessing e-journals, purpose of downloading articles, number of e-journals accessed or downloaded. The data collected have been analyzed to reach conclusion. In addition to these, the data in the login registers also help to augment library services more effectively.

Findings : The study shows that researchers like to have both media namely print and digital for information. For immediate requirements, they depend on digital resources while serious and continuous reading they prefer print media. In the digital era, users expect more digital resources in TIRC for reference. Users require new services like videoconferencing and virtual class room facility for knowledge sharing. Everybody knows that library is a calm and peaceful place where anybody (here all employees) can visit at any time and read the materials which they like.

Originality : This study is conducted based on the data collected from questionnaires and login registers. The data are also collected from the discussion with the library committee members and library refurbishment committee members. It tries to find out the exact need of the users in the digital era.

Keywords : Information need; User characteristics; Digital libraries; Techfocuz digital library; NPTEL; DSpace; e-learning; Koha

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WHAT PROFESSIONAL BODIES CAN DO FOR THE FUTURE OF LIBRARY AND INFORMATION PROFESSION IN INDIA?

Sanjo Jose¹ and V V Biju²

Abstract

Purpose : This paper identifies a few of the numerous issues faced by the library and information (LI) profession in India. It proposes solutions for them and emphasise the role of professional bodies in the development of profession.

Approach : The paper addresses the issues in the professional practice, education, continuous professional development and benefits, and suggest solutions which can be achieved by professional bodies.

Findings : The status of the profession is affected by the disparity in statutory qualifications of librarians with those of supervisory positions of colleagues and inequality in pay among librarians in contractual or temporary positions. In higher education, qualified librarians should be recognised as research supervisors and should have the option of lateral entry as LIS teachers. Improper implementation of UGC scheme has caused a lot of demoralisation among the professionals and piling up of court cases. The librarians are treated as academic staff by UGC and libraries as academic departments. But lack of proper staff formulae according to present day library operations has led to huge underemployment and reduced the charm of the profession.

Value : Organisations or individuals may be working on the above issues/suggestions, but we would like to urge our fellow professionals and professional bodies to work in a coordinated manner to achieve the best by setting priorities and time schedules.

Keywords : Library and Information profession; Professional bodies; Librarianship; India.

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ST - 5 : REENGINEERING / REIMAGING OF LIBRARY AND INFORMATION SERVICE

Paper Ref : ST - 5/31

ROLE OF ACADEMIC LIBRARIES IN ACCREDITATION AND RANKING OF HIGHER EDUCATIONAL INSTITUTIONS

Surendran Cherukodan¹ and S Humayoon Kabir²

Abstract

Purpose : Accreditation and ranking of higher educational institutions are important aspects of education across the globe. This study tries to understand the process of accreditation and ranking and explores the role of academic libraries in supporting the parent institution in the process. Since both accreditation and ranking are integral part of assessing the quality of higher education, all institutions give top priority to the process. Academic librarians can take active roles in this process by contributing through multiple ways to improve the services of the library and improve the total academic environment of the institution.

Methodology : Data regarding the criteria for accreditation were collected from the websites of National Accreditation and Assessment Council (NAAC) and National Board of Accreditation (NBA). The data regarding ranking of higher education in India and global ranking were collected from the websites of National Institutional Ranking Framework (NIRF) and Times Higher Education respectively. Web content analysis was applied for data collection. The data gathered were supplemented by relevant literature search on the area.

Findings : Librarians can contribute to the process of accreditation and ranking through multiple ways. The main areas where librarians can offer help includes the collection and organising the documents regarding accreditation and ranking, preparation of data on the publications of faculty members from sources recognised by the agencies, identification of impact factor of journals, h-index of authors and institutions, giving citation analysis, ensuring the visibility of the scholarly output of faculty members preferably on open platforms, and encouraging and instructing faculty members and scholars for publishing on reputed platforms through conducting workshops on academic publishing.

Originality : Accreditation and ranking of higher educational institutions are important aspects of higher education across the globe. However, scholars in library and information science have so far not attempted studies on this area. This is the first paper of its kind that identifies new roles for academic librarians.

Keywords : Institutional ranking; University ranking; Academic ranking; Accreditation; Academic libraries; India

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ST - 6 : NEW TECHNOLOGY APPLICATIONS IN LIBRARY AND INFORMATION SERVICES

Paper Ref : ST - 6/37

TRANSITION TO MOBILE DEVICES TO ACCESS THE INTERNET BY THE STUDENTS OF GOA UNIVERSITY : A STUDY OF DISRUPTIVE TECHNOLOGY

Nancy Waral L¹ and V Gopakumar²

Abstract

Purpose : *The new digital age is characterized by technologies that get overtaken by new technologies. We can call them Disruptive Technologies. In recent years, most of our activities like; the way we communicate, the way we share the information, the way we think, and the way we buy things, etc. have changed a lot. Everything is available to us through mouse clicks. Information Technology has emerged as the reason for changes and modernization in human life.*

According to Morgan Stanley's report, the mainframe computers took about twenty years to reach mass commercialization, mobile devices have taken around seven years, and social media has taken just three years. It was found in early studies that the students opted to access the internet through their smartphones instead of gathering information from libraries using the traditional method. They have started using electronic gadgets, such as smartphones, tablets for getting access to the Internet. The ample amount of information available from the internet severely reduced the number of users who access the libraries for information. Due to this crisis, the libraries have gone automated with provision for access to E-resources and provisions to use their mobile devices.

The main aim of the study was to find out the usage of mobile devices, to know why the students are using mobile devices, to find out the student's attitudes towards mobile devices, and to assess the usage of desktop computers available to students in the library.

Methodology : *Survey method was used to collect the primary data from the student of Goa University. Out of 538 respondents only 500 were considered as the samples for the study.*

Findings : *The study reported that the students preferred to use the Internet on regular basis, majority of the students own mobile devices and they used them for accessing the Internet. The University libraries and departments have a good number of desktops, but it was clear from the study that the respondents preferred to access the Internet through mobile devices.*

Keywords : *Disruptive technology; Mobile device; internet; e-resource; Student, Goa University*

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STATE OF THE ART FACILITIES OF B C ROY MEMORIAL LIBRARY OF IIM CALCUTTA

Biswajit Saha¹

Abstract

Purpose : *The library is not only a store house of knowledge, it is also an essential component of the teaching and learning process of an academic Institute. It is a well-established truth that a Library is the center of any educational setting. While class room teaching offers a glimpse of knowledge, the libraries disseminate a vast variety of knowledge, which is required to attain mental heights. Libraries supplement the educational work of class rooms and lift forward the ideals of education. It calls for competence for acquiring multi and interdisciplinary knowledge in various areas. Use of existing knowledge is as important as the discovery of new knowledge. A library enables a user in identifying the subject of study and in understanding the procedure, of the already recognized and properly recorded information. A well-arranged and equipped library with state of the art service facilities will assist users to carry out new ideas. The purpose of this paper is to highlight the various services provided by the B C Roy Memorial Library of IIM Calcutta, Kolkata, West Bengal.*

