OPPORTUNITIES AND CHALLENGES
of
THE INSTITUTIONAL LIBRARY
in
RURAL AREAS

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Opportunities and Challenges of the Institutional Library in Rural Areas

Pre Seminar Proceedings

Organized by
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Editor's Note

We feel great pleasure to welcome the Library Professionals, Dignitaries, Fellows, Delegates and the Participants of the National Seminar on Opportunities and Challenges of the Institutional Library in Rural area, organized by Shri Shakti Degree College, Sankhahari, Ghatmapur, Kanpur Nagar and sponsored by National Assessment and Accreditation Council (NAAC) on October 05-06, 2014. Interaction among professionals of different sections is must for the emergence of new coherent ideas leading to new frontiers in every field. Enormous growth in knowledge base in different fields and developments in storage and access technique had necessitated sophisticated infrastructure along with trained man power.

The focus of the seminar encompasses various aspects of Library & Information Science which are baffling the community both at application and academia level. The tidal wave of ICT has already started compelling Libraries and Information Centres to analyze new trends and work out strategies so as to play a vital role in the emerging global knowledge society. Some of the challenges that the information professionals are required to strategically address include: Role Responsibilities and present scenario of Libraries in rural area, Stakeholder's interest and role of Library, Role of Library in Modern Education System for creation and development of scientific temper, creativity and self study amongst students of higher education, Contribution of Libraries for Social Orientation and rural development, Need of Promotion of Library service in Rural areas for Sustainable Development, Need of Application of modern, scientific technique in Libraries, Development, Preservation and Management of Digital Library and its Resources etc. This seminar will provide an opportunity to the library professionals for presenting their work and to exchange ideas with a view to formulate future priorities for research and build the road map for global knowledge society. The deadline for receiving of full text papers was 15th September 2014. However, many of the papers have been received till 20th September, 2014. So, we were having few days to edit these papers. Despite our best efforts some errors may have crept in, so due apologies to editors for any such errors. The papers in this volume are presented with a view of triggering further discussions during the seminar so that the ideas can be groomed as relevant in increasingly fluid and dynamic knowledge society by incorporating strategic foresight and ultimately meet emerging users need. The volume will also help the participants as a reference tool for implementing some of the ideas discussed during the seminar.

From the Desk of Editors

We feel privileged to extend a hearty welcome to all the participants, invited speakers and eminent guests at National Seminar on Opportunities and Challenges of the Institutional Library in Rural organized by Shri Shakti Degree College, Sankhari, Ghatmapur, Kanpur Nagar and sponsored by National Assessment and Accreditation Council (NAAC) on October 05-06, 2014. Initial response to the seminar, information circulated on various listings was encouraging. But the kind of response we received in terms of paper submission was amazing. The volume includes good quality papers both invited as well as contributed by about 50 authors. Despite different technical issues we have tried our best to include all possible papers being presented in Seminar. The successful realization of the Seminar has been made possible due to the kind support of organizing committee and executive committee members in almost all areas of the Seminar. Wherever an unforeseen problem emerged, the way out was just a few of all members tasks. They come from different parts of the country and are all committed to support you and make the Seminar an enjoyable and successful event. The Editors feel honoured for editing the volume and responsibly acknowledge the cooperation, guidance, patron ship and suggestions from Editorial Board, Advisory Board, Paper Review Committee, Publication Committee, especially to Executive Committee and others who have helped us directly and indirectly to bring out this proceeding. This Seminar has been organized with the efforts of Shri Shakti Degree College, Sankhahari, Ghatampur, Kanpur Nagar. We would like to express our gratitude to all invited Speakers, chairpersons and co-chair of various technical sessions, students, volunteers, reporters and the participants for their active participation to this Seminar. We hope this Seminar proceeding will be effective in providing a deeper understanding of the wide ranging relations between users and professionals that will grow stronger in the years to come.

THANKS to everybody who made this Seminar possible and a great experience!

Dr. Pankaj Kumar Singh
Mr. Adesh Kumar
Mr. Vinay Trivedi
Mr. Vivek Trivedi

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Section-1

Role of Librarians to Disseminate Information Services among Rural Users

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Abstract

Due to lack of proper information support, the rural users can not gain right skill while seventy percent Indian population live in rural areas. The libraries can play a crucial role in progress of rural population. The libraries can also act as a dynamic centre of information resources. The information needs of rural users may be different as employment, health care, education, agriculture, industry, trade, economics, business, banking, land, weather, women affairs and various governmental schemes etc. This paper focuses on the role of librarians in disseminating information or knowledge among rural users. The libraries are needed to disseminate knowledge to rural users in their understandable language. The paper also describes challenges before librarians, services to be provided by librarians, and feedback or suggestions.

Keywords: *Library, Librarians, Information services and rural users.*

Introduction

The traditional concept of a library is being redefined from a place to access paper records or documents or books to one that also houses the most advanced digital form. Today libraries are called Automated Library, Virtual Library, Digital Library or Library without walls. The information in a printed, permanent format called document or book while now information is called as a resource.

A rural library means a library that provide information services in rural areas and an institutional rural library is that serve to the rural users of that particular institution.

Here, we can categorize rural libraries in two parts: one is institutional rural libraries and another is rural libraries. The rural libraries are part of the public library system in India. State council libraries, district central libraries and rural or taluk panchayal libraries are consist in rural libraries. These libraries are mainly supported by province / state government local authority, central government local authority central government development agencies, NGOs and private trusts while institutional libraries are governed by their local administrative authority.

The institutional libraries should help the rural users for seeking jobs, motivating self employment, and skill development, awareness about government policies and programs and essential information regarding health issues, social issues. Institutional libraries should satisfy the educational needs of rural students.

Objectives

1. The main objective of this paper is to highlight the role of the librarians in providing library and information services to rural users.
2. To identify the challenges facing by librarians in providing library and information services.
3. To provide feedback / suggestions to uplift the library and information services.

Challenges before librarians

Librarians are facing a variety of challenges:

ICT (Information communication technology) revolution

Information Explosion

Rapid growth and usage of web resources

User need relevant and packed information in small time limit

Technological challenges as Wi-Fi, internet, digital information resources

Different library software are also affecting librarians

Copyright also an important challenging in front of librarians

Librarians working in rural institutions are facing some common challenges as inadequate technical skills, advance searching skills, inadequate trained and skilled manpower, use of digital sources of information, different library software, poor physical condition of libraries, inadequate training, inadequate infrastructure, low rate of information literacy and professional status.

Services to be provided by librarians to rural users

Document supply services

Information services

Current awareness services local type information reference services

Reprographic services

Collection of non-book materials

Library consortia

Text, graphics, video, audio available

Role of Librarians to disseminate library and information services among rural users

Librarians assist people to fond the relevant as well as pin point information effectively with a short time. Librarians develop and index databases and help users to develop searching skills for the information they need.

The librarians play a vital role to spread the knowledge to rural users. The following are some important information services which can be disseminate by librarians to rural users:

Help to rural users to enhance their knowledge.

Guide and counsel to rural users regarding hygiene, social problems, employment and others.

Provide educational as well as cultural information to rural users.

Aware about resources of information and encourage to use them.

Alert about natural calamities.

Provide general information on the state and the country.

Provide new technological information.

Provide 24 hours information to rural users at anytime at anywhere.

Help to rural users by providing right information to right users at right time.

Feedback / Suggestions

The following feedback / suggestions may be beneficiary for rural institutional library:

The institutional authority should take steps for,

Proper infrastructural facility

Proper furniture

Proper lighting

Drinking facility

Sufficient library staff

Proper cleanliness

Online library facility to users

Librarians need to make some extra efforts with strong will power to serve the rural user for its further development socially and economically. Besides this even high authorities of each institution must consider the value of libraries and should give proper attention to libraries for its smooth functioning.

Conclusion

The above study shows that librarians can disseminate more information to rural users so that they can develop their skill and take part in development of nation. Most of the institutional rural libraries are suffering with lack of proper financial provision, lack of library staff, lack of learning resources, uncomfortable furniture, insufficient space for stacks as well as for users

and improper access accessibility. The institutional authority and government both should provide necessary facility to libraries.

Librarians can play an important role in coordinating all library activities in such a manner that no user remains information hungry when they visit library.

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Rural libraries and rural development in India: a case study of West Bengal

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Abstract

This paper discusses the roles of rural libraries for rural development in India basically concentrating on the state of West Bengal. Rural libraries have a proportional relationship with rural development. It bridges the gap between ignorance and knowledge and thus enlightens the people to act as human resources for rural development. Though it has immense importance in the rural life still it is facing certain challenges to protect its existence. In earlier times libraries was chained and closed-access but now libraries that use the latest technology for provision of information through automated, electronic, virtual, hybrid libraries. Accordingly library profession have also changed from storekeepers who basically concern with protection of books theft to navigators, information officers, cybrarians who find themselves in the vast ocean of reading material and are busy in satisfying their clients who want anytime and anywhere information to develop our society.

Keywords: *Information, Knowledge, Rural library, Rural development, Sustainable development, Information and Communication Technology.*

Introduction

India is one of the developing countries located in the Southern region of Asia and the second-most populous country with over 1.2 billion people, and the most populous democracy in the world. Nearly 70 per cent of the country's population lives in rural areas i.e. out of 121 crore Indians, 83.3 crore live in rural areas while 37.7 crore stay in urban areas, said the Census of India's 2011 Provisional Population Totals of Rural-Urban Distribution in the country, released by Union Home Secretary. "The slowing down of the overall growth rate of population is due to the sharp decline in the growth rate in rural areas, while the growth rate in urban areas remains almost the same," Registrar General of India and Census said. However, according to the report, the number of births in rural areas have increased by nine crore in the last decade. Whereas West Bengal has population of 9.13 Crores where 6.22 Crores live in rural areas and 2.91 Crores in urban areas.

From this brief information we can say we are moving towards developed but there is some problem which we have to recover through utilizing our resources. The most important resources are human resources. These human resources are made through the availability of proper information or knowledge at proper time. Every human being has their own individual capability but without gaining proper information some resources are unused. So every human being has right to acquire their knowledge for proper use their resources and representativeness as a citizen in our democratic society for socio economic and sustainable development. From this point the importance of libraries being very much important to progress our society

In our democratic society library plays a vital role. By collecting organizing, preserving and providing knowledge and information are the prime activities of library. Library is a social institution which is associated with the social function of providing a reservoir of the true reflection of the diversity of human knowledge. Libraries preserve valuable record of culture that can be transmitting down from earlier generations to the later ones. This is an essential part of sustainable development. Libraries are also help to bring people into the democratic process and keep them informed as citizens about the actions of their representatives.

Modern concept of library

With advancement of computer, information and communication technology, internet, the role of library is also changing to acquaintance with the changing society. The society is popularly known as information society. Because in today's society the standard of life and its socio economic development are not only depends of natural resources but it is mostly depends on the information. The quality of life, education, medical facilities, market, communication, agriculture, irrigation, industry, research and development, remote sensing, climate change etc all are mostly depends and controlled by the information. People need to acquire a new bundle of information skills necessary to function in the society. In this new society library's role also changed in many ways.

The environment of a modern library described as:

- a place for end-to-end learning: consuming and digesting information, creating new knowledge, and producing and sharing new knowledge
- a place where multiliteracies are developed and promoted through access to print, digital and multimedia collections
- a place where library staff and teachers continually collaborate to support and nurture confident literate students, encouraging and enabling deep thinking and creativity

- a place for creating, developing and encouraging readers to develop a passion for books and reading across different formats
- a dynamic transformative learning centre that provides a welcoming, vibrant and culturally inclusive environment
- a place of awe and enchantment, exploration and curiosity
- a large, flexible learning space based on fluid design principles
- a space that includes print, e-resources, and multi-media, and provides access to a range of ICT hardware and software fully supported by robust ICT infrastructure
- providing seamless access to information resources, apps, advice and support to the classroom, home and mobile devices 24/7

Impact of ICT on libraries

Sl. No.	Library activities and services	Conventional methods	With ICT
1	Generate/ originate Information	Writing/ Typing	Word Processing, Text editing, Character Recognition, Voice Recognition
2	Preserve/ Store Information	Manuscript, Paper-Print Media	Electronic Publishing, Magnetic Storage, , Videotext, Tele-text, Computer Disk, ROM
3	Processing of Information	Classification, Cataloguing, Indexing	Electronic Data Processing, Artificial Intelligence/ Expert Systems
4	Retrieval of Information	Catalogues, Indexes	Database Management System, Information Retrieval off-line, online
5	Disseminate/ Communicate Information	Lists, Bibliographies, Abstracts, Hardcopies	Electronic Mail, Electronic Document Delivery, Computer Conferencing, Telefacsimile, View Data
6	Destroy/ Remove Information	Physical Weeding	Magnetic Erasers, Optical Erasers, reuse the medium
7	Integrated Library System	Provided MARC, patron, and circulation records	Web-based: meta-data; resource links; cross data-base searching
8	Information available	The print collection; Inter-Library Loan for anything else; CD Abstracts & Indexes	Print collection plus online data-bases; Document Delivery; extensive E-resources
9	Information Instruction	Bibliographic Instruction, by instructor request	Information Literacy; hands-on "learning"
10	Information printouts	Dot matrix printer	Laser printer
11	Orientation	Local	Regional, consortia

Table 1

Rural development and libraries:

The term rural development connotes overall development of rural areas to improve the quality of life of rural people. In this sense, it is a comprehensive and multidimensional concept, and encompasses the development of agriculture and allied activities, village and cottage industries and crafts, socio-economic infrastructure, community services and facilities and, above all, human resources in rural areas. As a phenomenon, rural development is the end-result of interactions between various physical, technological, economic, social, cultural and institutional factors.

Library and society are inter-linked and inter-dependent. Society without libraries has no significance, and libraries without society have no origin. In this digital era we are living in a society which is so called Information Society or Knowledge Society. Information society is a society where the creation, distribution, uses, integration and manipulation of information is a significant economic, political, and cultural activity. In this society role of libraries are very much important to enhance the progress of rural areas. Though urban areas have been provided digital facilities but rural areas are deprived of it. But we know nearly 70 per cent of the country's population lives in rural areas in India. So without giving proper facility to gain information such in the digital or electronic era the whole community cannot be developed. Thus libraries help to disseminate right information to the right person at the right time then each individual use their proper individual capability or resources and aware about their representativeness as a citizen in our democratic society and to sustain social development.

Rural libraries & rural development in West Bengal:

Here in this paper we are concentrating on the state of West Bengal and the opportunities and challenges of the rural libraries present there. West Bengal is divided into nineteen districts though one more district is formed, but still we will consider the nineteen districts of West Bengal. Table 2 shows nineteen districts of West Bengal with their respective rural libraries, total public libraries and average literacy rate.