Methodology : *Methods of dissemination of services have been divided in various categories. Users' statistics have been counted to measure the success of some of the services implemented in B.C. Roy Memorial Library.*

Findings : *It is seen that usage of library resources has increased manifold after implementing IT based services.*

Value : *This library is considered to be one of the best libraries in Asia in the area of Management Science and allied subjects. It acts as the learning resource centre and occupies a unique place in academic and research activities of the Institute. It is a fully automated modern Library and Information Centre which provides current, accurate and authoritative information from print and electronic resources using state-of-the-art technology. Over the time, due to the impact of Information Technology, drastic changes have taken place in terms of the collection, organization and the way and nature of service it provides. B. C. Roy Memorial library is a small special library (mainly management library). In spite of various limitations it has implemented a wide range of services which is unique.*

Keywords : *Remote access; RFID; Discovery service; QR Code; Open access.*

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CLOUD COMPUTING AND ITS APPLICATIONS IN LIBRARIES

Vishakha¹ and R Sarangapani²

Abstract

Purpose: Cloud computing is a recent concept of computer and information science especially in IT services which can be termed as third revolution after Internet. Cloud computing technology came up as a boon for libraries and is offering various opportunities for libraries to connect their services with clouds. Implementing cloud computing, libraries will significantly reduce cost, save energy, register a global outlook on the web optimize their services and expose library patrons to multi-variant Information resources. This study tries to provide understanding on the general relevance of cloud computing to libraries and how libraries can be transformed into smart institutions. Cloud computing initiatives for libraries include OCLC WorldShare Management Services (WMS), Ex Libris, Polaris Integrated Library System, Dura Cloud, LibLime, the 3M Cloud Library App and “dark archive solution” CLOCKSS and PORTICO.

Cloud computing is a platform solution for management of all libraries Systems, including circulation, cataloging, acquisitions, serials, digital resources, internet service, thin client architecture, wireless access point, analytics for data in the system and digital librarian are considered as prerequisites for cloud computing deployment. Cloud computing is an internet based, remote driven and service oriented technology emerged to provide infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS) among others.

Methodology : This paper explains cloud computing, its definitions, historical background, characteristics, models and application of new generation libraries and digital or e-libraries of Academic library comprehensively . The paper explores cloud services, the types and models, and the roles that cloud computing and technologies can play in enhancing library services in the 21st century.

Findings : The papers reviewed have rightly addressed both theoretical and practical aspects of application of cloud computing in libraries, institutional data systems of various parts of the world. It was mentioned in some detail about the application of cloud computing in library like building digital library, searching library data, website hosting, searching scholarly contents, file storage, building community power, enterprise resource planning etc.

Value : Libraries are moving towards cloud computing technology in present times and taking advantage of cloud based services, especially in building digital libraries. Role of LIS professionals in this virtual era is to make cloud based services as a reliable medium to disseminate library services to their users with ease of use and trustworthiness.

Keywords : Cloud computing; Digital library; ICT; Information security; Cloud Librarian; CLOCKSS; PORTICO cloud

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YOUTUBE AS A LEARNING RESOURCE FOR ENGINEERING EDUCATION

N K Sreeja¹, Aparna Mohanan² and A Anupama³

Abstract

Purpose : The study is to evaluate the existing videos available in YouTube related to “engineering lectures” and to explore the perception of engineering undergraduate students on the use of YouTube as an information source for their learning.

Methodology : In order to conduct the study, authors adopted web content analysis and survey method. The study evaluated 100 videos and 50 channels of engineering lectures on YouTube as of 26 October 2019. The study surveyed undergraduate engineering students to explore their perceptions of YouTube as an information source. A structured questionnaire was administered to 140 undergraduate engineering students studying in School of Engineering (SOE), a department of Cochin University of Science and Technology (CUSAT), which offers undergraduate B.Tech courses in seven branches of Engineering. A total of 120 questionnaires were received which were analysed using frequency and simple percentage.

Findings : The study found that 36% of channels have more than 10 million views and “NPTELHRD” of India is the most subscribed channel with 1.58 million subscribers. The majority of the most relevant 50 channels were uploaded from India. The survey result shows that students used YouTube channels on engineering for their learning purpose with spending 2-3 hours per week. Majority (91%) of the students perceived that YouTube channels supported their study and improved their study habit. Most (82%) of them found that contents of YouTube videos are relevant for enriching their current course. The overall results reveal that the students are aware of open education resources available on social media and these influence their learning process.

Originality : Scholars have so far not attempted studies on the volumes and relevance of YouTube channels for engineering students. This study is the first of its kind which provides an overview of open education resources available in YouTube. The findings of this study contribute to the research on Internet based open education resources and its role in e-resource management in libraries.

Keywords : YouTube; Engineering lectures; OER; Engineering education; Libraries

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TRADITIONAL KNOWLEDGE OF AGRICULTURAL ARTISAN OF RARH REGION OF WEST BENGAL : PROBLEMS AND PROSPECTS IN DESIGNING VIRTUAL LIBRARY SYSTEM

Moumita Ash¹ and Pijushkanti Panigrahi²

Abstract

Purpose : Documentation of traditional knowledge of agricultural artisan at virtual library framework is essential for its proper utilisation in future. Differences and challenges need to be addressed for its implementation. With the mechanisation of agriculture sector, artisans are economically and socially ambushed and disappeared with their thousand years enriched specialised knowledge. This paper is to design a virtual library system in preserving the traditional knowledge of agricultural artisans producing eco-friendly agricultural tools for harvesting and storage.

Methodology : The knowledge of agricultural artisans of a particular region are identified, classified, and analysed the scope of archiving at digital media platform. For this study, the agricultural artisans of Rarh Region of rural Bengal have been considered as sample because it has got Geographic and Anthropologic uniqueness in nature. The history of agriculture and its relation with artisans of Rarh Region has a very long past.

Findings : Declining traditional knowledge of agricultural artisan now belongs to geographically scattered, culturally fragmented rural communities who are not potential enough to self-archive their knowledge using digital platform. This tacit community knowledge is disappearing rapidly with changing paradigm of social structure and industrialisation of agricultural tools. But the knowledge of artisans may be used for eco-friendly sustainable agriculture and rural livelihood. The archiving process of such crowd-sourced knowledge framework for virtual library system is identified also. Social media channels with geotagging facilities are useful to archive and disseminate the crowd-sourced knowledge. Librarians can make cluster of this particular knowledge base by using national portal in decentralised way with the help of open source discovery search tools like Omeka.

Value : Tacit knowledge of agricultural artisans of Rarh Region would be documented by following the guidelines of World Intellectual Property Organization (WIPO) with interdisciplinary approach.

Keywords : Traditional knowledge Resource; Agricultural artisan; Virtual library; Crowd sourcing

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GREEN LIBRARY BUILDING : CONCEPTS, CUSTOMS, CODES AND CURRENT TRENDS

Susanta Kumar Senapati¹

Abstract

Purpose : Speedy industrialization, large scale of construction work, heavy uses of non-renewal energy, deforestation, huge population growth, excess exploitation of natural resources and man-made disaster are the common responsible factors of global warming, pollution, natural imbalance and climatic change. Due to effects of the factors the people and other living being are facing day to day health problems, facing natural disasters at global level. The peoples have been concentrated in town and cities due to availability of employment, basic facilities and amenities like education, health so called modern urbanization. The real problem arises to provide shelter and provision of infrastructure to all. So why the construction works of different kinds and capacity are rising day to day. Due to space problems, the multi-storey building are coming up in cities and town with a massive scale made on modern concrete structure using tons of cement, steel and other plastic materials. The habitat required modern electrical equipments for thermal comfort (heating and cooling), pumping and lifting and so on. Due to Govt.'s liberal policy on education a large number of private educational institutions are growing rapidly like mushroom growth. So by and large each institution has a library. The library is placed in a prominent place as a separate building in their campuses. Now architect and librarian to concern about green construction with minimum energy consumption so why green library building came up nowadays. Not only for new construction of library building but also thinking about the measures of existing library building to convert into a green one. This research article is to explore the practices on green library building in India and abroad. Elaborates the present standards, codes and guidelines are available for green library building. The paper describes IFLA's contribution on Green Library. It enumerates different steps towards making green library building for existing and new one.

Methodology : Being a theoretical research, thorough literature survey method has been followed from professional journals / books /online matters and also patent database for patents related to green library building.

Findings : Collected information gives the present scenario on green library and buildings and finds out the practical steps to be taken towards making exiting library a green library.

Originality: This study is explores from the present literature as well as patent database. The experiences of implementing green library in CSIR-CBRI, Roorkee are shared.

Keywords : Green library building; Green library; Current practice; Codes and Standards; Laurie Baker

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TRANSFORMATION OF LIBRARY INTO GREEN LIBRARY : A STUDY IN INDIAN PERSPECTIVE

Ashis Biswas¹

Abstract

Purpose : This study discusses the need of protection of environment and energy conservation through green practices. The green practices emphasize on nature conservation, economic and social wellbeing, mental and physical health, and a sustainable future for humans. There is no alternative rather than library which is regarded as social institution to spread the messages about green practices. To do it properly library first of all has to transform itself as green library. Green library is designed to minimize negative impact on the natural environment and maximize indoor environmental quality by means of careful site selection, use of natural construction materials and biodegradable products, conservation of resources (water, energy, paper), and responsible waste disposal (recycling, etc.). It also focuses on social responsibility of library as leader for environmental sustainability. In country like India where rapid growth of population is adversely affecting natural resources and environment the establishment of green libraries is very much essential.

Methodology : This study has mainly presented how the libraries can be transformed into green libraries in India following the seven green features, i.e., i) Sustainable Architecture and Design, ii) Site Selection and Planning, iii) Water Conservation, iv) Energy Efficiency, v) Building Materials and Resources, vi) Indoor Environmental Quality, vii) Innovation and Development addressed by Indian Green Building Council (IGBC). These features for green building have been taken into consideration for green library.

Findings : It has been discussed that to establish green libraries a careful planning is done following the green building code. It requires preparing library building with the provision of water and energy conservation, waste management and healthy indoor air quality. On the other hand collections and collection development in green libraries have been discussed in three ways, i.e., selection of materials which help to generate awareness about green practices, de-selection processes that highlights the need and method of reuse and recycling of materials, and selection of format of information sources (print or electronic) which produce less CO₂ emission. Whereas green services have indicated to provide services consuming less paper and energy. It has also been shown that transformation of library into green library in India will be cost effective because some indigenous methods can be applied for the sustainability of library. Some notable techniques of cooling and ventilation used in Indian palaces, use of profusely available agro-based products for building materials and furniture, organic pesticides, reuse habit etc. are very much worthy to be mentioned here. Some green codes in addition to IGBC and Indian green library initiatives have also been referred.

Value : This study shows that establishment of green library does not require big budget. It only needs the awareness about green practices and endeavour to make the library green with help of competent stakeholders. Therefore this study will help LIS professionals to plan for green library.

Keywords : Energy conservation; Green building; Green codes; Green library; Green practice; Green services; IGBC; Sustainable library

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LIBRARY SERVICES TO PEOPLE WITH SPECIAL NEEDS

Achala Munigal¹

Abstract

Purpose : The mission of any library is to provide access to information and resources to its users. But the users of Academic, Private, Corporate, Special libraries are defined. Only Public Libraries were established to cater to community in general irrespective of Gender, Age, Caste, Creed, Sex, Status etc., and to ensure everyone has a right to access Information. Public Libraries are funded from public money like taxes or various cesses. But how does this pan out practically for general public some of who have special needs? Are there any libraries to address special needs of people? Or are there any libraries which provide special services to these special groups in public libraries in India?

Methodology : Online research method was employed and various online resources including newsletters, newspaper articles etc were explored to cull out relevant data.

Findings : To cater to niche groups or people with special needs there are only 115 Mahila (women) public libraries and 9 Braille public libraries in Gujarat, to cater to the Blind. There are 98 children's public library in Gujarat and 34 in Karnataka; There are 32 State Central Libraries in India including 2 for the state of Gujarat. There are no State Central Libraries for Uttarakhand, Daman, Chattisgarh and Andhra Pradesh (after bifurcation) and Ladakh. Since there is paucity of public libraries so 742 part time libraries were introduced in Tamil Nadu, 70000 Rajya Sikshan Kendra Libraries opened in primary school for public and 27000 Rajya Sikshan Kendra Libraries opened in Middle School for Public in Madhya Pradesh and 1608 Higher Secondary School Library opened for Public in Chhattisgarh. Public Libraries are not far behind in adopting the various tools, technologies, devices and equipment to provide information to its users.

Originality : This article presents ideas implemented in various public libraries in India to make libraries inclusive and cater to people with special needs which has been documented in the article.

Keywords : Library services; Inclusive libraries; Mobile libraries; Bookmobile; Bibliobus; Children library; Prison library

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GREEN LIBRARY : CONCEPT AND RATING SYSTEM

P K Nidhisha¹ and R Sarangapani²

Abstract

Purpose : Environmental rating is the need of the day. Green libraries, also called sustainable libraries are a part of the larger green building movement. A Library building also has impact on the environment either directly or indirectly so has to go through some environmental checking by green building rating system. Various green building rating systems are available to rate the library buildings to make it sustainable. IGBC and GRIHA are the two councils operating in India to assess green libraries. BREEAM, LEED, Green Globes and Green Star are the most popular and widely using Green Rating Systems internationally.

The paper presents the concept of green library and some choices of green building rating system available in India and in other countries such as IGBC, GRIHA, BREEAM, LEED etc.

Methodology : The librarians should be responsible to make society aware of the green issues and related concerns. They should be up-to-date with technology, web tools and architecture. So that they can guide and instruct the community to a better environmental practice through library collection, betterment of environmental facilities and offering green library programs and green library courses.