District wise Rural Libraries & literacy rate in West Bengal

SL NO.	DISTRICTS OF WEST BENGAL	RURAL LIBRARIES	TOTAL PULIC LIBRARIES	AVERAGE LITERACY RATE
1	BANKURA	119	130	70.26
2	BIRBHUM	110	124	70.68
3	BURDWAN	163	212	80.21
4	COOCHBEHAR	100	109	74.78
5	DAKSIN DINAJPUR	49	57	72.82
6	DARJEELING	91	99	79.56
7	HOOGLY	121	158	81.80
8	HOWRAH	99	136	83.31

9	**JALPAIGURI**	87	110	73.25
10	**KOLKATA**	0	96	86.31
11	**MALDAH**	92	105	61.73
12	**MURSHIDABAD**	131	145	66.59
13	**NADIA**	89	110	74.97
14	**NORTH 24 PARGANAS**	99	221	84.06
15	**PASCHIM MEDINIPUR**	130	158	78.00
16	**PURBA MEDINIPUR**	106	121	87.02
17	**PURULIA**	111	117	64.48
18	**SOUTH 24 PARGANAS**	107	156	77.51
19	**UTTAR DINAJPUR**	46	54	59.07

Source: Department of Mass Education Extension & Library services Govt. of West Bengal.

Table 2

The total number of public libraries in West Bengal is 2418 out of which there are1850 rural libraries. This shows that out of total public libraries in West Bengal 76.50 % are rural. The literacy rate in West Bengal 77.10% which is above the national average 74.04%. T his clearly indicates that the rural population in West Bengal has contributed to the increase in the literacy rate.

Literacy Rate	**Total Population**	**Male**	**Female**
West Bengal	**77.10%**	**82.70%**	**71.20%**
INDIA	**74.04%**	**82.14%**	**65.46%**

Source: Census of India 2011

Table 3

From table 2 it is clear that Burdwan records the highest number of rural libraries in West Bengal and Uttar Dinajpur records the lowest number of rural libraries in West Bengal. We also observe that with the increase of rural libraries in Burdwan the literacy rate has increase above 80%. But in a district like Uttar Dinajpur where the number rural libraries are very low so is the literacy rate below 60%. With Kolkata as exception as it contains only urban area all the districts of West Bengal shows a high number of rural libraries corresponding to high literacy rate.
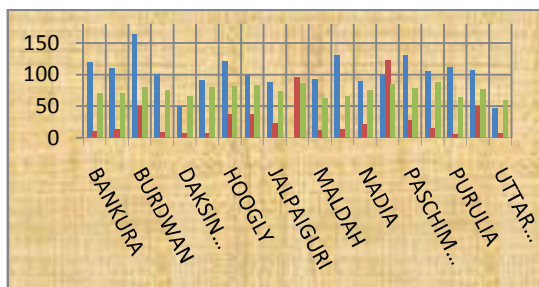
Figure 1

Rural Libraries   Urban Libraries   Literacy rate

So from this figure 1 we can derive a proportional relationship between rural libraries and literacy rate. Districts of North 24 Parganas, Darjeeling, Purba Medinipur, Howrah & Hoogly also shows increased number of Rural Libraries with high Literacy rate. We know rural development can only occur with the increase in rural literacy rate. As an educated population can only utilize the benefits of science & technology and implement it into the agricultural and other rural sectors. So that they can gain from it and also dispel the darkness of ignorance and superstitions. Thus the rural libraries act as a information centre and also preserve the culture and heritage of the rural areas.

Opportunities of libraries in rural areas of West Bengal:

The rural libraries helps in assembling, organizing, preserving, socializing, and serving all expressed thought embodied as manuscripts, books, periodicals, their constituent's documents.

Libraries help in the transmission of knowledge of the earlier generations to the later ones for rural development.

To help in the contemporary development of knowledge, by the unintended and purposeless repetition of effort and the consequent wastage in the research potential of humanity.

Rural libraries help in the perpetual self education of one and all.

Rural libraries acts as an information bank where available recorded information particularly in the form of reference books, and to socialize and serve freely all such information to each according to his needs at the moment.

To help in the elevating, self dependent use of leisure with the aid of freely served books, pictures, sound records, and other similar materials.

Rural libraries also help the people of the area to get fresh information about the world.

Rural libraries also act as a social institution where illiterate people to be literate.

Challenges of rural libraries

Though the rural libraries contains electric facilities and moderate infrastructure still they lack the touch of modernization like the computer and internet facilities are very rare in rural libraries which hamper the process of gaining information.

There are Inadequate Management support and Finance and Lack of effective planning for Digital technology activities in rural libraries.

Lack of updated books and resources fail to attract the rural readers.

A majority of the people in rural area is uneducated this creates a deficiency of readers in rural library.

Sometimes lack of government initiatives in rural areas also act as a barrier for rural libraries.

Lack of trained human resources is also a problem for library services.

Conclusion

The data collected above it is clear that rural development for the district of Burdwan is far greater than that of Uttar Dinajpur. The district Uttar Dinajpur faces different infrastructure problem like roads, proper health services, deficiency of higher education institutions, poverty etc. Thus establishing more rural libraries may try to provide information and help in the development of the rural areas. Lastly I may conclude that India is a country where a certain amount of people is below the poverty level, so for them getting access to expensive books and resourceful books is nearly impossible. So here rural library acts as a bridge between the people and the world of knowledge. Redefining roles and responsibilities, constructive intervention of the organization leaders in institution building endeavors, positive involvement of information personnel in delivery system and constant evaluation of goods and services will make the Indian academic libraries highly appropriate and resourceful in future.

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Development of Information literacy system in Rural areas of Chhattisgarh

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Abstract

The web technology have change the way people communicate, share knowledge and participate in the creation and re-use of information but till now the most of the population of in our India who live in rural areas are information poor, which creates a large gap which is a major cause for our backwardness. This paper presents with the measures to fill this gap and A rural information literacy system should be developed and designed to provide right information at the right time by directly approaching them and giving the information according their information need in their own language. Without this type of information literacy system, the authentic and reliable information services could not be available for rural users who have less information literacy. If they are aware with mobile phones and concerned technology such as messages, blogs, wikis etc. The much more users have available these basic-services because everyone has a mobile terminal. On the aforesaid basis this system we can provide information literacy in rural areas of Chhattisgarh.

Introduction

The Internet and web technology have changed the way people communicate, interact, acquire, share knowledge, Search, investigate and participate in the creation and re-use of information. It also an undisputed fact that information and communication technology have brought a new era of opportunity for easier information access its communication, consolidation, creation and retrieval downloading and distribution through the world. This system should be developed and designed to provide comprehensive up-to-date, reliable and authentic information.

Objective

Objectives are proposed for this type of information literacy system is as follows:

- To assess the scope of information system to strengthen its service provided by Rural Community Information System

- To identify the gaps at different levels towards getting information and improve in the implementation of solution based on authentic information for rural community.
- To suggest such type of Rural Community Information System at National Level.
- Development and implementation of recent new technologies at every level of rural community users of Chhattisgarh.

Need of such type of system

The present era of information dissemination has been changed drastically with the plethora of technologies available in todays techno-oriented world but there are some problems exist in its implementation in rural areas of Chhattisgarh. With the various applications of technologies a information literacy system can be design and developed to fulfill the following needs especially in rural or less literate areas:

- An authentic reliable and accurate information tool to retrieve information round the clock (24x7).
- Strengthen the rural India in using information regarding their needs and to propel them to make a prosperous India.
- To find out the remedial measures for the development of rural peoples and remove the discrimination of economic status.
- To provide a platform for the local community for exchanging their views and let the communities arise as a knowledge and information sharing community.

Hypothesis

H1 - Most of the people in rural area of Chhattisgarh are not fully aware with required information.

H2 - Such type of Information literacy System (which will be responsible for rural literacy) will full fill the need of Rural Community according to their demands.

Suggestions

- Suggestions are proposed for this project is as follows:
- To provide the authentic and reliable information to rural community
- To understand their problems and provide effective solution in their own language and desired format as soon as possible.
- Information should available at 24X7.
- To provide a toll free contact no.
- To organize Information Technology awareness programs.

Conclusion

The study concluded that how information systems tools and techniques will assist the rural user in getting authentic, reliable and accurate information. With the development of this type of platform, we will have to provide full system to access to a basic information services to rural community through various information communication technology. Without this type of information system, the authentic and reliable information services could not be available for rural users who have less information literacy. and it also paved the way for development of society and benefitted the society economically.

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वर्तमान परिदृश्य में पुस्तकालयों की भूमिका एवं उनका उत्तरदायित्व

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सारांश

आज का युग मूलतः सूचना का युग कहा जाए तो यह अतिशयोक्ति नहीं होगी क्योंकि आज हम जिस व्यापक परिवेश में जी रहे हैं, उसमें सम्पूर्ण विश्व हमसे सीधा जुड़ा है अर्थात जिस ग्लोबल वर्ल्ड की कल्पना 20 वीं सदी के उत्तरार्ध से शुरू होने लगी थी वह सूचना के युग में आज पूर्णतः साकार रूप में दिखायी पड़ रही हैं। वर्तमान में सूचना संचार के अनेक माध्यम उपलब्ध हैं। उनको निम्नांकित प्रकारों में विभक्त किया जा सकता हैं :–मुद्रित माध्यम (प्रिंट मीडिया) तथा इलेक्ट्रॉनिक मीडिया

आज दूरस्थ अंचलों में बसे गांवों से लेकर नगरों तक में सूचना और संचार की सुविधा उपलब्ध हो गई है।नगरों एवं छोटे कस्बों में स्थापित पुस्तकालय सूचना उपलब्ध कराने के केन्द्र है। पुस्तकालयों का स्वरूप बदल रहा है पहले पुस्तकालय मुद्रित एवं हस्त लिखित पुस्तकों के भण्डार के रूप में होते थे किन्तु आज पुस्तकों के अतिरिक्त उनमें कम्प्यूटर का प्रचलन तेजी से बढ़ रहा है क्योंकि कम्प्यूटर के द्वारा ही इन्टरनेट का प्रयोग सम्भव होता है।

अब सभी को इन्टरनेट से जोड़ने का प्रयास किया जा रहा है। इस क्षेत्र में तेजी से कार्य हो रहा है यह एक महत्वपूर्ण परिवर्तन भारत जैसे विकासशील देश में आया है। निःसन्देह यह भारतीय समाज के अनेक पक्षों पर अलग–अलग ढंग से प्रभाव डालेगा। हम हर पल के गतिशील विश्व को निरन्तर अपनी आंखो से देखना,सुनना और जानना चाहते हैं। प्रिंट माध्यम और इलेक्ट्रानिक माध्यम हमारे सामने हर पल नवीन सम्भावनाओं के साथ अवतरित हों यह आवश्यक है क्योंकि आज का पाठक समाज बौद्धिक स्तर पर किसी भी तरह की लापरवाही स्वीकार नही करना चाहता है। प्रिंट माध्यमों और इलेक्ट्रानिक माध्यमों द्वारा जहां हमारे जीवन को सुखमय बनाने के लिए अनगिनत जानकारियां उपलब्ध हो रही हैं वहीं उक्त माध्यमों में बहुत से ऐसे तत्व उपलब्ध होते हैं जो हमारे जनजीवन को दूषित कर रहीं हैं तथा समाज में व्यर्थ का तनाव उत्पन्न कर रहीं हैं।

प्रस्तुत शोध पत्र में वर्तमान समय में पुस्तकालयों के बदलते स्वरूप तथा अधिकतर प्रिंट तथा इलेक्ट्रानिक माध्यमों में सरलता से उपलब्ध हानिकारक तत्वों तथा उनको पाठकों तक पहुँचने से रोकने के लिए अधिकतम निगरानी की आवश्यकता की ओर ध्यान आकर्षित किया गया है।

कुंजी शब्द– *पुस्तकालय,प्रिन्ट माध्यम, इलेक्ट्रॉनिक माध्यम,इन्टरनेट, हानिकारक तत्व।*

परिचय

आज का युग मूलतः सूचना का युग कहा जाए तो यह अतिशयोक्ति नहीं होगी क्योंकि आज हम जिस व्यापक परिवेश में जी रहे हैं, उसमें सम्पूर्ण विश्व हमसे सीधा जुड़ा है अर्थात जिस ग्लोबल वर्ल्ड की कल्पना 20 वीं सदी के उत्तरार्ध से शुरू होने लगी थी वह सूचना के युग में आज पूर्णतः साकार रूप में दिखायी पड़ रही हैं।

वर्तमान में सूचना संचार के अनेक माध्यम उपलब्ध हैं। उनको निम्नाकिंत प्रकारों में विभक्त किया जा सकता हैं:–

मुद्रित माध्यम (प्रिंट मीडिया)

यह छपे स्वरूप में व्यापक स्तर पर लोगों तक पहुंचाता है। अतः केवल शिक्षित लोग ही इसका लाभ ले सकते हैं। शिक्षित जन समुदाय में इसका महत्व अत्यधिक होता है। इसके अन्तर्गत पुस्तकें, समाचार पत्र–पत्रिकायें,जर्नल,विज्ञापन,पम्पलेट,कैलेन्डर तथा स्टिकर इत्यादि को सम्मिलित किया जाता है।

इलेक्ट्रानिक माध्यम (इलेक्ट्रॉनिक मीडिया)

वर्तमान समय में यह सर्वाधिक सशक्त माध्यम है क्योंकि इसका लाभ शिक्षित तथा अशिक्षित सभी लोग ले सकते हैं। अतः इसकी पहुंच विशिष्ट से लेकर जन सामान्य तक एक समान हैं। इसके अन्तर्गत इलेक्ट्रॉनिक उपकरणों के माध्यम से संचार संभव होता है। इसके अन्तर्गत रेडियो,टेलीविजन,फिल्म वीडियो,टेलीफोन, इन्टरनेट, कम्प्यूटर, ई–मेल तथा फैक्स इत्यादि साधन आते हैं। प्रसार की दृष्टि से इसका क्षेत्र अत्यन्त व्यापक है और विश्वव्यापी स्तर का है। अतः यह राष्ट्र की सीमाओं से परे है।

आधुनिक समाज में सूचना एक मूलभूत संसाधन है, जो संचार के द्वारा ही संभव हो पाती है। आज किसी भी क्षेत्र को विकास के क्षेत्र में उन्नत स्थिति में ले जाने में सूचना माध्यमों का महत्वपूर्ण योगदान होता है। विकास के लिये,योजना के लिये सूचना,सूचना के लिये सूचना की तैयारी,ये सभी विकास प्रकिया के अंग हैं। यही कारण है कि सामान्य रूप से यह कह दिया जाता है कि सूचना का प्रसार ही विकास है।

आज का समाज सूचना के अभाव में अधूरा है। सूचना सम्प्रेषण एवं संग्रहण की तकनीक ने विश्व स्तर पर मनुष्यों को नजदीक ला दिया है भौगोलिक दूरियां सिमट गई हैं। नवीनतम साधन इसे और छोटा बनाते जा रहे हैं। सम्पूर्ण विश्व में संचार कान्ति घटित हो चुकी है और इसमें निरन्तर नये आयाम जुड़ते जा रहे हैं।