Findings : The need of certification of building, the government's requirement and the minimum requirements of certification are some of the points to be considered while selecting a rating system. In common all the rating systems are designed to evaluate location, water and energy efficiency, operation and management, innovations and indoor quality of buildings.

Value : The concept of green library has gained importance in the present society which mainly aims to minimize the environmental impact. The green building rating system is an aid for environmental checking of library building thereby reducing the impact on environmental factors and ensures effective utilization of resources like water, energy, and paper. Moving towards green, a library can achieve several benefits such as preservation of resources, economic benefit, improving air quality and can solve environmental issues affecting the library.

Keywords : Green library; IGBC; GRIHA; BREEAM; LEED; Green globes; Green star; CASBEE

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ST - 9 : APPLICATION OF NEW MANAGEMENT TECHNIQUES IN LIBRARIES / ICS

Paper Ref : ST - 9/9

APPLICATION OF CUSTOMER RELATIONSHIP MANAGEMENT IN ACADEMIC LIBRARIES

Rajib Kumar Das¹ and Anuradha Singha²

Abstract

Purpose : Library and Information Centres are based on three major pillars, first one is Information Resources second one is Staff and the third and most important among them is its user, and without it the library is a body without soul. Laws of Library Science also stress on the user satisfaction. To keep pace with the Technological advancements and information explosion libraries are compelled to work for user centric approach. The library has to address the user demand and for that reason Customer Relationship Management (CRM) should be adopted. CRM indicates "The strategic process of shaping the interactions between a company and its customers with the goal of maximizing current and lifetime value of customers for the company as well as maximizing satisfaction for them". CRM is a process or methodology or strategy used to learn more about customer's requirements and behaviours to develop stronger relationship with them. The purpose of the paper is to assess the impact of CRM in their work and their perceived level of satisfaction towards academic library services. The primary approach of the present study is how to implement the basic CRM in the academic library. Libraries consider adopting CRM concept and applications as one of the possible solutions to secure users' satisfaction while facing the challenges brought by information explosion, flourished information service channels and users' higher expectations.

Methodology : To understand the aspects within single, real-life settings during the implementation of CRM process, the case study method was adopted.

Findings : The findings highlight the importance to overcome libraries' inexperience in terms of CRM implementation management, and demonstrate that the biggest challenge facing a library is to raise internal awareness of the CRM functions and capabilities that are now provided, and to educate library staff on how these functions and features operate. The biggest problem of implementing a CRM system in academic libraries is to raise internal awareness of the functions and capabilities that are now provided, to educate library staff on how these functions and features operate, and to clarify the different roles played by the automation system, online reference service and the CRM system.

Originality / Value : The paper provides useful information for those wanting to implement a CRM system in an academic library context.

Keywords : CRM; Customer relationship management; Academic library; Library management

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DOMAIN SPECIFIC RESOURCE GATEWAY

Devika P Madalli¹, Sagar Gajbe² and Amit Tiwari³

Abstract

Purpose : The twenty-first century has witnessed enormous growth of domain specific information and information resources. The emergence of new domains has posed a challenge to the organization and management of information resources. Though available in abundance on internet, of then required information is not readily available as the information in domains is scattered and may not be represented using standard metadata or any metadata at all. For the end users it can be a time consuming process to look for and access useful domain based information.

A number of specific domains and a huge amount of information resources have led towards a requirement of domain based information systems and services. Content Management Systems (CMS) are used as tools bring online information from various domains together. CMS can be used for developing domain specific information systems. The shift towards domain based information services has implications for libraries and the use of online resources. The purpose of the study is to building current awareness services using RSS feeds and offer categorized information according to the user needs.

Design : Many of the online resources and even services provide RSS feeds. The present work is based on various online resources that provide RSS feeds in the domain of Big Data and Artificial Intelligence. RSS feeds are aggregated to form a subject gateway providing a unified current awareness service. For the deep understanding of the domain, Study of Subject approach could be used.

Findings : Current Awareness Service is one of the most popular services provided by memory institutions. The present aggregation works an online current awareness service for the students and scholars of Big Data and Artificial Intelligence. The methodology can be adopted for developing Current Awareness Service in other domains as well. The subject gateway incorporates an exhaustive list of information sources of the domains mentioned that will be updated in real time based on syndication.

Value : This paper discusses current awareness services based on syndicated resources deployed to aggregate online resources that provides current and updated domain based information to the users.

Keywords : Online resources; Domain specific resource; CAS; Subject gateway; RSS feed; Big data; Artificial intelligence

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ORGANIZATIONAL SCHEME OF ONLINE RESOURCES IN LIBRARY WEBSITES

Veerankutty Chelatayakkot¹

Purpose : In the present circumstances, a library website is considered as a subject gateway, portal as well as Virtual Public Face of the institution. The content organization and representation order of resource type in the library website is very crucial as a user may be able to find the resources within minimum mouse clicks. This study aims to analyze organizational scheme of online resources in selected library websites.

Methodology : The author selected library websites of top Nine IIT's in MHRD-NRIF ranking to analyze the resource type, access point, mouse clicks required to get access and content organization in user perspectives.

Finding : Based on the previous studies, nine resource types were identified. Out of nine resource types, Databases are the most common resource type followed by E-Journals and E-Books that are found in the library websites. IIT Bombay, IIT Roorkee, and IIT Indore have links to seven resource types. The "three-click rule" is an unofficial web design rule concerning the website navigation, that a user may be frustrated if he is not able to find the resources within three mouse clicks. The study reveals that IIT Kharagpur, IIT Dhanbad, and IIT Indore has given 'E-resource ' as first link / click, and remaining resource types as second link / click that a user may apply more clicks to get access to. Similarly, the study reveals that the resource type Databases, 6 IIT's arranged alphabetically followed by content type by 5 IITs. IIT Kharagpur and IIT Indore organized Databases both alphabetically and by content type. Regarding E-Journals, the preferred arrangement is alphabetical order (78 %) followed by publisher order (56 %). Four IIT's use both orders for the arrangement of E-Journals. E-Books are arranged publisher wise (78%), and IIT Bombay provided a link to OPAC. The preferred order of print journals is alphabetical. All 9 IIT's provided links to Institutional Repository / Digital Library. 5 library websites provided links to open access resources and 67 % libraries provided search option and user manual.

Value : The design and content organization on a website is very crucial, and if done properly it can create excellent leverage for the institution.

Keywords : Library websites; e-resources; Representation order of resources

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RESEARCH DATA MANAGEMENT : ROLE OF LIBRARY AND INFORMATION PROFESSIONALS

A R D Prasad¹

Purpose : Thus far much of the data generated by various research and scientific communities has not been shared, much worse it has not been organised. The open access to information movement paved the impetus and ideological justification to open up the data, so that the data can be reused. Though Open Access to Information (OAI) largely bridged the digital divide in case humanities and social sciences, it has done to a lesser extent in the case of natural and physical sciences. Both the physical and natural science do require expensive laboratory infrastructure. If the data generated out of these laboratories and equipment is shared, the organisations that do not have financial support to build infrastructure could use the data generated by privileged laboratories and do interpret the data in a different way or at least support and ascertain the finding of others. One of the best examples of data sharing is the availability of human genome data on the Internet. The paper presents the advantages of open data as against closed data. The guiding principle in the world of research data is based on FAIR principles – Findable, Accessible, Interoperable and Reusable. The library and information science professionals have a great responsibility in managing research data based on FAIR principles.