सूचना संचार क्रान्ति और भारत

सूचना संचार कान्ति भारत में भी स्थान ले रही है। जिसकी शुरूआत 1980 के दशक में ही हो गई थी। 1990 के दशक में आरम्भ उदारीकरण एवं नयी आर्थिक नीति में भी इसका महत्वपूर्ण स्थान है। इस कारण यहॉं सम्प्रेषण सुविधाओं का तीव्र विकास हुआ है। इलेक्ट्रॉनिक मीडिया और प्रिंट मीडिया के क्षेत्र में उल्लेखनीय प्रगति हुई हैं।

आज दूरस्थ अंचलों में बसे गांवों से लेकर नगरों तक में सूचना और संचार की सुविधा उपलब्ध हो गई है।

नगरों एवं छोटे कस्बों में स्थापित पुस्तकालय सूचना उपलब्ध कराने के केन्द्र है। पुस्तकालयों का स्वरूप बदल रहा है पहले पुस्तकालय मुद्रित एवं हस्त लिखित पुस्तकों के भण्डार के रूप में होते थे किन्तु आज पुस्तकों के अतिरिक्त उनमें कम्प्यूटर का प्रचलन तेजी से बढ़ रहा है क्योंकि कम्प्यूटर के द्वारा ही इन्टरनेट का प्रयोग सम्भव होता है।

अब सबको इन्टरनेट से जोड़ने का प्रयास किया जा रहा है। इस क्षेत्र में तेजी से कार्य हो रहा है यह एक महत्वपूर्ण परिवर्तन भारत जैसे विकासशील देश में आया है। निःसन्देह यह भारतीय समाज के अनेक पक्षों पर अलग–अलग ढंग से प्रभाव डालेगा।

इन्टरनेट का समाज पर प्रभाव

विकसित एवं पश्चिमी देशों में जहॉं वास्तव में सूचना क्रान्ति हो चुकी है, वहॉं बहुत सी चीजें आसान हो गयी हैं। व्यवस्था चुस्त हो गयी है, बहुत से कार्य बटन दबाने मात्र से सम्पन्न हो जाते हैं।

सूचनायें तत्काल उपलब्ध हो जाती हैं पर उसके नकारात्मक पक्ष भी तेजी से उभर कर सामने आ रहे हैं।

संचार कान्ति ने सम्पूर्ण विश्व में मीडिया साम्रज्ज्यवाद पर बहस छेड़ दी है क्योंकि इसके सूत्र मुख्य रूप से विकसित देशों के हाथ में है। अतः यह आशंका व्यक्त की जा रही है कि औद्योगिक क्रान्ति की तरह पिछड़े देशों को विशिष्ट प्रकार से नव उपनिवेश न बना दिया जाये।

यह उपभोक्तावादी समाज के विकास के रूप में होगा। मुक्त बाजार की वकालत उसी का एक हिस्सा है। सम्पूर्ण मीडिया आज इसी विचार को आगे बढ़ाने और स्थापित करने में जुटा है कि मुक्त बाजार की अवधारणा एक अच्छी अवधारणा है जो सभी राष्ट्रों को विकास एवं प्रतिस्पर्धा का अवसर उपलब्ध करायेगी। प्रश्न यह है कि अविकसित,गरीब एवं विकासशील देश कैसे इनका मुकाबला कर पायेंगे। यह भविष्य के गर्भ में है आशंका यही है कि संचार कान्ति का लाभ बड़े देश ही अधिक ले पायेंगे।

संचार कान्ति का दूसरा पक्ष सांस्कृतिक है विश्व के विकसित देश संचार माध्यमों के द्वारा अपनी संस्कृति को अविकसित एवं पिछड़े देशों पर थोपना चाहते है। भारत में इसे पाश्चात्य संस्कृति के प्रभावों के संदर्भ में देखा जा सकता है।

इन्टरनेट आज के समय में जीवनसाथी तलाशने का कारगर माध्यम बनता जा रहा है। आन लाईन चैट्स,लड़के-लड़कियों के वीडियो क्लिप्स और कई सारी तस्वीरों के बेहतरीन विकल्प इन साइट्स पर मौजूद होने के कारण लोग ई-मेल शादी की तरफ काफी आकर्षित हो रहे है। उपरोक्त वेबसाइट्स 10-15वैवाहिक सम्बन्धों के प्रतिदिन जुड़ने का दावा करती हैं।

इन्टरनेट से त्यौहारों पर भी आधुनिकता की परत चढ़ती जा रही है। आजकल सभी त्यौहार इन्टरनेट की वेबसाइट्स के माध्यम से मनाये जा रहे है। अगर आधुनिकता का यही आलम रहा तो सभी रिश्ते बेईमानी होने लगेगें और मानव जीवन पर स्वार्थ की परत गहराती जायेगी। विज्ञान एवं प्रद्यौगिकी के विकास के कारण लोगों की जिन्दगी की निजता खतरे में है। दिल्ली का चर्चित एम0एम0एस0 काण्ड हो, या सेलेब्रिटी पेरिस हिल्टन का इन्टरनेट पर धड़ल्ले से बिकता सेक्स टेप। इतना ही नही आज नित्य नये-नये काण्डों का पता चल रहा है।

सूचना एवं प्रौद्योगिकी के अनिगनत संसाधन निजता के हनन में अपराधिक तत्वों का साथ दे रहे जिससे कि प्रत्येक आदमी आंशिकत हो जाता है एवं समाज में व्यर्थ का तनाव उत्पन्न हो रहा है।

इन्टरनेट पर प्रेमालाप और सेक्सी गुफ्तगू बढ़ती जा रही है। यह प्रवृत्ति केवल अविवाहित लोगों तक ही सीमित नही है बल्कि शादी-शुदा लोगों में भी देखी जा रही है। इन्टरनेट पर प्रेमालाप की बढ़ती प्रवृत्ति से विवाहेत्तर यौन सम्बन्ध का सिलसिला जोर पकड़ रहा है।

आजकल इन्टरनेट सेक्सी वार्तालाप का प्रमुख साधन बनता जा रहा है। इन्टरनेट सेक्स के जाने माने विशेषज्ञ 'अलकूपर' की टिप्पणी है कि आने वाले समय में पति पत्नी के रिश्ते को तहस-नहस करने में इन्टरनेट की खास भूमिका होगी। कूपर ने अपनी पुस्तक सेक्स एण्ड इन्टरनेट में लिखा है कि कई दम्पत्ति को इन्टरनेट सेक्स के कारण तलाक का रास्ता अपनाना पड़ा है। इन्टरनेट वैवाहिक जिंदगियों को बर्बाद करने वाला सबसे सफल माध्यम बनता जा रहा है। यदि समय रहते इस पर काबू नही पाया गया तो हालात बेहद गम्भीर हो जायेगें। बहुत से पाठक पुस्तकालयों में इन्टरनेट पर उपलब्ध इन्ही हानिकारक सामग्रियों को खोजते हुये देखे जा सकते हैं।

निष्कर्ष कुल मिलाकर हम यह निष्कर्ष निकाल सकतें हैं कि आज का युग संचार कान्ति का युग है। हम हर पल के गतिशील विश्व को निरन्तर अपनी आंखों से देखना,सुनना और जानना चाहते हैं। प्रिंट माध्यम और इलेक्ट्रानिक माध्यम हमारे सामने हर पल नवीन संभावनाओं के साथ अवतरित हो यह आवश्यक है क्योंकि आज का पाठक समाज बौद्धिक स्तर पर किसी भी तरह की लापरवाही स्वीकार नही करना चाहता है। प्रिंट माध्यमों और इलेक्ट्रानिक माध्यमों द्वारा जहां हमारे जीवन को सुखमय बनाने के लिए अनिगनत जानकारियां उपलब्ध हो रही हैं वहीं उक्त माध्यमों में बहुत से ऐसे तत्व उपलब्ध होते हैं जो हमारे जनजीवन को दूषित कर रहीं हैं तथा समाज में व्यर्थ का तनाव उत्पन्न कर रही हैं।

वर्तमान समय में उक्त हानिकारक तत्व अधिकतर प्रिंट तथा इलेक्ट्रॉनिक माध्यमों में सरलता से उपलब्ध हैं अतएव पुस्तकालयों को उक्त हानिकारक तत्वों को पाठकों तक पहुँचने से रोकने के लिए अधिकतम निगरानी की आवश्यकता उत्पन्न हो गयी है।

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Section-2

Library and Information Science Education and Steps towards Quality Assurance, Standardization and Accreditation of LIS Programs

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Abstract

This study is based on purely theoretical discussions of development of LIS education, its multidisciplinary nature and emerging need for a separate LIS Authority at national level in the country to regulate the LIS education with international standards. Through overall re-engineering of curricula and standardization should be through statutory accreditation agency. It felt absence of an accreditation agency in India for quality control and standardization of LIS courses at National level. Western countries like USA and UK have accreditation agencies to monitor and constantly evaluate LIS education. In India too, there is on urgent need for a national level accreditation body for LIS education like MCI, AICTE etc. LIS Schools lacked proper and requisite infrastructure facilities for teaching. Due to absence of Quality assurance being a major lacuna in imparting quality LIS education.

Keywords: LIS Education, Accreditation, LIS curricula.

1.1 Introduction

Library and Information Science attained the status of a scientific field and emerged as one of the professional subject involving information service to society. It has developed theories, philosophical basis, methodologies and assumptions. LIS education underwent enormous changes due to social, economic, and technological progress in the 21st century. Information Technology has made substantial impact on Library and Information Science education. The advent of Internet and information communication technologies stepped up flows of electronic information and practice of library services in digital era. Today it has entered into the era of 'virtual library' using digital technology. Rapid change in library and information science caused educators to propose significant revision to course content and program directions - so significant that some LIS schools are introducing new degrees and changing their names (Kathleen, 1988). Lee and Chuang Mammo, (1997) predicted four trends in LIS education:

1. Developments in information technology and services have a major impact on curriculum design, and it is common for a curriculum to change with time and technology.
2. It becomes harder to determine the core while electives tend to be the mainstream in course selections.
3. There appears to be an increasing emphasis on theory and research in course content.
4. Lifelong learning becomes the focal point in curriculum development.

The KALIPER Report (2000) identified six trends in LIS education that have been extensively cited, reviewed, and debated in the literature. These are as follows:

1. Addressing broad-based information environments and information problems in curricula;
2. Emerging with a distinct core that is predominantly user-centered;
3. Increasing the infusion of information technology into their curricula;
4. Experimenting with specialization within the curriculum;
5. Offering instructions in diverse formats; and
6. Expanding curricula by offering related degrees at the undergraduate, Master's, and Doctoral levels.

It is understood that in order to introduce changes in the LIS programs, these efforts must be preceded by a systematic evaluation of the context, strategies, curriculum, facilities, resources, and other related factors.

1.2 Multidisciplinary Nature of LIS Education

The KALIPER Report in 2000 characterized the multidisciplinary character of LIS education as a natural result of LIS faculty conducting research with or hiring faculty from cognate fields and offering joint programs or courses with faculty from other departments. The report stated "Faculties are growing increasingly multidisciplinary, especially through joint appointments" and noted that this trend had a significant impact on curriculum development. Sajjad Ur Rehman, (2007) examined the changes in library and information science (LIS) education during the last couple of decades, observing that these processes of change accelerated new areas of studies including information management, knowledge management, content management, information architecture, digitization, as well as archival and record systems. At about the same time when the KALIPER project was being conducted, TFPL (1999) conducted a seminal study in the UK. The study focused on identifying the new capabilities that information professionals need to possess in the emerging information and knowledge

environments. TFPL noted that the LIS profession had developed and changed significantly during the last decade in a way that affected the roles and opportunities for information professionals. They emphasized that knowledge management presented a unique opportunity for LIS professionals.

According to Sajjad Ur Rehman, (2007) Willimason's Reports of 1921 and 1923 in the United States proved to be hallmark studies that transformed training programs of the library economy to the university-based degree programs in library science heralding revolutionary changes in the preparation of professionals. Consequently, new graduate degree programs were founded in universities since Developing New Competencies among LIS Professionals 1950s that produced professionals who were expected to be grounded in the interdisciplinary underpinnings of a variety of socio-human disciplines. During the next three decades, this academic movement provided the strong impetus for change and renovation and the field progressed into different phases of library science, documentation, and information science. There has always been diversity in the content and structure of these programs. During the last few decades, this wave of change has been most pervasive, resulting in a variety of interdisciplinary offerings. These programs have also been given fresh labels and nomenclatures such as information studies, information management, information systems, information resource management, knowledge management, etc. The KALIPER Report predicts that these schools will keep producing graduates for the non-traditional wider markets. In order to be effective in the future, it will require new generation of faculty and students.

1.3 LIS education in India

LIS education in India is fortunate to have its torch bearer none other than the father of library science, the great Prof. S.R. Ranganathan. Of all his capabilities, his being a teacher was a boon to library sciences in India. He made tremendous contributions everywhere: initiating departments, courses, outlining contents or planning a research base for the discipline. He set up the Departments of library science in the University of Madras, Banaras Hindu University, University of Delhi, DRTC. It is necessary to take stock of the situation to ascertain what was achieved, what was not and how to improve. Library professionals need to ponder over what Ranganathan taught us and continue on those lines. Librarians and teachers should come together to overcome all shortcomings and take LIS education to greater heights (Krishan Kumar and Jaideep Sharma, 2010).

1.4 Problems of LIS Education in India

The existing Library and Information Science education programs have been facing many problems such as infrastructure, technology upgradation, lack of accreditation and faculty strength. Some of major problems being felt in Library and Information Science education in India are given below:

- ❖ Lack of proper infrastructural facilities for teaching.
- ❖ Intake of poor quality students due to lack of quality procedures in admission policy.
- ❖ Curriculum not upgraded to current trends in a job oriented market. Outdated theories and old conventional curricula being taught even today. Changes in LIS curriculum are very slow as compared to the desired changes in LIS education because department curricula are neither revised nor updated regularly.
- ❖ Lack of adequate teaching and non-teaching staff.
- ❖ Efficient, intelligent and high merit students need to be attracted to this stream as compared to other subjects. Hindi medium students face difficulties as the study material is in English medium. LIS Schools are facing severe paucity of requisite skilled manpower capable of teaching these courses in comparison to the traditional courses.
- ❖ Lack of overall awareness of LIS education and its applications.
- ❖ Library and Information science syllabi having no uniformity at the national level.
- ❖ Lack of intensive practical training that may help in acquiring the desired skills.
- ❖ Non-availability of Library automation software.
- ❖ Substandard courses on LIS education at some Schools.
- ❖ Lack of Information Technology infrastructure in LIS schools resulting in virtually zero exposure to this dynamic new subject at some Library Schools.
- ❖ Lack of awareness of international level developments taking place in LIS education.
- ❖ Commercialization of LIS education is a recent debilitating trend where emerging private universities are organizing the entire course on the basis of single teaching staff at the BLIS and MLIS level. These institutions had scant infrastructure, no computer labs or even library facilities. The only purpose of running courses at such places pure commercialization to earn revenue and obtain degrees. The students knowledge is evidence of the poor education programs of these institutions.