The Government of India, way back in 2012, introduced the National Data Sharing and Accessibility Policy (NDSAP), which mandates all the organisations funded by the Government of India to make the data publicly available on the site <http://data.gov.in>. However, in spite of India having a huge number of research laboratories, and universities conducting research, it does not reflect on the volume of data that is available on data.gov.in. This is, largely, because the scientists are not aware of the mandate, besides being poorly equipped in organising and preserving their own data as it warrants the skills of library and information science professionals. Even the library and information science professionals, in spite of their background knowledge and skills, they too require orienting their knowledge in organizing and preserving data. The purpose the presentation is to promote the advocacy of Open Data and highlight the role of library and information professionals in Research Data Management. To put it succinctly Data Curation and Open Data should be the rallying point in sharing data.

Methodology : Data Curation is arguably a very important aspect of Research Data Management. The paper enumerates the methodology to be followed in data curation which includes – Creating/Gathering verifiable digital data assets. In other words, ensuring trustworthiness and integrity of data; Describing the data using Metadata to make it Findable and Accessible; Using Open Standards for Data (Interoperable), Classifying (Ontologies) in order to group the data sets available on the Net so that related data can be aggregated if necessary; tagging the necessary licences, preferably Creative Commons Zero (CC) to the data sets to explicitly pronounce the terms of re-usability; Backup, Archiving/Distributing so that the data remains Reusable.

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Findings : A major finding of the work carried out in this regard is that of identifying the four major stake holders in research data management. Domain Experts, belonging to various disciplines. They generate the primary data. The Library and Information Science professionals, who capture and curate the data by doing de-duplication, filling up the missing values, converting the file format of the data sets to ensure interoperability, adding metadata, ontologies and publishing the data following the FAIR principles. In case of large data sets, which are mostly generated by equipment, CCTV cameras, satellites, social media etc. Computer Science professionals come into the picture to provide platforms to handle huge volume of data. One of the major objectives of Data Science is to do analytics on data, which normally calls for expertise of Statisticians. One should not forget Business Analytics is an emerging area. The task of Library and Information Science professionals is to make data – analytics ready. In other words, the stake holders are Domain Experts, Library and Information Science professionals, Computer Science experts and Statisticians.

The paper briefly presents the findings of using software for data curation, especially the software for ETL (Extract, Transform & Load) – OpenRefine, Datameer, Talend, Informatica, DbFit. The presentation also covers Data Management Plan (DMP) and enumerate various funding agencies requirements of DMP. Additionally, the presentation mentions the software for data publishing / data repositories – Dryad, dataVerse, CKAN.

Originality : World wide there is awareness in making the data openly accessible. The central theme of the paper is to emphasise the role of the library and information professionals in advocacy of open data, data curation and building data repositories.

Keywords : Open access; Open data; Data curation; Fair principles; Research data management; Data management plan; Library and Information professional .

ST - 12 : OPEN DATA, OPEN CONTENT, OPEN SCIENCE AND OPEN KNOWLEDGE

Paper Ref : ST - 12/12

DISSEMINATION OF OPEN GOVERNMENT DATA THROUGH INDIAN STATISTICAL SYSTEM : A ROADMAP TOWARDS SUSTAINABLE DEVELOPMENT

Mayuri Das Biswas¹ and Pijushkanti Panigrahi²

Abstract

Purpose : This paper is to find the relational importance between the organizational structure and corresponding functional activities of Indian Statistical System (ISS) in regard to dissemination of government data for sustainable development. The possible ways for achieving the Sustainable Development Goals (SDGs) as set by the United Nations Development Programme (UNDP) are to be identified and to correlate them significantly with roles of ISS played in this regard. This paper is to further analyze how socio-economic values could be added to open government data in accelerating overall development of the nation.

Design : The official site of Ministry of Statistics & Programme Implementation (MoSPI) have been examined along with the UNDP annual reports. The prevailing responsibilities and activities of ISS have also been analyzed. In this regard Open Government Data (OGD) initiatives have been studied carefully to see its usefulness towards greater democracy with an aim for transparency, participation, and collaboration. This study is designed to investigate the methods of data collection by ISS and data curation thereby. Benefits of open data policy are also studied critically.

Findings : The study indicates that ISS needs to play a crucial role as an intermediary between data collection and publicizing the same through open data portals to enable public accessing easily for meeting their necessities. This paper further establishes the fact that the curated data, when accessed and analyzed, may help in tracking the environmental, social and economic progress of India and strive to lead the nation towards achieving the SDGs. The study reveals the issues and challenges encountered by ISS in regard to the openness of data.

Value : It is understood that if ISS retains any rigidity of being conservative gatekeepers of their data stores, it might bring forth huge retardation in socio-economic development of our nation. A well organized statistical system would enable monitoring of SDGs and encourage dissemination of reliable and accessible open government data which, in turn, would help government in designing better policies and programs enabling progress and decision-making for sustainable development.

Keywords : Data sharing, Indian Statistical System, MoSPI, NDSA policy, Open data, Open government data, Statistical data, Sustainable development goals, UNDP.

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QUALITY OF PRE-PRINT ARCHIVES : A CASE STUDY OF ARXIV ARCHIVES IN THE FIELD OF HIGH-ENERGY PHYSICS

E R Prakash¹

Abstract

Purpose : Preprints are publicly available scientific manuscripts posted on dedicated preprint servers prior to publishing in journals or conferences. Since they are all open, anybody can upload the research output for the review comments. Then the question arises about the quality of the uploaded pre-prints. It is believed that many of the pre-prints are getting published as either journal articles or conference papers. The present study attempts to 1) assess the amount of pre-prints in the area of 'High-Energy Physics' of arXiv services operated by Cornell University are published as journal articles and 2) list the top journals in which the preprints are getting published and 3) analyse the quality of the pre-prints by evaluating the impact factors of the journals in which the pre-prints are published.

Methodology : The High Energy Physics preprints in arXiv are again categorized as: High Energy Physics – Experiment (hep-ex), High Energy Physics – Lattice (hep-lat), High Energy Physics - Phenomenology (hep-ph), and High Energy Physics – Theory (hep-th). The pre-prints submitted to these categories during 2014-2018 are taken as sample of the study. Impact Factor assigned to journals included in Web of Science by Clarivate Analytics is taken as the parameter for quality of the journals in which the pre-prints are published. The 'Journal-ref:' field used by arXiv in the preprint records is used to list the journals in which the pre-prints are published.