- ❖ The efforts are not being made in India to adequately modernize LIS education program.
- ❖ Lack of practical exposure completed with lack of teaching and technical skills in LIS education.
- ❖ A number of LIS Schools teach only theoretical aspects of LIS education through distance mode as well as regular courses.
- ❖ Lack of efforts to fill up positions of teachers.
- ❖ Students unfamiliar with global developments and impact of digital environment on LIS education.
- ❖ Wide gap between theory and practical training with most of the time being devoted to teaching theory rather than practical papers.
- ❖ Non-availability of modern literature related to Library Science coupled with outdated hardware.
- ❖ Curriculum updation and more optional subjects are required to be introduced.
- ❖ Knowledge management and Information Communication Technology courses are essential in LIS education, But these subjects found absent in LIS curricula in India at several LIS Schools.
- ❖ Lack of awareness about this subject among students and general public.
- ❖ Lack of coordination between university library and library schools / departments as also lack of funds, a scientific temper and of research culture and rigid stance of the Library Science manpower as well as no uniformity among BLIS, MLIS and M Phil syllabi. Outdated courses are being taught at some Schools even today.
- ❖ Stagnation and saturation had set in the areas of classification cataloguing, Information Technology, management and traditional and archaic teaching methods.
- ❖ Organizational authority not important for LIS subject as compared to other subjects.
- ❖ Insufficient preparation by faculty for teaching and lack of quality books in LIS education.
- ❖ Decreasing Reading habits among LIS students.

LIS Schools lacked proper and requisite infrastructure facilities for teaching. Due to absence of quality assurance being a major lacuna in imparting quality LIS education.

1.5 Accreditation and Standardization of LIS Education

The national professional accreditation approach had the problem that all countries in the world had no accreditation authorities and even where authorities existed they did not accredit all programs. The generic academic qualification equivalence approach was also not perfect because it was only applicable in a few countries and could therefore not apply universally. The third alternative - the Institutional Course Approach had its shortcomings as well including uncertainty of ready availability of data required from LIS institutions the world over; and the interpretation of "equivalence" in terms of the needs, and culture of the individual counties (Peter Dalton and Kate Levinson, 1999). Abdus Sattar Chaudhry, suggested that an accreditation should be implemented for improving the quality of education in LIS programs in Southeast Asian countries. Collaborative projects undertaken by Southeast Asian countries demonstrated that collective efforts were more useful to improve the quality of LIS education with Guidelines developed for content organization, management, accessibility and usability of learning objects. Effective teaching of new subjects and modules to cover topics related to knowledge management, information systems, and digital media requires that LIS faculty look for new teaching methodologies and learning styles and introduce new modes of assessment suitable for collaborative learning. A couple of countries in the region (Malaysia and Singapore) have expanded LIS curricula to include new areas like knowledge management and information systems while others are working for enhancing LIS curricula (Thailand and Vietnam) with increased emphasis on digital information and new media. Faculty in these programs have been exchanging ideas and sharing knowledge regarding difficulties experienced in these new ventures. Through these interactions, it was learnt that expansion in curricula provided opportunities to LIS programs to expand their markets beyond the traditional groups of students.

Christopher Khoo, (2003) examined some of the issues involved in developing accreditation standards and procedures for Library and Information Studies (LIS) professional education programs in Southeast Asia. The accreditation standards of the American Library Association (ALA), Australian Library and Information Association (ALIA), Chartered Institute of Library and Information Professionals (CILIP) (UK) and International Federation of Library Association (IFLA) are examined, Shaheen Majid conducted out a questionnaire survey of LIS schools in Southeast Asia to explore the perceptions of the LIS schools about a regional accreditation Scheme for the LIS degrees. Fourteen LIS schools from five Southeast Asian countries participated in the study. Most of the

schools agreed that implementation of an accreditation scheme would result in better coordination among LIS programs in the region, result in wider acceptance, higher creditability and recognition of LIS degrees, along with better job prospects for LIS graduates. Eleven schools agreed while three were not sure that such a scheme would enhance the mobility of LIS graduates in the region. Regarding the implementation and coordination of accreditation activities, a majority of the respondents agreed that a joint committee of representatives from CONSAL and LIS schools should be responsible for developing rules and procedures as well as for coordination of the proposed regional accreditation scheme, examined some of the issues involved in developing accreditation standards and procedures for LIS professional education programs in Southeast Asia.

There is a crisis in library education, varying in severity from country to country and calls for a new (or resuscitated) model of library education that will meet the demands of libraries and librarianship in the years to come. Among the problems seen are that library schools have become hosts to information science and information studies faculty and curricula. These disciplines are, at best, peripheral to professional library work and, at worst, inimical to it. Modern communications technology has led many library educators to concentrate on that technology and dismiss anything about libraries that is not amenable to a technological solution. The gap between what is taught in many LIS schools and what is being practiced in libraries is ever widening. The curricula of library schools should, of course, focus on the former but not ignore the question of the management of the latter points out that the American Library Association (ALA) accredits courses based on the school's own vision and mission rather than on national standards. Thus a librarian at an ALA-accredited school need not take any courses in cataloguing and classification, which Gorman argues is of extreme importance to the profession (Michael Gorman, 2004).

The Chartered Institute of Library and Information Professionals (CILIP) in the UK declares that "In assessing a course the professional body will be primarily concerned with its relevance to current and developing practice in librarianship and information science, rather than purely academic issues. In view of the wide range of skills and expertise now needed for the efficient provision of information and the effective management of library and information services, the professional body does not seek to stipulate precise requirements for course content. Courses submitted should, however, provide students with appropriate knowledge and skills to enable them to enter the profession. However, CILIP's course accreditation documents include a content checklist, so that those applying

for accreditation can indicate how core requirements are covered in their courses. He suggests that many library educators have been enticed by the lure of modern communication technology to concentrate on that technology and to dismiss areas of librarianship that do not fit within these technological boundaries. IFLA's Education and Training Division, proposed a model of quality assurance. She applied this model in an international survey in detailing the evaluation and quality assurance among LIS programs in the European Union. Four types of criteria of inputs, activities, outputs and outcomes were used for this assessment. The study covered the areas of accrediting agency, frequency and the areas covered. This study is worth replication in other regions with appropriate adjustments (Rehman, 2007).

Proceedings of two recent conferences held in Nanyang Technological University, Singapore (A-LIEP, 2006) and Punjabi University, Patiala, India (IALTIS, 2006) presented various aspects and suggestions for Quality Assurance (QA) and accreditation of educational programs in the Asian region. However, in practice, to attain QA is a very challenging phenomenon in developing and less developed countries. There is no accreditation body in India to assess the quality of LISE programs being offered.

1.6 Conclusion

Quality assurance and accreditation of LIS education will facilitate the process of achieving greater transparency and transferability of professional qualifications from one LIS program to another and thus increasing employability of the students upon completion of their degrees (Sarkhel, 2006). Baiba Holma, and Pakalna (2007) emphasized that aspects of quality management are necessary to consider and evaluate for providing LIS education. They analyze the ways of the quality management and model for quality management in higher education. They stressed the importance of the accreditation process of the programme (aims, visions, goals of the programme, global and local tendencies of higher education and LIS education, expectations of employers). They felt lacuna in data, which are not collected and analyzed in a systematic way (e.g. data characterizing the input and output of the social system: expectations about skills and knowledge of information professionals, the impact of the programme on society, reputation of institution, achievements of graduates, impact of ICT on LIS domain and education; new theoretical trends in LIS and it implementation in education etc.).

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International Association of Law Libraries (IALL): A Case Study

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Abstract

Professionals share knowledge and skills through personal contacts and through the formation of professional bodies. There are several law libraries associations at national & international level and they are playing their role in law librarianship. Law librarianship is a very alert profession and needed expertise to provide the desired information to its users instantly. In this paper, the study about the International Association of Law Libraries (IALL) and its role in development of law librarianship has been carried out. The IALL is a worldwide, cooperative non-profit organization concerned with access to legal information, particularly on a multinational and global scale. Internationalization is not new; human interaction across borders has existed since national borders were drawn, particularly within empires and their trading areas. The present paper discusses various aspects of IALL like its organization, mission, activities and achievements in the field of law librarianship. The study was done on the basis of literature reviews both primary and secondary. The web site of the association was also evaluated and reviewed to collect relevant data. It was found that the IALL promotes the law library profession and access to legal information. IALL publishes the International Journal of Legal Information and offers Annual Courses on International Law Librarianship. IALL provides an international forum for networking and information sharing among legal information professionals worldwide and supports professional development by awarding scholarships for annual course attendance and grants for internships.

Keywords: International Association of Law Libraries (IALL), Law librarianship, Law library associations.

Introduction

There are a large number of library associations in the world. A library association is a professional association which provides services to the library and information community within one country or across multiple

countries. Library associations play a vital role in promoting the librarianship profession. The object of any library association is also to promote the interests of librarians and enable them to exchange views and disseminate information among library association members and non-members[1].

A law library is the heart of the legal profession. While other professions can afford to do without reference to any information source, legal professionals cannot do so even for a single day. Any decision they make, argument they present or remark they make must be supported by legal authority. The legal authority must either be produced or quoted as it appears in the legal document. In short, without access to legal information, a judge cannot pass judgement, an advocate cannot represent or defend his/her client, and a magistrate cannot listen or decide on a case. If a door to a law library is closed, the entire legal profession is paralyzed[2].

Law librarianship is different from librarianship in any other discipline. This aspect is more appropriately explained by Prof. Igor I. Kavass, when he says that "the reason for law libraries being different from other types of libraries is that they serve a profession which is literally unable to exercise its work without the use of books." While Librarians in other organizations may convince their users to give them some time for catering to their information requirements, a court librarian has to furnish the desired information at once because the case is being argued in the Court and desired information is needed in the course of the argument. So a law librarian has to provide the information instantly without any excuse. Because of this reason, a law librarian has to be a very alert professional and must develop his or her own tools and expertise to provide the desired information instantly.[3]

In this field, several law libraries associations like American Law Library Association, Canadian Law Library Association, and International Association of Law Libraries (IALL) are playing vital roles to promote law librarianship and legal information management at local, regional, national and international level around the world.

The present age is the age of globalization. In this age, world come together and communicating beyond the boundaries of the countries. The result, international competitions have increased. The IALL is also playing its role in international librarianship. Here, the topic *"Role of International Association of Law Libraries (IALL) in development of law librarianship"* was taken to know about the IALL, its organization and activities in development of law librarianship. The study was done on the basis of literature reviews both primary and secondary. The web site of the association was also evaluated and reviewed to collect relevant data.

International Association of Law Libraries (IALL)

The International Association of Law Libraries (IALL) was founded in 1959.It   is a universal (worldwide) and multinational, non-profit organization created to further co-operation among law librarians, law libraries and others concerned with legal information across borders and continents, and to encourage and promote their interests world-wide[4]. It comprises law librarians, law libraries and other persons and institutions active in the acquisition, delivery and use of legal information from sources beyond their own jurisdictions. The IALL is dedicated to international cooperation among law librarians, the promotion of professional knowledge and understanding through international exchange, the promotion of access to legal information, and more generally the ideals of internationalism.

Purpose of the Association

The purpose of the Association is to promote on a worldwide, cooperative and nonprofit basis the work of individuals, libraries, and other institutions and organizations concerned with all aspects of legal information and to facilitate the use of such information.[5]

Mission of the Association[6]

As a worldwide, cooperative non-profit organization, the International Association of Law Libraries:

a) Promotes the work of individuals, libraries, and other organizations concerned with the dissemination of legal information;

b) Advances the education of law librarians and other legal information professionals by providing substantive educational programs on foreign and international legal systems in venues all around the world;

c) Supports educational and professional opportunities for newer legal information professionals, especially those from developing nations, by providing financial support in the form of bursaries and scholarships for annual course attendance and internships;

d) Shares legal knowledge and scholarship and increases access to legal information on a worldwide basis through the international journal of legal information and other publications, and its website;

e) Fosters networking and mentoring among legal information professionals on a worldwide basis by creating and maintaining ongoing relationships between IALL and other

international, national and regional law library and legal information organizations; and

f) Supports and encourages the development of national and international legal information policies and promotes free access to legal information on a worldwide basis through policy statements and scholarship.

Membership[7]

Any person or institution involved in the creation, distribution or use of legal information may become a personal or institutional member respectively upon the payment of membership dues. Membership shall be of the following classes: regular, associate, life and honorary.

Membership classes	eligibility
Regular Members	An institutional regular member will designate a person as its representative and notify the secretary of the Association of such person's name.
Associate Members	Any person or institution not directly involved in the creation, distribution or use of legal information may become an associate member subject to the approval of the Board of Directors and upon payment of membership dues.
Life Members	Any person who has been a regular member of the Association for more than twelve years and who has retired may be elected life member of the Association by the Board of Directors.
Honorary Members	Any person may be elected honorary member of the Association by the Board of Directors for outstanding and distinguished service to the Association.

Membership annual fee is as follows:
- Student membership – US$20
- Personal membership – US$95 (North America, the EU, EEA, Australia and New Zealand)

  – US$60 (for all other countries)
- Institutional membership – US$130

The IALL offers following benefits and opportunities to its members:
- A connection with a worldwide network of law library professionals
- The membership fee includes a subscription to the International Journal of Legal Information.
- Discounts on IALL Annual Courses registration
- Access to IALL LISTSERV

Presently, the IALL has over 700 members in more than 50 countries all over the world. The members represent all types of legal collections ranging from academic law libraries of all sizes to corporate libraries, and from national and parliamentary libraries to administrative agency and court libraries[8].

Organization of the Association[9]

The organization of the association consists:

A. Officers of the Association: The officers of the Association shall consist of the president, first vice-president, second vice president, secretary and treasurer to be elected by the regular members of the Association. Each shall serve a term of three years or until his or her successor is elected.

B. Board of Directors: The Board of Directors shall consist of the officers of the Association, eight additional members, and the immediate past president. Five of the Board members shall be elected by the regular members of the Association, and three shall be appointed by the outgoing Board of Directors. There shall be two ex-officio members of the Board of Directors: the Editor of the Journal of Legal Information and the Director of Communications. All members of the Board, regular and ex-officio, shall serve a term of three years. Officers and Regular members of the Board of Directors, other than the ex-officio members, shall serve not more than two successive terms as regular members of the Board. The Board shall exercise all of the powers of the Association between membership meetings, except those specifically reserved to the members in this constitution, but it shall keep members informed of the activities, and it may poll them on important questions if it so desires.