Findings : The percentages of pre-prints submitted during 2014-2018 and published as journal articles in the four categories are 55 (hep-ex), 42 (hep-lat), 48 (hep-ph), and 44 (hep-th) respectively European Physical Journal C; Journal of High Energy Physics; Physical Review D; Physical Review Letters; Physics Letters. These are the journals in which most of the pre-prints are published and all the five journals have impact factors more than 4. Among the pre-prints published in journals, 82 % are published in journals with Impact Factor more than 4 and 6 % are published in journals with Impact Factor more than 6. One third of the pre-prints in the categories are published in journals having impact factor range of 4 to 6.

Value : The results of the present study may be an eye-opener for Library and Information Science professionals to consider pre-prints as a reliable and qualitative sources of information in many subject areas.

Keywords : arXiv; Pre-prints; Open access quality assurance; High-energy physics; e-prints; Archives; Journal publishing

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OPEN ACCESS INITIATIVES IN UNIVERSITY OF KASHMIR

Abdul Majid Baba¹

Abstract

Purpose : The main purpose of the paper is to highlight the benefits of Open Access Repositories for authors and researchers, direct Users, Universities, Libraries and Librarians and also for creating Public Opinion. It brings into focus some of the pioneering open access initiatives of the University of Kashmir. It calls for collaborative action on the part of various stakeholders to further the cause of Open Access Movement.

Methodology : The study explores the various Open Access Initiatives taken by University of Kashmir and describes in some detail the rich data held by these repositories. Drawn from author's rich professional experience in the field, observations are made on various aspects of Open Access repositories and particularly on the benefits derived from the University of Kashmir's association with the programme.

Findings : Authors prefer to publish their articles in Open Access resources as this maximizes their research impact. Open access extends the reach of research beyond its immediate academic circle. Universities prefer Open Access as they want their research work to have maximum impact in the wider academic world. Libraries are strong advocates of Open Access because it helps in removing price and permission barriers and makes knowledge available to all. The University of Kashmir's virtual library has online journals, e-books, e-newspapers and the entire collection of Social Science Library of Tufts University. The Digital Repository has the university's own research output on the web for wider access. There are number of good educational institutes in Jammu and Kashmir and developing a common institutional repository for all these institutes including the universities, is the need of the hour.

Value : In order to make the Open Access Programmme successful there has to be awareness building exercises in various institutions. In the past, once the records held by the University of Kashmir's administrative departments were severely damaged due to fire. Such mishaps can be avoided in future by digitizing the records of other official departments also along with scholarly publications.

Keywords : Open access; University; Institutional repository; Library; University of Kashmir

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ST - 14 : SKILL DEVELOPMENT FOR NEW AGE LIBRARY AND INFORMATION SERVICES

Invited Paper

Paper Ref : ST - 14/28

DEVELOPING SKILLS OF LIBRARY AND INFORMATION PROFESSIONALS : THE NEED OF THE HOUR

Narendra Lahkar¹

Abstract

Purpose : The paper is identifying the skills to be acquired by Library and Information (LI) professionals to enable to work in the changing environment of librarianship. The changes are in continuation and also inevitable; librarianship is not an exception. It is essential to prepare LI professionals for developing the workings and services in the changed environment. Moreover, what changes we have noticed and taken place today are to change in continuation. Discussion has been made in the paper of the changes noticed and to consider the areas, the LI professionals are to cope with to meet the challenges of the present and days to come.

Methodology : Discussion with both senior and junior professionals and the library users' approaches towards Library and Information Centres (LICs) and their expectations have been taken into account. It is based on experiences of the author and the literature available in both printed and digital are the main focus of the paper.

Findings : While considering the skills to be acquired, broadly, they can be categorized into two: soft skill and hard skill. Of the soft skills, leadership, communication, collaboration/ team work, time management, Interpersonal skills, are some of them. These have resulted for development of Interpersonal skills communication, collaborative approaches, and the leadership.

Hard skills are to be acquired in most cases formally. Acquiring knowledge through study and teaching, gathering knowledge at work place are some of the areas where hard skills can be acquired. Participating in the teaching and learning process in formal and informal education, online courses, through readings, and the job pursuing can form the bases for acquiring hard skills.

In LI field, it is essential for developing one's skills in both traditional or conventional librarianship and the modern issues especially use of Information and Communication Technology (ICT) devices in library works and services. Techniques used for developing the catalogues and catalogue databases, library classification using modern approach especially with the publications available as a result of in-depth study and research in different fields, the reference and information services with new approaches are some of the fields in LIS inviting attention of LI professionals for developing their skills.

LI field is rapidly changing for various reasons. Because of use of ICT devices in performing library jobs the growth is becoming more visible. Meeting users' needs in right perspectives has become imperative and working LI professionals are to continuously develop their skills to cope with the regular changed working environment. Mentions may be made few of them like: Digital/ Virtual/ Green libraries, Massive Open Online Courses, Open Access Movement, Big data, Data Science and so on.

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Originality : *The outcome of the study enables especially LI professionals to develop one's ability to work for the profession with much confidence, dedication and vigor. Changes are inevitable and in continuity towards new height. The LI professionals are getting a scope of identifying and learning the emerging areas for study enabling to equip the skills with self reliance.*

Keywords : *Soft skills; Hard skills; Library and information professionals; Information and communication technology; Library and information centre*

CHANGING THE ROLE OF LIS PROFESSIONALS IN TRANSFORMATION OF THE SOCIETY : STRATEGIES AND SKILLS TO ADOPT AND ATTAIN

S B Banerjee¹

Abstract

Purpose : Libraries of various nomenclatures grew with the growth of the Society. The inherent thirst for knowledge in man in all ages sequelled its unstopped growth. In these days of diversities and multidirectional activities in the society entailing knowledge economy, the libraries have become indispensable key centres to cater equitable and 'Just in time' (JIT) information/knowledge. Rapid advancement of information and communication technology (ICT) woefully reshaping the society, has also been bringing a compelling situation "to have a close connectivity between knowledge, innovation and collaboration" for navigating to all sectors of the economy. Ideation, innovation, creation, dissemination and consumption of knowledge with astounding care has become a must.

Librarians, today, are to play distinctive roles to complement and support the activities of the planners, administrators, decision makers, scientists, technologists, academicians, researchers, legal and other key professionals besides largely the communities. While technology thrived society has been longing for the crucial library services, loud talks for its nonuse are rampant. In this context LIS professionals are to adopt new strategies to effectively rise to the situation to serve the society best and to attain proficiency, in both hard and soft skills, the metonyms of competence, competency and personal effectiveness.

This paper aims to highlight how the Libraries are to act factually for transformation of the society, how the LIS professionals are to deal with the situation and what strategies, techniques and skills they are to adopt and pursue.

Methodology : The paper is based mostly on the views expressed in professional, seminars, conferences, symposiums etc and occasional informal discussions with information seekers and consumers.

Findings : Informal interactions with expressed and potential information consumers brought out the indications of latent and unexpressed unwillingness to use library services, though compulsion to use information is in the high ladder.