C. Committees: Nominating Committee shall be appointed for preceding each election year according to the IALL Constitution. In addition to the Nominating Committee, the President may appoint such additional committees as he or she believes appropriate, and designate the chair to serve during his or her presidency. Sub-committees may be established by a committee to assist it in its work. The current IALL committees are listed below:

i. Communications Committee: The Communications Committee provides advice and counsel to the editors of the International Journal of Legal Information (IJLI) and the IALL web site, while developing other IALL print and electronic publication and communications initiatives.

ii. Conference Committee: To advise the Officers, the Board and the Board Liaisons on the planning and coordination of Association

conferences.

iii.   Finance Committee: To advise the Officers and the Board on financial planning and financial administration of the Association and to assist the Treasurer in drawing up an annual budget and in monitoring the finances of the Association.

iv.   Scholarships Committee: The purpose of the Scholarships Committee is to administer the funds made available by the Association for programs of financial assistance and its work includes formulating programs, advertising and selection of recipients. At present the Association offers professional development bursaries to enable law librarians who are normally unable to benefit from Association activities to attend the IALL annual conference. The Committee is also considering how the Association might play a part in assisting law librarians to undertake placements or exchanges internationally to promote their professional development.

v.   Web Site Award Committee: IALL wants to recognize valuable legal information web sites by this award. The Association would like to encourage the development of useful, authoritative, reliable, and user-friendly sites and will make its selection on this basis.

Activities & Achievements of IALL
The following activities are being performed by the association:

A) Courses in International Law Librarianship[10-11]

The annual course in international law librarianship is the Association's main meeting and educational event of the year. It takes place in different cities around the world each year and reflects the local legal environment and culture as well as addressing international issues of importance to all legal information experts. The annual conference is also a catalyst for change and improvement in the recognition of the role of law librarians and of legal information itself. It regularly attracts delegates from over 25 countries. Over the last few years it has taken place at the University of Cape Town, in Mumbai, and of course in Russia. 31 Annual Courses on International Law and Legal Information were organized till date at various places around the world. The 31st Annual Course on International Law and Legal Information on Canada: The Cultural Mosaic and International Law was organized between September 30 – October 4, 2012 at Faculty of Law, University of Toronto & Osgoode Hall Law School, York University, Toronto, Canada and 32nd Annual Course on International Law and Legal Information is going to be held in Barcelona, during15th – 19th September, 2013.

B) Collaboration and Cooperation[12]

It is part of the role of the Association to collaborate with national and regional law library associations and, where possible, to assist in the formation of new associations. The International Association of Law Libraries has collaborated with IFLA for many years and recently, with the American Association of Law Libraries, sponsored the formation of a Section of Law Libraries within IFLA. The Association continues to offer support to the new Section as it contributes to the programmes within the World Congress and contributes to the policy-making and lobbying activities of IFLA on behalf of associations such as our own. It is to be hoped that IALL together with the Section on Law Libraries in IFLA can play an increasingly important role in international policy.

One of the watchwords of modern librarianship is collaboration. We know we need each other. So many initiatives and collaborative projects rely on coordination of efforts and these ultimately rely on contacts, on contact between a relatively few people and on meetings between individuals, increasingly on an international basis. The role of the IALL in facilitating international networking is extremely important.

C) International Networking and IALL[13]

International networking can start at home and, of course, networking can be virtual. Anyone can participate through lists and discussion groups, membership of national and international associations, reading their publications, and building up contacts by email. However, there is a whole world, where anybody can meet to interact with international colleagues. The IALL website provides an international calendar of events but IALL itself, its scholarships and Internships, and particularly its conferences are the best opportunities for international networking. IALL looks forward to more members becoming involved in the association's activities.

D) Scholarship & Internships Programme[14]

The Association operates an extensive scholarship programme to provide financial assistance to law librarians, not limited to members of the Association, to attend the IALL annual conference. The IALL offers three bursaries each year to attend its Conference comprising the following benefits: the conference registration fee is waived, a grant to assist with accommodation and travel costs of up to US$1,500 and membership of IALL for one year including the *International Journal of Legal Information*. These grants are not limited to members of the Association.

The Association also provides financial assistance to undertake internships or extended visits to law libraries overseas and to pursue relevant research

projects. IALL's Placement and Internship grant programme is designed to assist law librarians who are financially unable to undertake an unpaid or non-stipendiary internship, placement, fellowship or extended visit to a law library outside their own countries. Placements may be for a minimum of two weeks and a maximum of two months. The IALL offers one grant each year of up to US$3,000 to assist with the cost of travel and accommodations. A smaller grant may be awarded depending on the duration of the visit or placement, the location of the applicant's institution and the location of the host institution. Grant recipients also receive a one year complimentary membership in IALL that includes the journal.

E) Publications of the IALL[15]

i. **The International Journal of Legal Information (IJLI):** *The International Journal of Legal Information* is the official publication of the International Association of Law Libraries. It is issued three times a year: Spring, summer and winter. It seeks to advance the exchange of legal information throughout the world. Under the direction of its international editorial board and advisors, the *IJLI* serves the global community of law librarians, legal scholars, and practitioners through the publication of original articles, conference papers, bibliographies, book reviews, documents concerning law and law-related information. The journal was started as *IALL Bulletin* in 1960. The IALL Bulletin was ceased in 1972 and a new journal "*International Journal of Law Libraries*" started since 1973, which was later on, in 1982 renamed as *"International Journal of Legal Information*". The Journal continues to be published in print as a major contribution to law librarianship around the world with the assistance of West Publishing but is also now available in electronic form both commercially and in part through open access routes.

ii.

iii. **IALL Handbook of International Legal Information Management:** The Association has published '*IALL Handbook of International Legal Information Management'* with Ashgate Publishing in 2011. The handbook was edited by Richard A. Danner and Jules Winterton, officers of the Association. This is a substantial volume and provides law librarians around the world with a comprehensive and authoritative state-of-the-art review of the current issues in legal information management with a global perspective.

iv.   **Other Publication:** The association also published *"A Selective Bibliographical Guide on the Law in the United States of America"* in 1965. The proceedings of annual courses and conferences are also being published by the association. Since 1994 proceedings of the courses have usually been published in one issue of the Journal.

International Association of Law Libraries and India[16]

The 26th Annual Course on International Law and Legal Information Global Challenges & the Indian Legal System was organized by International Association of Law Libraries during 1st – 5th December 2007 at National Centre for the Performing Arts, Mumbai, India. Various papers related to Indian legal system and law libraries in India were presented and discussed in the conference. Law librarianship in India is still a new field and much needs to be done for the development of law libraries in a coordinated manner. In this way, an attempt has been made to form an Association of Law Librarians in the country, but the Association could not be registered and is yet to be given a formal birth.

Conclusion

Law library associations play an important role in enhancing the professionalism of their members and enhancing the quality and efficiency of library services. Each country has a different legal system and a different system of legal publications, indeed each country may well have multiple jurisdictions. The legal systems may belong to larger families of legal systems, they may have influenced each other, but they still remain an expression of the culture and identity of a jurisdiction.[17] IALL promotes the law library profession and access to legal information. The association has been playing roles to make aware professionals with foreign and international legal systems, understand the sources of law, and recourse to expertise beyond our local resources. For this, the IALL publishes the International Journal of Legal Information and offers Annual Courses on International Law Librarianship. IALL provides an international forum for networking and information sharing among legal information professionals worldwide and supports professional development by awarding scholarships for annual course attendance and grants for internships. IALL has been privileged to act as a catalyst for the establishment and development of national and regional law library associations.

Law librarians will meet many opportunities and challenges in the coming years but they will be well placed to share their expertise as globalization in all its manifestations and the growing interpenetration of legal systems requires all of us to broaden our knowledge and our network of contacts.

There is an increasing need for law librarians to gain experience in working with foreign legal information sources and to develop personal and professional relationships with law librarians around the world. There are opportunities to learn but also to contribute your own expertise because there will be many law librarians wanting to learn from you.

The IALL is playing its role at international level. In India, a national level law library association should be established to provide a platform to share experiences.

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Use of Library by Faculty in National Institute of Technology: An Assessment

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Abstract

Purpose: The aim of the present study is to investigate the use of library by the faculty of National Institute of Technology. Study intends to know about the information seeking behavior of faculty while seeking information from different sources in library and out side the library. Preference of faculty for print or electronic / digital sources and the problems faced while using different information sources is also ascertained in the study.

Design/Methodology/Approach Questionnaire method is employed to obtain data from the faculty of National Institute of technology.

Findings The study reveals that faculty is using library services and resources for different purposes particularly for teaching and for pursuing research activities. Majority of faculty prefer electronic / digital resources and are using internet for different purposes.

Research Implications Findings of the study can help concerned authorities at National Institute of Technology (NIT) to take necessary measures for revitalizing the library in order to make it a vibrant learning center in the institution.

Keywords: Information Seeking Behavior, Faculty, Library, NIT
Paper type: Research paper

Introduction

Information is a vital input to different types of activities performed by different categories of persons. Due to significance & importance of information today, it is regarded as wealth and power also. Today information has become the necessity of every one. Everybody needs information for some purpose or the other. Professionals like medical doctors would like to know the new developments in medical science. Information is regarded as a valuable asset in the modern world and its importance in overall progress and prosperity of all facets in human life is recognized by every intellectual. Engineers and technologists need information for solving their technical problems. Managers need more and

more information for taking managerial decisions. Similarly teachers and students need information to keep themselves fully abreast with the latest developments in their respective fields. Modern society incessantly produces and uses information. In the contemporary information age, information is being generated in large quantities and this large amount of information is creating what we call as information explosion, information pollution, information overload and information anxiety like challenges. Due to information explosion, people are facing numerous problems in accessing precise and relevant information. With the impact of new technologies, most people are interested in accessing information with the aid of technologies because of faster accessibility and availability. Individuals use different sources of information varying from print sources to digital ones. Advent of internet has provided great opportunities for people to have access to large number of information sources generated both at national and international level in order to keep themselves aware and up-to-date about the latest trends and developments in their field . Present paper also focuses use of library by the faculty members of the National Institute of Technology (NIT), Srinagar.

Review of Literature
Library and Information centers have gained an important position in any academic institution because of the role played by these libraries in disseminating information to the right corners where it is to be utilized for overall progress and prosperity. Success of any library and information center depends on the satisfaction of library patrons. Thus a number of studies have been conducted in different parts of globe highlighting information seeking behavior of library patrons while using resources and services provided by libraries. The purpose of this literature review is to provide an overview of research studies from 2000 to 2011. Previous studies provided guidance and background information on analyzing the information behaviour of faculty members. Information seeking behaviour is expressed in various forms, from reading printed material to research and experimentation. Information users make active and intentional attempts to seek up-to-date information from the library resources, including electronic sources. Shokeen and Kushik (2002) report on a study about information seeking behaviour of social scientists in the universities of Haryana. The study showed that most of the social scientists visit the library daily. The first preferred method of searching the required information by the social scientists by searching through indexing and abstracting periodicals, and citations in articles respectively. The social scientists use current journals followed by books.

Information-seeking behavior of faculty members from Government Arts Colleges in Cuddalore District was studied by Suriya, Sangeetha, and Nambi (2004), to evaluate information-seeking pattern of faculty members in the library. Most of the respondents visited the library several times a week to meet their information needs. In Pakistan, the evaluation of information needs and information-seeking behavior has gained interest during the last two decades. Qureshi (2008) investigated the information needs and seeking behavior of students in university of Pakistan. The study concluded that there are several factors that have significant effect on student's behavior such as educational and cultural background, surrounding environment and student participation, which have high positive impact on information needs and information seeking behavior of student. If surrounding environment is helpful and student's participation is active and then it will create culture that enhances the student's information gathering system. Beside these old studies in the recent years, few more studies were conducted. For example, Shazad (2007) conducted his research to find out the information seeking behavior of faculty members at GCU, Lahore. Tahir, Mahmood, and Shafique (2008) studied the information needs and seeking behavior of Arts and humanities teacher of university of the Punjab. Tahira (2008) studied information needs and seeking behavior of science and technology teachers at university of the Punjab for her M.Phil study. Ansari (2007) carried out her PhD research to find out the information needs and seeking behavior of media practitioners in Pakistan. Within the city of Bahawalpur, only one study was conducted by Nazli (2001) to find out the information seeking behavior of user community at the Islamia university of Bahawalpur library. Fatima and Ahmad (2008) investigated the information needs and seeking behavior of student at Ajmal Khan Tibbiya College, Aligarh University. The study showed that use of library resources needs to be increased. It was concluded that students oriented information resources needed to be facilitated so that the utilization of library resources and services may be maximized

Bhatti (2008) investigated the information needs of students of the Islamia University of Bahawalpur. It was concluded that current provisions of various kinds of library services did not show the positive picture. Most of the students and researchers complained about the lack of indexing and abstracting of services in the library. The reference services were not found to be useful by users to some extent. However, research students expressed that the material their library was providing was valid and accurate in terms of their information contents. Akhter (2008) studied the library services and user satisfaction from the departmental library of LIS department, Punjab University, Lahore. He concluded that most of the users were not satisfied

with the overall quality of library services. Most of the respondents said that there was a lack of professional journal in the library. They demanded for Web OPAC, TOC, and CAS and suggested that e-mail of relevant information services should be arranged in library. Similarly, Shafique (2009) also explored the research student's satisfaction with the library services of the same department and found that most of the research student did not find their departmental library services very satisfactory. She also recommended many library services to fulfill research student's information needs. Kakai, et al., (2004) have defined information-seeking behaviour as an individual's way and manner of gathering and sourcing for information for personal use, knowledge updating, and development. Information-seeking behaviour of students, researchers, and professionals has been the focus of enquiry for decades. Initially, however, user studies were conducted primarily to evaluate library collections. These were followed by studies of the research habits of individuals or groups that would lead to the design of appropriate information systems and services. During the past 30 years or so, a considerable body of literature has been produced dealing with information needs and information-seeking behaviour of both individuals and groups in a variety of contexts (Anwar, Al-Ansari, & Abdullah, 2004). Many studies have been conducted to investigate the information-seeking behaviour of library users based on their subject interest, occupation, information environment, and geographical location. Information needs and information-seeking behaviour of academics have also been a popular area of research for the information scientists for decades (Majid&Kassim, 2000). Anwar (2007) reviewed different research studies on information needs and information-seeking behaviour of different groups of people in Pakistan. He mentioned fifteen unpublished studies conducted on the subject so far. He stated that "the nature of information is not easy to describe. One definition from the literature defines information as recorded experience that is used in decision-making. Today, information technology has developed rapidly and has a huge impact on access to information and on information seeking behaviour. Librarians and library-staff must understand the criteria of information seeking and information used by users for providing information services, designing new information systems, intervening in the operation of existing system, or planning service programmes". He has critically analyzed the beginning of research activity on information needs and presented an analysis of the literature on information needs and seeking behaviour in Pakistan. He reviewed 14 student-research projects produced from 1975 to 1982 at the University of the Punjab, which have remained unpublished. He also concluded that there is a dire need for the LIS academics and practitioners

in Pakistan to take note of the current state of affairs and take steps to promote and conduct research in this area.

Modern society incessantly produces and uses information. Information diffuses through society in many ways. In this information age there is so much of information being generated that we are confronted with information explosion, information pollution and exponential growth of information. Due to this information explosion or information pollution the people are confuse about the information need, information access and information sources. With the impact of new technologies such as information technologies most people are interested in accessing the information through these sources because of faster accessibility.

Objectives
Objectives of the present study are:
- To investigate the information seeking behaviour of faculty at NIT.
- To examine the use of library by the faculty members.
- To ascertain the popularity of Print /electronic formats of information sources among the faculty.
- To identify the problems faced by faculty while using library resources and services.
- To suggest measures for overcoming the problems.

Scope
Scope of the study is confined to Faculty (Teachers) in National Institute of Technology, Srinagar (Jammu and Kashmir).NIT is the primer institute imparting education and training in the field of engineering and allied fields. Earlier it was known by the name "Regional Engineering College" but now it is known by the name "National Institute of Technology".

Methodology
Descriptive methodology is adopted to achieve the objectives. A well framed questionnaire is used for collecting data related to the problem. One hundred and ten (110) questionnaires were distributed among Faculty members. However, only eighty-one (81) responded, making an overall response rate of 73.63%.

Data Analysis

Questionnaires were distributed among one hundred and ten faculty members at NIT Srinagar. Only eighty-one responded, making an overall response rate of 73.63%.

Gender

Data gathered from Respondents when analyzed indicates majority of respondents 67%are male and the rest of the respondents (33%) are female as indicated in Fig.1
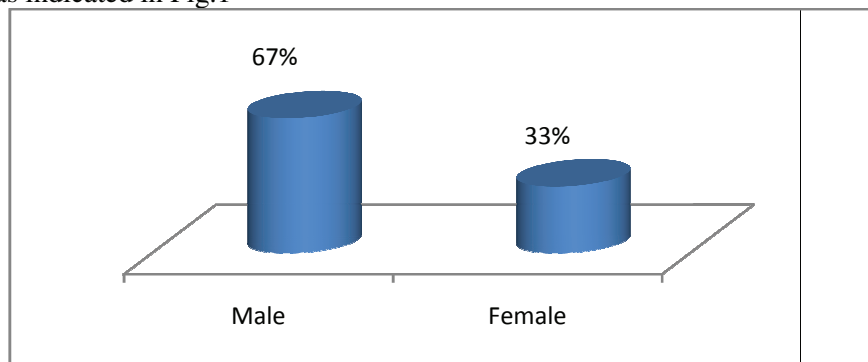
Fig. 1 Gender of Respondents

Departmental Affiliation

Faculty members included in the present study belongs to different disciplines taught in the said institution. Demographic characteristics of faculty members are indicated in table 1.

Table 1 **Departmental Affiliation**

Name Of Department	**Total**	**Percentage**
Chemistry and Chemical Engineering	13	16.04
Civil Engineering	12	14.81
Computer Science and IT	11	13.58
Mechanical Engineering	11	13.58
Electronic and Communication	8	9.87
Electrical Engineering	7	8.64
Humanities and Social Science	6	7.40
Physics	5	6.17
Metallurgical Engineering	4	4.93
Mathematics	4	4.93
Total	81	100%

As it is evident from table 1 that majority of respondents (16.04%) belongs to Chemistry and Chemical Engineering followed by Civil Engineering (14.81%), Mechanical Engineering (13.58%), Computer Science and IT(13.58%), Electronic and Communication (9.87%), Electrical Engineering (8.64%), Humanities and Social Science (7.40%), Physics (6.17%) and least number of respondents belongs to Mathematics and Metallurgical Engineering each having (4.93%) .

Faculty's Position
Position of faculty members varies as is evident from table 2.

Table 2
Faculty Position

Faculty's Position	Total No.	Percentage
Professors	8	9.87
Associate Professor	12	14.81
Assistant Professor	61	75.30
Total	81	100

From Table 2 it is evident that large number of respondents (75.30%) is Assistant Professors followed by Associate professors (14.81%) andwere Professors (9.87%).

Use of library
Faculty is getting support from libraries in the form of availability of information resources. In order to consult these resources faculty made visits to library. How frequently they are visiting the library as indicated in table 3.
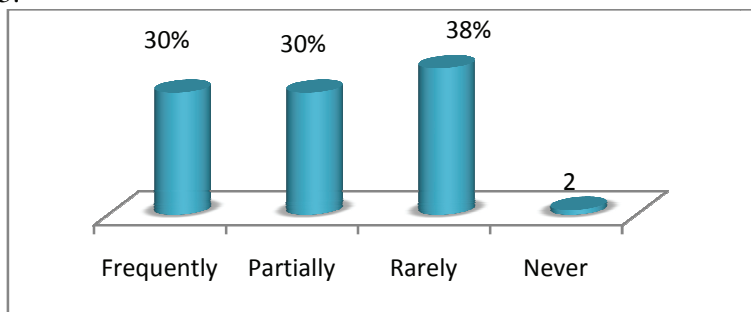
Figure 3   Use of Library

Majority of users (38%) are rarely using the library. Data also reveals that equal no. of faculty members (30%) are visiting the library frequently and partially (Fig. 3).

Purpose of Seeking Information

Responding of the question regarding purpose of seeking information, respondents revealed different purposes as indicated in table 6.
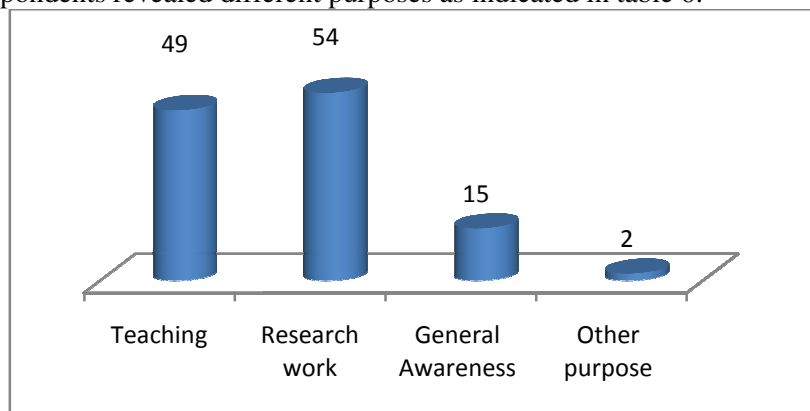
Fig 4 **Purpose of seeking information**

Data collected from the respondents reveals that majority of respondents sought information for pursuing their research work (54) followed by those respondents who use library resources and services for teaching purposes (49).A number of faculty use library for updating their general awareness (15) and least number of faculty members (2) sought information for other purposes as shown in Figure 4.

Preferred Information formats

There are generally two formats in which information is stored or gathered, i.e. electronic and print. Respondents were asked to indicate their preference for electronic resources or printed sources. The data collected is as indicated in table 6.

Table 6
Format Preference

Format	Preference		Total
	Male	Female	
Print copy	18 (33.33)	9 (33.33)	27 (33.33)*
Electronic copy	12 (22.22)	3 (11.11)	15 (18.51)
Both	24 (44.44)	15 (55.55)	39 (48.15)

*Data in parenthesis indicates percentage

It was interesting to note that NIT Srinagar faculty members believed to possess better computing skills prefer using print material to electronic. This finding also contradicts a general perception that due to rapid advancement in information technology, electronic sources are becoming more popular and acceptable to library users. It is evident from the table that majority of faculty (48.15%) are liking information sources in both print as well as electronic formats. On further analysis of data, it emerges that printed sources of information are still popular among the users.

Use of Internet

Respondents were asked about the internet usage. Data collected reveals that majority of faculty members (95.07%) use the internet and only a slight percentage of faculty (4.93%) faculty members don't use internet so for. The data also indicates that female faculty members are using internet more than male faculty members. Popularity of internet among faculty is very much evident from the data (Table 3).

Table 3
Internet usage

Response	No. of Respondents		Total
	Male	Female	
Yes	51 (94.44)	26 (96.29)	77 (95.07)*
No	3 (5.55)	1 (3.70)	4 (4.93)
Grand Total			81 (100)*

*Data in parenthesis indicates percentage

Usage of information sources

There are a variety of information sources available in the library in print as well as electronic / digital formats. Responding to the question regarding the usage of information sources, faculty members differ in their interests of consulting and in using information sources.

Table 4
Information Sources Used

Sources	No. of Users		Total
	Male	Female	
Books / Monographs	40	19	59

	(74.07)	(70.37)*	(72.83)**
Journals/Databases	13 (24.07)	11 (40.74)	24 (29.62)
Conferences/ Seminars	11 (20.37)	3 (11.11)	14 (17.28)
Thesis / Dissertations	13 (24.07)	8 (29.62)	21 (25.92)
Internet	17 (31.48)	16 (59.25)	33 (40.74)
Other sources	5 (9.25)	4 14.81	9 (11.11)

*Data in parenthesis indicates percentage

** It is a multiple-choice question, so percentage cannot be rounded after 100.

Table 4 indicates that majority of faculty members (72.83%) consult books, monographs and data sheets followed by (40.74%) faculty members who consult internet and least number of faculty members (11.11%) rely on other sources of information like patents, standard etc.

Problems Faced

Faculty members are facing lots of problems in getting the information. The data analyzed in the table 5 indicates their problem.

Table 5

Problems Faced

Problems Faced	Respondents		Total
	Male	Female	
Information is scattered in too many sources	22 (40.74)	10 (37.03)*	32 (39.50)**
Information explosion	11 (20.37)	5 (18.51)	16 (19.75)
Latest information sources are not available	11 (20.37)	2 (7.40)	13 (16.04)
Lack of time	5 (9.25)	7 (25.92)	12 (14.81)
Non availability of relevant e-journals and databases	22 (40.74)	8 (29.62)	30 (37.03)

*Data in parenthesis indicates percentage.

** It is a multiple-choice question, so percentage can not be rounded after 100

Information scattered in too many sources is a big problem faced by majority of respondents (39.50%). A good number of respondents are facing problems (37.03%) due to non-availability of e-journals and data

bases. Other problems faced by the faculty are lack of time (14.81%) , Non availability of latest information sources (16.04%) , too much information i,e., information explosion is also one of the problem faced by respondents (19.75%).

Discussion and Suggestions

Libraries and information centers are regarded as rich springs of knowledge that irrigates the field of education. Libraries play a very important role in furthering the intension and extension of knowledge by providing information support to teachers, students and scholars in any academic institution. Library of NIT is also housing rich sources of knowledge. These sources are being exploited by the faculty, students and scholars. Findings of the present study reveal that although a good number of faculty are making effective use of the library but the fact that majority of faculty (38%) of NIT is using library rarely is to be taken seriously and appropriate measures are to be taken for turning this majority of rarely using library into those who will use library frequently. Findings of the study demand that library authorities should regularly evaluate both resources and services in order to turn dissatisfaction of respondents into satisfied ones. Barriers and problems faced by faculty while making use of information sources must be demolished by conducting information literacy programs.

Conclusion

Libraries being knowledge repositories revitalize teaching, learning and research programs of any academic institution. If men, machines, money and materials of libraries are properly managed, mission of libraries in terms of providing pinpointed, exhaustive and expeditious information to the patrons can be achieved effectively and efficiently. Information and communication technology has provided new opportunities for library professionals to provide relevant, reliable and timely information to the library patrons not only within the premises of the library but also outside the library anywhere, anytime on 24*7 bases. Library authorities at NIT need to be proactive in order to redefine the library services by adopting latest technology for acquiring, organizing, preserving and ultimately dissemination information to those who are in need of information.

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Role of library in adult education: An overview

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Abstract

Today, education is the most important tool for the progress of a nation. No country can imagine of its overall development without education therefore, libraries are getting more important day by day. They facilitate learners with the books required for their particular need. However, libraries are important for the adults who have been deprived of education in the Initial stage of their life. These adults can get access to knowledge and books by joining a library where they can study whatever they like without any sense of shame and feeling of humiliation, if the adults of a country show interest in acquiring knowledge, this is a good sign as it will help eradicate illiteracy from the world and will also equip adults to face the challenges and problems successfully. By the acquisition of knowledge, the adults will be able to discharge their responsibilities as ideal citizens and contribute to the welfare of their country. But for all this to happen, availability of a well-equipped library is a must. This paper aims to ob sure the role of libraries in adult education.

Introduction

A good library is the need of every good society. It not only educates people but also wakes them cultured. Today every school, college, university, village, city and other higher units of place owns a library where children, adults and old people go in search of books and other relevant materials fit for their specific studies. Thus, libraries are very important for people of every stage of life. However , it is interestingly most important for adults who have been deprived of fundamental education. These adults can get access to the library of their respective areas and acquire knowledge by reading books of their choice libraries literate adults in a very comprehensive way. They come here and study without having to face any humiliating situation like question-answer session etc. Thus, for the adult education, libraries are very important. They help adults acquire new skills and techniques and cultivate good habits and attitudes. More one they broaden their outlook on society and world.

Adult education

Though without Primary education the adults have a learning to study and acquire knowledge which is beneficial for them and their society. It is also socially and economically necessary. Society is generally run by adults who constantly make decisions on questions of a private or public nature as they arise. The quality of the adults as operators and decision makers, life in the present and the future. Adult education properly conceived, contributes towards insuring that the quality of the adults, the productiveness of their operations and the value of their decisions are as high as can be achieved by institutional means. Thus there underlies in all education: that it is a means to improve the quality of the individual and society.

Other types of Education

A part from the adult education, there have been other types of education namely, social education, fundamental education, community education and distance education. Social education improves the individual's ability to live if as a make if a group called society. It includes remedial, vocational, recreational, health, social skills and self-development education for achieving higher standards of life through society or social groups. It also absorbs the content of adult education and gives it a social orientation. Fundamental education is preparation of children or adults without opportunity for traditional formal schooling for effective participation in community life through instructions in basic facts and skills as of literacy, agriculture , dwelling, hygiene and citizenship. Distance education provides extension of education opportunities; and general education, liberal education, science education, technical education, vocational education and research programs are offered through distance education. The courses are more structured at lower levels than at higher levels. In recent years distance education programs are also extensively used by industries to train their staff. These are efforts to make education of adults more market oriented. Multimedia including electronic media and printed lessons are extensively used in distance education.

Other education activities

A part from the types of education afore mentioned there are certain activities & programs like exhibitions, film display, musical and dramatic activities, etc. Which may be used as if future learns to spread education and faster awareness in adults and thus, these activities contribute to adult education.

Main objective of adult education

The main objective of adult education is the overall development of adult. Long Back E.M. Hutchinson, Secretary of the National Institute of Adult Education stated in his paper submitted to the International Conference on Adult Education in Denmark:

"Adult education is taken to mean those forms of education which are undertaken voluntarily by mature people which have as their aim the development, without direct regard to the vocational value of personal abilities and aptitudes and encouragement of social, moral and intellectual responsibility within the   framework of national, local and world citizenship."