Value : Libraries/information centres being the service units, quality performance of the LIS professionals, their expertise capabilities and excellences, in soft skills, in addition to hard skills or competence need be ushered in. To bring forth the elements and indicators of strategies and soft skills, they are to go in for new steps.

Products are manufactured, services are performed; while quality of products is visible, quality of performance can only be felt. To ensure quality of performance, LIS professionals, are to adopt strategies and skills, discussed in this paper, to help eradicate the apathies to use library services creating better image and its indispensability as well.

Keywords : Library; Information centre; Information and communication technology; ICT; LIS professional; Changing role

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SKILL DEVELOPMENT PROGRAMMES OF LIBRARY PROFESSIONALS FOR RENDERING EFFECTIVE SERVICES TO THE USERS IN AN ENGINEERING COLLEGE LIBRARY IN THE CHANGING SCENARIO : A CASE STUDY

Subhra Banerjee¹, Binod Bihari Das² and Moumita Ash³

Abstract

Purpose : The main purpose of this paper is to assess the usage of the resources of a college library through its various services provided by the library professionals who are being equipped through various skill development programmes. The Heritage Institute of Technology , Kolkata (HITK) library is treated as a sample for case study.

Methodology : All the data relating to HITK library have been collected from the HITK Newsletters, library records , Publications i.e. Know Your Library and HITK Library –a brief profile .Survey method also has been adopted through the feedback system from the users.

Findings: This paper deals with the various skill development programmes of the library professionals of Heritage Institute of Technology (HITK) and the increase of usage of the library, development of its services, better utilization of its resources, its discipline and ambience with good organization of resources, its team work and positive attitude of the library professionals. The various skill development programmes have been arranged for the staff members in HITK library; viz. ,six Computer training programmes ; 18 Seminars/ Conferences attended by library professionals; acted as Resource persons in Seminar / Refresher and Orientation courses ; presenting papers in National seminars; organising seminars/workshops on D-space, Koha and Libsys etc. Each library professionals has been engaged in imparting training to the new entrants on searching OPAC/ WEB-OPAC, Institutional Repository and other e-resources in the Digital Library. Through these programmes the library professionals are acquiring competence and confidence in their work. On the other side, the library activities and newer services are publicized and popularized ; as a result, the usage of library services has been increased from 350 students /per day in 2006 to 1110 students /per day in 2018 in HITK library along with its digital library. The print and e-collections of the HITK library have been developed within these twelve years. The development of collection , introduction of newer services and skill developments programmes for staff members i.e. equipped personnel have great impact on the popularity and usage of library services.

Originality: This study is an original work as this deals with primary data of the Heritage Institute of Technology , Kolkata (HITK) library relating to its skill development programmes, services and usage.

Keywords : Skill development programmes of HITK library. HITK library - collections and services, Usage of HITK library, Usage of HITK digital library

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ATTITUDE AND SKILLS ON WEB 2.0 TECHNOLOGY AMONG LIBRARY PROFESSIONALS : A STUDY ON CHMK LIBRARY, UNIVERSITY OF CALICUT, KERALA

K G Sudhier¹ and S T Seena²

Abstract

Purpose : This paper investigates the attitude and skills of web 2.0 technology tools by library professionals in the CHMK library, University of Calicut, Kerala. The web has transformed the ways by which people search, find, use and communicate information. Web 2.0 application tools are the effective and interactive platform which involves users in the development of the library services. It facilitates interactive information sharing, interoperability, user centered design, dynamic content, openness, and user participation.

The main objective of the study was to find out professionals' attitude and skills regarding integration of web 2.0 technologies in library operations and services.

Methodology : A survey based questionnaire method was used to collect data. The respondents chosen for the study consists of librarians, deputy librarians, assistant librarians, and library assistants in the university library. Total 65 questionnaires were distributed to the professionals and 58 were collected and analyzed.

Findings : The study revealed that university library professionals were mostly familiar with web 2.0 tools such as social networking sites (face book, twitter, etc.), blogs, instant messaging and wikis. Analysis also showed that the library professionals have a positive attitude towards the implementation of web 2.0 technologies in libraries. The paper concludes with the suggestions that adequate funds should be made available by the authorities for developments of ICT infrastructure and application of web 2.0 technology enabled services in university library. Finally, power failure, lack of facilities such as computers with internet access, lack of time and lack of interest were mentioned by the librarians as some of the challenges in using web 2.0 tools.

Originality : This is a pioneer study to identify the attitude and skills on web 2.0 technology applications in the CHMK library of the university of Calicut. The outcome of the study would be useful for the university library professionals and the authorities to provide better service with the emerging technology applications. To explore the factors affecting the applications of web 2.0 technologies in university libraries in the region, a comprehensive study should be conducted by including more universities.

Keywords : Web 2.0; Attitude; Skills; Library professionals; CHMK library; University of Calicut; Kerala

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JOB DIARY AS A MODULE OF LIS EDUCATION FOR SKILL DEVELOPMENT WITH REFERENCE TO THE LIS EDUCATION IN ASSAM

Nirmal Ranjan Mazumdar¹, Dipen Deka² and Sanjay Kumar Singh³

Abstract

Purpose : The Library and Information Science (LIS) is a skilled based profession. Without acquiring basic skill and competency, a better and a new age Library and Information services cannot be assured. Therefore, the LIS schools are always emphasizing on providing some practice based educations and trainings so that, a LIS graduate can be a good professional with self-confidence. During the LIS education basically theoretical aspects are given more emphasis in comparison to practical aspects. In BLISc/MLISc programme of LIS curriculum, a paper with evaluation and gradation is included in a few LIS schools which is purely practice oriented in nature and is named as 'Job Diary'. The basic purpose of this study is to highlight the scope of 'Job Diary' in LIS schools in Assam in general and its related issues in particular.

Methodology : LIS education in Assam has a glorious history as it has completed fifty years in 2016. Till date there are four universities in Assam where bachelor and master programme in LIS are offered in regular mode. The only state Open University in Assam has also the provision of LIS education and it provides diploma level course only. This study is based on those four universities of Assam where LIS education is being provided in regular mode. A survey has been conducted and the syllabus of those universities is being analyzed as per the purpose of this study.

Findings : Job Diary is a self prepared manual by a student on the basis of the practical experiences gathered while working in a library for a short period preferably one week to two weeks. In this process, LIS students are deputed in groups to some selected developed/modern libraries/library and information centers and the students work under the guidance of the librarian of those particular libraries to have practical exposures of library management. After completion of the period, students prepare a manual which can be helpful in their professional career. They are evaluated on the basis of their performance as well as their 'Job Diary'. The study reveals that LIS education in Assam has the provision of the 'Job Diary' and the students are mandatorily deputed in various institutions for this purpose.

Value : This paper proposes a model which can be implemented for conducting 'Job Diary' by a particular library. The paper suggests for implementation 'Job Diary' in the course curriculum of all LIS schools of our country.