Media of adult education

There are certain media like religious institutions, public organizations, schools, colleges, universities, museums which help spread adult education in any society. Business organization, labor organization, clubs and libraries are suitable for promotion of adult education programmes. For the purpose of this address, the role of libraries in adult education has been specified.

Role of library in adult education

The library is a very effective medium so for as the spread of adult education is concerned. It fosters in adults the desire to learn which the most essential thing is. It facilitates their learning. They may go to any library of their area and study the books of their need and choice. A public library provides them with an opportunity to learn without going to a school, college or university. According to Dr. S.R. Ranganathan, the library is an agency for life-long education an agency for universal and perpetual self- education. It is the only stable agency to in street, inform and mould minds and lives of people.

The library provides the following six adult education services:
1. It supplies books, films, recording tapes and other learning materials;
2. It helps in planning the educational activities;
3. It offers advice to the community on subjects, methods and materials;
4. It trains the readers and librarians in skills and techniques necessary to adult education activities;
5. It informs about the opportunities available through web and materials; and
6. It performs all possible activities to promote adult education.

Conclusion

In conclusion, it can safely be argued that libraries have a very significant role in the spread of adult education. They facilitate learning in a peaceful ambience where adults feel no kind of share while learning. Having acquired knowledge, the adults will be able to take themselves in the main stream of society and will also be able to contribute to the overall progress of their country. They will no longer be burdens on society. Rather they will be rendered into quality human beings with same amount of self-esteem and zeal to do something for the country. Hence libraries are very important for adult education which supplies adults with a variety of means to learn from, nearly, books, films, recording tapes and other learning materials. It helps them in planning educational activities, trains them in different skills and techniques and creates opportunities for them. It infect, promotes adult education is every possible way.

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Ethical and Academic Issues related to Information

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Abstract

Information is a basic resource and input for all kind of development. There are various steps in information cycle, such as: need, search, collect, process, evaluate, use, disseminate and feedback. Intellectual property, copyright, plagiarism and citation issues are the core issues related to information. In this article plagiarism is discussed in detail. How to avoid plagiarism is also discussed with examples. Quote, paraphrase, summarizing, survey/ experiment based studies, read and write, etc are the techniques to avoid plagiarism. Plagiarism is an offence and it is also related to moral and ethical issues. Authors should be aware of cyber plagiarism also.

Keywords: Information, Plagiarism, Ethical and Academic issues.

Introduction

In the present world, information has become a major resource by itself and source to other resources. As an individual or community, we cannot live without information. In every step, irrespective of education, social or economic background, everyone needs information, which one applies to realize his goals. In the present environment it is not easy to use information, because it is a resource and is protected by various laws with various restrictions on its use. Library and information science (LIS) professionals should be aware of the academic and ethical issues related to use of information. As professionals if we are providing information services, we must be acquainted with the consequences of misuse or ill-use of information in various contexts.

In today's world human interests are so intertwined that nobody can claim that he does not need information or he does not want to become information literate. Information literate persons can feel, search, collect, analyze, synthesize and use information effectively and efficiently. In the present ever-changing electronic environment, right information at right time can save a lot of energy, time and efforts. In the learning society information is an Intellectual Asset (IA). Proper knowledge about this IA can make and mar in the real life situation.

Various points of   Information Use Cycle
Information is accepted as a source of all resources, so it is easy to grasp the importance of information. Everyone is involved in various activities linked to information world. Getting information is a cyclical process, which can be understood with the following diagram. The diagram given below describes eight points of information use cycle. These all steps are co-related and interdependent.
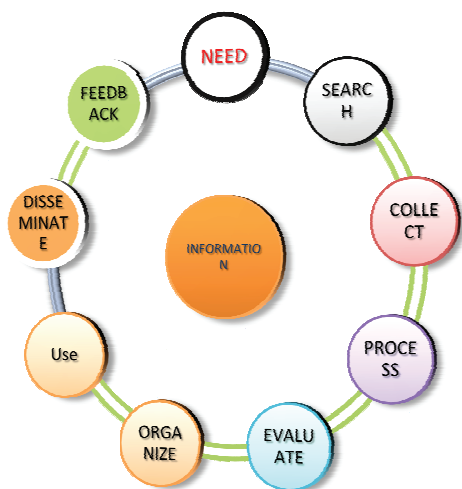
Need: People need information for various purposes and want to satisfy need in various ways.

Search: Next, people search information in various available media, such as: print, non print, electronic etc. People select resources as per their convenience and accessibility. People search needed information on their own or with the help of various agencies or others. This search process varies person to person, place to place or society to society. Search process is also influenced   by age, gender, socio-economic background of the information seeker and other various factors. In the present electronic environment wi-fi connectivity is preferred. LIS professionals must keep in mind, the search process employed by people is not static; it is always changing.

Collect: After search, people collect needed information. In the huge amount of information, it is very difficult to collect the right information, in right form and in right time. In the present world there is a flood of disinformation and misinformation. So how to collect right information is a challenge before people or professionals.

Process: Collected information is processed by people. This process is completed by user. They may also take help of experts to decide its genuineness and completeness. Information may be processed alphabetically, chronologically and may be classified in other ways depending on the need of the user.

Evaluate: At this step user assesses information critically**.** Evaluation needs scientific thinking. It is a difficult step. Inductive and deductive logic may be applied for evaluation purpose. Causation theory may be helpful for the evaluation purpose. Objectivity must be maintained while evaluating information as it is not easy to maintain objectivity. Every person has his beliefs and background knowledge. Evaluation process filters information. Filtered information is useful to apply to solve the problems faced by the people or society.

Use: At next step people use information to satisfy their need. Information is used in various contexts to resolve problems, big or small. Day to day life is very much dependent on the use of information.

Disseminate: After using   information, people disseminate information by various means. People share information through various ways, such as: symbols, gestures**,** spoken words, formally written or in other ways. People disseminate information for various regions.

Feedback: As a person we always receive inputs from various sources regarding information. These inputs further creates some scope to feel need of information again thus the process of information never ends.

Key Issues Related to Information
There are various issues related to the information. These are:
- Intellectual Property
- Copyright
- Citation Issues
- Plagiarism

Intellectual Property: Intellectual property is **"**created by the mind or intellect." It may include: articles, books, poems, paintings, inventions, designs, images, logos, names, etc.

Types of Intellectual Property Rights (IPRs): There are various types of IPRs, such as: copyright, patents, trademarks, design, integrated circuit layout design, industrial design, geographical indications, etc.

Citation Issues incorporates various issues, such as: bibliography, footnotes, appendix and index.

In this article only plagiarism issue is discussed in detail.

What is Plagiarism

According to Harrod's glossary plagiarism is "using another person's work and publishing it as one's own without payment or acknowledgement."

Chris Hart (2005) says that plagiarism is "the act of knowingly using another person's work and passing it off as your own." Both definitions clearly elaborate the act of plagiarism.

As we are aware, there is flood of information, especially in the electronic environment. So researcher must be aware of 'who said what' before writing an article or any academic work. Proper review of literature must be done before writing any academic assignment. Do not use others words and ideas as your own. Always acknowledge the authors. If you are taking others words, put quotation marks and give complete bibliographical detail. Taking the words without quotation/ citation is a violation of copyright act. It is also to be noted that you cannot change or revise others ideas and present as your own.

How to avoid plagiarism?

Plagiarism must be avoided in academic setup. Academic community can minimize this problem by adopting and applying following points.

Quote

For quoting author has to copy exact words, whether written or spoken, it is acceptable to use other's words. If sentences are used verbatim, quotation marks must be used. Make citation with full bibliographical details. Use brackets [( )] if you are adding your own words in quoted material. It is needed because sometime it is necessary to use definition or statements or facts in a particular context.

Example : Analytico-Synthetic Classification

> *"In Colon Classification, readymade Class Numbers are not assigned to subjects. The schedule in the Colon Classification may be said to consist of certain standard unit schedules. These correspond to the standard peace in a meccano apparatus. By combining this standard in different ways, many different objects can be constructed. Even a child knows this. So also, by combining the numbers in the different unit- schedules in assigned permutations and combinations, the Class Number for all possible subjects can be constructed."*

- Ranganathan, S. R. Colon Classification. Bangalore: Sarada Ranganathan Endowment for Library science,1994.P.12-13.

Above mentioned paragraph has been taken from the book "Colon Classification by S R Ranganathan".   Some of the acceptable ways to use of Ranganathan's work may be as follows :

- **Acceptable** : S. R. Ranganathan in his book Colon Classification expressed the meccano analogy for analytico- synthetic classification."These correspond to the standard peace in a meccano apparatus. By combining these standard in different ways, many different objects can be constructed."*
- **Acceptable**: S.R. Ranganathan said that analytico synthetic scheme is like a meccano apparatus, one can make different objects by combining the different pieces.†
- **Acceptable** : It is to be noted that analytico synthetic scheme is like meccano apparatus. (Ranganathan 1994 : 12)

Give complete bibliographical detail in bibliography , footnote or /and in endnote.

*Ranganathan, S. R. Colon Classification. Bangalore: Sarada Ranganathan Endowment for Library science,1994.P.12-13.

† Ranganathan, S. R. Colon Classification. Bangalore: Sarada Ranganathan Endowment for Library science,1994.P.12.

The above mentioned idea or expression cannot be taken by others without proper acknowledgement.

Some of the **unacceptable** ways to use of Ranganathan's work.

- **Unacceptable** : In this article I want to express that analytico synthetic schemes are do not assign readymade class numbers. They are based on meccano analogy.
- ➢ **Unacceptable :** In this paper I want to say that in analytico synthetic scheme, class number of all subjects are similar to meccano apparatus.

These all are unacceptable examples of plagiarism. If teachers or students have doubt, discuss with your seniors, colleagues or supervisor. Plagiarism is a serious offense.

Paraphrase

Wilson says "paraphrasing means rephrasing the words of someone else. It is acceptable as long as the meaning is not changed and originator is credited properly with a citation." In the paraphrasing authors use different words and rearrange the words with minor changes. Credit must be given to the original author. Example is given below.

a - Ranganathan says in analytico synthetic scheme, class number of all subjects are similar to meccano apparatus. {Ranganathan, S. R. Colon Classification. Bangalore: Sarada Ranganathan Endowment for Library science,1994.P.12-13.}

b- Nonaka and Takeuchi (Oxford-1995) have expressed their views on tacit knowledge. They considered the tacit knowledge in Japanese business firms.{Nonaka, I. and Takeuchi H.(1995). *The*

Knowledge-Creating Company: How Japanese companies create the dynamics of innovation. New York : Oxford University Press.}

Summarize Summarizing means condensing the thoughts of someone else in a paragraph or a sentence. One can find information or an idea elaborated in many pages, these ideas can be summarized in a line or paragraph. This is acceptable for taking others' ideas by giving due credit to original authors.

Reading and Taking Notes.
 Before writing, must go through the relevant literature. While taking notes others work ["OW"] should be marked as OW or other symbol can be put in double inverted commas with citation. If you have written or developed your own, write –MINE (Wilson). This exercise helps you to avoid plagiarism.

Survey/ experimental based studies
There is no scope of plagiarism if researcher opts for a survey based study in social sciences. Survey based studies provide primary data. Researcher can collect primary data by using questionnaire, observation, interview etc. techniques. Experimental studies will be very effective to avoid plagiarism in natural sciences. Researcher can expand the idea and apply knowledge in another situation also.

Read and Write
As a researcher, you are expected to develop original ideas or at least new interpretation of old established facts and principles. To achieve this purpose, you have to read the literature and then put away all the material, and write your article based on your memory and experience. Consult the original sources and prepare an exhaustive list of references.

Use of Plagiarism Detection Software
There are various plagiarism detection software, available free of cost or on payment basis, such as: turnitin.com, www.copyscape.com, http://www.ithenticate.com/ etc. In India various academic organizations (JNU, MDI, etc.) are using these software to detect plagiarism. Students have to submit a certificate to this effect before submitting any academic work (dissertation, thesis or article). For Indian languages, this kind of plagiarism detection software should be developed to avoid plagiarism.

Conclusion

Plagiarism is related with moral and ethical issues. Awareness is the solution to face the challenge. Authors and students should be aware of cyber plagiarism also. As we know that literary theft is a criminal offense, so academicians must be aware of this issue. There is a scarcity of awareness regarding avoiding plagiarism in India. Academic institutions must pay attention on this issue. Only awareness is the solution of the problem.

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Plagiarism: Issues in the age of Information Explosion

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Abstract

Plagiarism is a most serious issue in digital environment. Uses of data of any author, his language and writing without mention the original source of the information is fall under the category of plagiarism. The act of taking someone else's ideas and passing them off as your own defines the concept of "Plagiarism". Copyright infringement and steeling of information is a criminal offence. This paper discussed about the plagiarism, their type and consequences of plagiarism.

Keywords: Plagiarism, Digital Information, Data steeling, ICT, information theft.

Introduction

No doubt development of information and communication technology rapidly affected the communication of Information on global level. In this era information can be disseminated within the part of seconds on whole world. It is better, but one problem is appeared during this development, which is Plagiarism. It can be define" plagiarism covered the whole process of stealing information, dissemination information, sharing ideas, thought and words of another's or any one's own, without crediting the main source. It can be seen in other way, if anybody claims that he/she is presenting and new and original idea or work or product derived from existing source, fall under the category of plagiarism, which is very serious offence.

Information Explosion

Information explosion is a term used to describe the rapidly increasing amount of published information and the effects of this abundance of data. As the amount of available data grows, managing the information becomes more difficult, which can lead to information

overload. *Information overload* refers to the state of having *too much* information to make a decision or remain informed about a topic. It is often referred to in conjunction with various forms of computer-mediated communication such as e-mail and the web. The term was coined in 1970 by Alvin Toffler in his book *Future Shock*.[1] in current time maximum information is available on internet, which is a reason to plagiarise the information.

Plagiarism

Plagiarism is the act of taking another person's writing, conversation, song, or even idea and passing it off as your own. This includes information from web pages, books, songs, television shows, email messages, interviews, articles, artworks or any other medium. Whenever you paraphrase, summarize, or take words, phrases, or sentences from another person's work, it is necessary to indicate the source of the information within your paper using an internal citation. It is not enough to just list the source in a bibliography at the end of your paper. Failing to properly quote, cite or acknowledge someone else's words or ideas with an internal citation is plagiarism. Plagiarism is also a form of academic misconduct in which you represent someone else's words or ideas as your own. The basic expectation in every class is that whatever you write will be your own words, generated from your own understanding. Therefore it is acceptable to incorporate someone else's words in your paper only if you clearly indicate the words are someone else's. (It is also possible to plagiarize other forms of expression -- someone else's computer program, mathematical expressions, technological designs, creative workings, etc. Here we are concentrating on plagiarism of words.)

Types of plagiarism

1. **Copy and Paste Plagiarism**
   Any time you lift a sentence or significant phrase intact from a source, you must use quotation marks and reference the source.