Keywords : Library and Information Science; LIS education; LIS education- Assam; Job diary; LIS schools; Curriculum; Skill development

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SIG - 01 : SOCIAL SCIENCES INFORMATION

**THEME : PERFORMANCE APPRAISAL OF LIBRARIES /
INFORMATION CENTRES**

Invited Paper

Paper Ref : SIG - 01/24

A FRAMEWORK FOR PERFORMANCE EVALUATION OF LIBRARIES/ INFORMATION CENTRES IN INDIA

Amitabha Chatterjee¹

Abstract

Purpose : We often hear people expressing displeasure with their libraries as they are not satisfied with the services provided by them. Such experiences by users undoubtedly result in drop in footfall in libraries. To avoid such situation it is necessary to develop a mechanism of periodic performance evaluation in every library. Performance evaluation tries to compare 'what is' with 'what ought to be'. In the context of libraries/ information centres performance evaluation should aim at finding the current situation and then assessing how far the library/ information centre is able to satisfy the objectives/ goals/ missions of the library/ information centre concerned.

The purpose of the paper is to develop a theoretical framework suitable for performance evaluation of libraries/ information centres in our country.

Approach : The available literature on the theory and practice of performance evaluation, specially in the context of libraries/ information centres, have been studied; hindrances in implementing a performance evaluation policy, specially in a developing country like ours, have been identified; and based on the same a workable methodology of performance evaluation of libraries/ information centres has been suggested. Since evaluation criteria and performance indicators are vital for effective performance evaluation work, effort has also been made to find such criteria and indicators which may be relevant for evaluating libraries/ information centres.

Value : Implementation of the suggested methodology to evaluate the performance of a library/ information centre is likely to bring out the weaknesses and shortcomings of the library/ information centre and thereby help in improving the services rendered by it and thus arrest the decreasing footfall of users and justify the investment made to run the library/ information centre. However, we cannot overrule the limitations. The suggested methodology has not been tested. Such testing is necessary in different types of libraries/ information centres – national libraries/ information centres, public/ community libraries/ information centres, academic libraries/ information centres, special libraries/ information centres – and the results/ feedback received should be used to further refine the same.

Keywords : Performance evaluation; Performance evaluation of libraries; Performance evaluation of Information Centres; Performance evaluation framework; Performance evaluation methodology; Performance evaluation criteria; Performance indicators

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ACCREDITATION : THE BENCHMARK OF EXCELLENCE FOR INDIAN HIGHER EDUCATIONAL INSTITUTES WITH SPECIAL EMPHASIS TO LIBRARIES

Nitai Raychoudhury¹

Abstract

Purpose : The key to harnessing India's demographic dividend is education. India's higher education system is the third largest in the world, next to the United States and China. Higher Education sector of India has witnessed a tremendous increase in the number of universities and colleges since independence. Higher Education Institutions (HEI) management is now demanding a more efficient use of scarce resource, and this leads to an urgent requirement for new management methods such as performance measurement based on performance indicators for all areas of the library. The Indian Library and Information Service (LIS) professionals engaged in HEI are now facing minor or major decision-making on quality management issues. Therefore, a need for guidelines, self-appraisal tools, real-world experience, etc. has emerged.

The higher education system in India is currently faced with many issues of concern relating to the accountability and quality assessment. HEI libraries are now being pressed for greater accountability and improved attention to quality so that they can provide meaningful support services to achieve quality in teaching, research and extension activities. Under these circumstances, the paper portrays the roles played by various statutory bodies in assessing the performances of HEI libraries. The study provides a clear view of the current State-of-the-Art of accreditation process of higher education institutions in India.

Approach : Accreditation is the way through which higher education institutions broadcast the quality of their educational processes to their stake holders, including students, parents, recruiters, alumni, staff and management and governing body. Before embarking on a path of improvement in quality, a higher education institution must know where it stands and what its strengths and weakness are. In India, quality enhancement of higher education is achieved in two ways –i) Higher Education Institute undertakes self assessment procedure to judge its activities and services, ii) Accreditation by well-structured external agencies by means of Strength, Weaknesses, Opportunity and Challenges (SWOC) analysis and rating it on a pre-defined scale. It is proposed that HEI libraries' quality assurance approach should be supported by a meaningful and comprehensive benchmark on quality indicators which needs to be developed to measure all aspects of library operations keeping in mind the multi-dimensionality of differences that persists among HEI libraries in India.

Findings : In India, accreditation for various disciplines of higher learning is overseen by respective autonomous body established by the enactment of Act. The present paper begins with the accreditation process of these national agencies, highlighting their governance, role and functions. The article has also portrayed the responsibility of international accreditation agencies in a global environment. Special emphasis has been given to identify the basic parameters of performance analysis of learning resource centres of the higher educational institutes with their status.

Originality : The accreditation of HEI will support the stakeholders and patrons responsible for achieving the aims and goals of the institute by identifying the strength and weakness in terms of infrastructure, services and other areas of present day demand of the knowledge society. The study provides potential input to self-examine the status of individual institute by collaborating different parameters and act accordingly. The HEI

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institutes may use this benchmark of excellence to better understand and compare the performance levels of different library systems in India. It helps higher education institutions to market their programmes nationally and internationally and promote as one of the premier and essential organ of the Higher Education System in India.

Keywords : *Higher education; Accreditation process; Higher Education Institutes; HEI; Quality assurance; India*

REPOSITORY OF BANARASI SAREE DESIGNS : TECHNIQUES TO PRESERVE ITS HERITAGE

Mohd Shoaib Ansari¹, Aditya Tripathi² and Sneha Tripathi³

Abstract

Purpose : Preserving the cultural, historical and scientific heritage of civilization is very important for humanity. Every generation is aimed at keeping its cultural artifacts so that it could be revised and studied by the next generations. The contemporary ICT have made possible the availability of digital content on a global scale and the strong demand for users who are now online. This paper aims to propose a model for cultural object repository as a modern technological solution for the preservation of Banarasi designs and cultural heritage.

Methodology : Traditional Banarasi saree designs are influenced by Persian art with a combination of Indian traditional art. These designs are composed of gold patterning on a silk ground. Most of the sources available for tracking the development of designs of Banarasi sarees are manuscripts, paintings, and old handmade design collections. The present work would help in the preservation of various designs and demonstrated the level of competencies of artisans. A study has been made to understand the work involved in the preparation of Banarasi Saree. It was advantageous for the authors as one of the contributors belongs to the community involved weaving of the Banarasi Saree industry. The work has attempted to propose a model for creating a cultural object repository. The theoretical aspect has been discussed to understand the concept and the model has been developed using PHP coding. The Apache server and MySQL database have been used as the underlying technology.

Findings : A model for repository has been developed to preserve the traditional Banarasi saree designs. The model enables preservation and access to the designs and patterns. The systems is a web-based information retrieval system enabling search through a web browser. The system stores designs along with the metadata. Further, the images of products with the design is also included with each record.

Originality : This paper tried to review the possibility to develop a model for the preservation of traditional Banarasi saree designs. A repository has been created for uploading raw designs and final designs woven over sarees. The repository is also enriched with metadata and keywords.

Keywords : Cultural preservation; Institutional repository; Cultural object repository; Digital preservation; Information system

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