2. **Word Switch Plagiarism**
   If you take a sentence from a source and change around a few words, it is still plagiarism. If you want to quote a sentence, then you need to put it in quotation marks and cite the author and article. But quoting Source articles should only be done if what the quote says is particularly useful in the point you are trying to make in what you are writing. In many cases, a quotation would not really

be useful. The person who plagiarizes is sometimes just too lazy to synthesize the ideas expressed in the Source article.

3. **Metaphor Plagiarism**

   Metaphors are used either to make an idea clearer or give the reader an analogy that touches the senses or emotions better than a plain description of the object or process. Metaphors, then, are an important part of an author's creative style. If you cannot come up with your own metaphor to illustrate an important idea, then use the metaphor in the Source article, but give the author credit for it.

4. **4. Idea Plagiarism**

   If the author of the source article expresses a creative idea or suggests a solution to a problem, the idea or solution must be clearly attributed to the author. A WORD ABOUT "COMMON KNOWLEDGE" Students seem to have a hard time distinguishing author's ideas and/or solutions from common knowledge, or public

5. Reasoning Style/Organization Plagiarism

When you follow a Source article sentence-by-sentence or paragraph-by-paragraph, it is plagiarism, even though none of your sentences are exactly like those in the Source article or even in the same order. What you are copying in this case is the author's reasoning style. [2]

Plagiarist can be differentiated on the basis of the degree to which the copying has been done. Following are some of the identified categories of plagiarism…

S.No.	Category	Description of Plagiarism
1	**Patch-work Plagiarism**	Copying different people's words and work and presenting them as your own.
2	**Global Plagiarism**	Taking or copying a whole piece of a particular work of another person.
3	**Incremental Plagiarism**	It involves quoting or paraphrasing one's statement without awarding credit to the originator. It has to do with quotation or paraphrase.
4	**The Ghost Writer**	Plagiarist turns in another's work, word for word, as his or her own. This can be called verbatim copy of another person's work.
5	**The Photocopy**	The plagiarist copies significant portions of texts straight from a single source, without doing any alteration.

| 6 | **The Potluck Paper** | Where one tries to disguise plagiarism by copying from several different sources, altering a few sentences and paragraphs here and there to make them fit together while retaining most of the original phrasing. |
| 7 | **The Self Plagiarism** | Where the plagiarist borrows generously from his or her previous work. This is common phenomenon among the writers that they publish the same material through different mediums without referencing it correctly. |

Consequences of Plagiarism

The consequences of plagiarism can be personal, professional, ethical, and legal. With plagiarism detection software so readily available and in use, plagiarists are being caught at an alarming rate. Once accused of plagiarism, a person will most likely always be regarded with suspicion. Ignorance is not an excuse. Plagiarists include academics, professionals, students, journalists, authors, and others.

Consequences of plagiarism include:

a. Destroyed Student Reputation

Plagiarism allegations can cause a student to be suspended or expelled. Their academic record can reflect the ethics offense, possibly causing the student to be barred from entering college from high school or another college. Schools, colleges, and universities take plagiarism very seriously. Most educational institutions have academic integrity committees who police students. Many schools suspend students for their first violation. Students are usually expelled for further offences.

b. Destroyed Professional Reputation

A professional business person, politician, or public figure may find that the damage from plagiarism follows them for their entire career. Not only will they likely be fired or asked to step down from their present position, but they will surely find it difficult to obtain another respectable job. Depending on the offense and the plagiarist's public stature, his or her name may become ruined, making any kind of meaningful career impossible.

c. Destroyed Academic Reputation

The consequences of plagiarism have been widely reported in the world of academia. Once scarred with plagiarism allegations, an academic's career can be ruined. Publishing is an integral part of a prestigious academic

career. To lose the ability to publish most likely means the end of an academic position and a destroyed reputation.

d.   Legal Repercussions

The legal repercussions of plagiarism can be quite serious. Copyright laws are absolute. One cannot use another person's material without citation and reference. An author has the right to sue a plagiarist. Some plagiarism may also be deemed a criminal offense, possibly leading to a prison sentence. Those who write for a living, such as journalists or authors, are particularly susceptible to plagiarism issues. Those who write frequently must be ever-vigilant not to err. Writers are well-aware of copyright laws and ways to avoid plagiarism. As a professional writer, to plagiarize is a serious ethical and perhaps legal issue.

e.   Monetary Repercussions

Many recent news reports and articles have exposed plagiarism by journalists, authors, public figures, and researchers. In the case where an author sues a plagiarist, the author may be granted monetary restitution. In the case where a journalist works for a magazine, newspaper or other publisher, or even if a student is found plagiarizing in school, the offending plagiarist could have to pay monetary penalties.

f.   Plagiarized Research

Plagiarized research is an especially egregious form of plagiarism. If the research is medical in nature, the consequences of plagiarism could mean the loss of peoples' lives. This kind of plagiarism is particularly heinous.

The consequences of plagiarism are far-reaching and no one is immune. Neither ignorance nor stature excuses a person from the ethical and legal ramifications of committing plagiarism. Before attempting any writing project, learn about plagiarism. Find out what constitutes plagiarism and how to avoid it. The rules are easy to understand and follow. If there is any question about missing attribution, try using online plagiarism checker or plagiarism detection software to check your writing for plagiarism before turning it in. Laziness or dishonesty can lead to a ruined reputation, the loss of a career, and legal problems. [3]

How can stop Plagiarism

a. Using Strategies for Avoiding Plagiarism

• Put in quotations everything that comes directly from the text—especially when taking notes.

• Paraphrase, but be sure you are not just rearranging or replacing a few words. Instead, read over what you want to paraphrase carefully; cover up the text with your hand, or close the text so you can't see any of it (and so aren't tempted to use the text as a "guide"). Write out the idea in your own words without peeking.
• Check your paraphrase against the original text to be sure you have not accidentally used the same phrases or words, and that the information is accurate. [4]

b. Using Plagiarism Detection Tools

The act of taking someone else's ideas and passing them off as your own defines the concept of "plagiarism". As it is shown by the growing educational concerns, plagiarism has now become an integral part of our digital lives as technology, with the billions of information it gives us access to, led to the exacerbation of this phenomenon.

1. **Anti-Plagiarism**- Anti-Plagiarism is a software designed to effectively detect and thereby prevent plagiarism. It is a versatile tool to deal with World Wide Web copy-pasting information from the assignment of authorship. The goal of this program is to help reduce the impact of plagiarism on education and educational institutions. At present, it distributes free software to detect plagiarism. Checking documents in a format *.rtf, *.doc, *.docx, *.pdf
2. **DupliChecker**- DupliChecker is a tool 100% free to use. Just copy-paste, or upload your essay, thesis, website content or articles, and click 'search', and you'll get the analysis reports within seconds.
3.
4. **PaperRater**- Paper Rater offers three tools: Grammar Checking, Plagiarism Detection and Writing Suggestions. It is a free resource that is developed and maintained by linguistics professionals and graduate students. It is absolutely free to use and it allows you to check for plagiarized parts in your students' essays.
5.
6. **Plagiarisma.net**- Plagiarisma has a search box as well as a software download available for Windows. Users can also search for entire URLs and files in HTML, DOC, DOCX, RTF, TXT, ODT and PDF formats.
7. **PlagiarismChecker**- PlagiarismChecker.com makes it simple for educators to check whether a student's paper has been copied from the Internet. Users can also use the "Author" option to check if others have plagiarized their work online. It is very easy to use as it does not require any download or installation.

8. **Plagium**- Plagium is a free plagiarism detection tool. It's very easy to use. All you have to do is paste in the original portion of text (max 250 characters) and hit "search. It is available in six languages and an Alert feature is also available.

9. **PlagTracker**- Plagtracker is another online plagiarism detection service that checks whether similar text content appears elsewhere on the web. It starts scanning all internet pages and more than 20 million academic works for any plagiarized copy. After scanning, you will receive a report with details about your work.

10. **Viper**- Viper is a fast plagiarism detection tools with the ability to scan your document through more than 10 billion resources, such as academic essays and other online sources, offering side-by-side comparisons for plagiarism. It's free and you can download it very easily. Just keep in mind that it requires a download. Just note that Viper is available to Microsoft Windows users only.

11. **SeeSources**- SeeSources is an online, automatic and free plagiarism checker. Choose MS Word in the formats (.doc/ .docx) or HTML in the formats (.htm) or text (.txt) or text document (max. 300kB, 1000 words). With "Start Analysis" the source search begins. You will be updated about the progress continuously; search takes about 1 minute per document.

12. **Plagiarism Detector**- Plagiarism Detector is software especially designed keeping the growing content requirement over the internet in mind. Equally useful for teachers, students and website owners. It scans the documents and detects plagiarism and provides an instant report. Your content should not be in a specific format. You simply need to copy/paste your content in the provided window and press search button. [5]

Punishment for plagiarism or infringement
1. Academic Punishment
At many middle and high schools, students who plagiarize receive a verbal reprimand and a failing grade on the assignment. Other schools, such as Dublin High School in California, fail student plagiarists and force them to withdraw from the course.
At the college and graduate level, the punishments for plagiarism are much stiffer. At Princeton and Harvard, undergraduate students found guilty of

plagiarism receive a failing grade, a one-year suspension and a permanent note in their files. Other schools, such as the University of Virginia and the military academies, immediately expel student plagiarists.

2. Workplace Punishment

At most jobs, plagiarism is highly frowned upon, particularly within journalism, freelance writing, academic and legal careers. Journalists such as Jayson Blair and Gerald Posner have lost their jobs due to plagiarism. College professors who plagiarize are usually forced to resign, and lawyers who plagiarize are disciplined by their state bar associations. Even if plagiarists do not lose their jobs, human resources will usually note the instance within personnel files. This note may haunt the plagiarist when seeking a new job or promotion.

3. Legal Punishment

In criminal law, plagiarism is usually considered a misdemeanour, "punishable by fines" and "up to" a year in prison. However, under certain state and federal laws it can also constitute a felony. According to Plagiarism.org, receiving more than $2,500 from a plagiarized work is a felony, punishable by "up to $250,000 in fines and up to 10 years in jail." In civil law, the original author can sue the plagiarist for violation of copyright.

Personal Punishment

The personal punishments for plagiarizing can be much worse than the academic, workplace or legal punishment. It takes years to establish a reputation, and a single instance of plagiarism can tarnish a good name. Even if the plagiarist is not expelled, sued, jailed or fired, he may permanently lose the respect of his colleagues and friends.

Plagiarism also punishes the plagiarist personally by denying them of learning opportunities. Students, employees and writers gain critical thinking, language, reading and research skills through writing. However, plagiarizing denies them the chance to develop such skills. Lack of these skills may prevent the plagiarist from achieving personal and professional growth. [6]

Indian Laws in Copyright, Plagiarism and Infringement

Copyright Infringement

Copyright, as understood today, is a creation of statute. It subsists in works such as books, and protects them by, among other things, disallowing their unauthorized reproduction, adaptation and translation. The right to do such acts is referred to as copyright, and is described in Section 14 of the Indian Copyright Act, 1957. It vests exclusively in the copyright owner — usually, the author of the work.

The violation of copyright (referred to as copyright infringement) is a legal wrong in respect of which a civil suit may be instituted to seek the grant of a permanent injunction to restrain further infringement, damages, the rendition of accounts of profit, and the delivery up of both infringing copies of the work and the plates used to make them. If required, administrative orders such as Anton Pillar Orders may also be obtained to assess the extent of infringement.

Copyright infringement is also a criminal offence. Section 63 of the Copyright Act states that infringers are liable to be imprisoned for between six months and three years and to be fined between fifty thousand and two lakh rupees, while Section 63A stipulates an enhanced penalty for second and subsequent convictions. [7]

Plagiarism

Plagiarism is primarily an ethical issue (even though it is often confused with copyright infringement). It involves using the work of another author without attributing him/her. To have committed plagiarism, it is not necessary to exactly copy the words contained in the earlier work. For example, merely incorporating the ideas which another person has expressed in writing without according credit to him/her constitutes plagiarism.

Pertinently, Section 57 of the Copyright Act grants authors the "Special Right" to be attributed for their work. Widely referred to as a moral right, this right is perpetual, is independent of copyright, and remains unaffected by transfers of copyright ownership. Thus, the right to attribution recognized by statute could be considered analogous to the right not to be plagiarized.

Further, Section 63 of the Copyright Act which deals with infringement as a criminal offence contemplates the same punishment for both the violation of Section 57 and for copyright infringement. Considering this parity in the statute itself, the confusion between infringement and plagiarism is understandable.

Infringement plagiarism

Infringement and plagiarism are distinct and may not occur simultaneously. This is partly because copyright generally subsists in a work for only up till

sixty years from the death of its author, while the right of an author to be attributed for his work is perpetual.

As such, if a copyrighted work is plagiarised in a manner violating Section 14 of the Copyright Act, possibly through an exact reproduction, then both plagiarism and infringement occur simultaneously. As a corollary, the plagiarism of a work more than sixty years after the death of its author does not involve copyright infringement.

Further, infringement may take place without plagiarism occurring. For example, the unauthorized, substantial reproduction of a copyrighted work is copyright infringement even if its author is credited. As long as the author is credited, there is not plagiarism. However, according credit does not negate the commission of copyright infringement.

Conclusion

In the era of rapidly growing information plagiarism is a very biggest issue. Every author should to follow the plagiarism and copyright rules. During the prepare any article, the author should be honest and its compulsory to give the credit to the original source, if another's information is used by the author. In the case of without giving the credit to original source under the copyright act punishment is possible on the complaint of victim.

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Section-3

Rural Libraries in Uttar Pradesh: Application of Tool and Technique

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Abstract

This study shows the importance of cataloguing for LIS professionals in rural libraries in Uttar Pradesh. A library globally has undergone a significant change due to the application of tool and technology in library services. Overall catalogue card is a very important tool of libraries. Catalogue card and cataloguing is a just like searching tool and technique. A good Cataloger is a good Searcher for rural libraries in Uttar Pradesh. The paper highlighted the present status of cataloguing and catalogue card. It also disclosed some suggestion to improve and development of the tool and technique programs in the rural libraries or LIS professionals in Uttar Pradesh.

Introduction

What is Cataloging? Cataloging– The process of creating entries for a catalog. In libraries, this usually includes bibliographic description, subject analysis, assignment of classification notation, and activities involved in physically preparing the item for the shelf, tasks usually performed under the supervision of a librarian trained as a cataloger. British spelling is cataloguing. See also: cataloging agency, Cataloging and Classification Section, cataloging-in- publication, centralized cataloging, cooperative cataloging, copy cataloging, descriptive cataloging, encoding level, and re cataloging. Online Dictionary of Library and Information Science, ODLIS.

Objective

This study aims for investigating the importance of cataloguing for LIS professionals in Uttar Pradesh. The objectives of the study are as follows:-

1. To understand the importance of cataloguing technique and library tool (catalogue card) for LIS professionals.
2.

Type of cataloging

- ➢ Original cataloguing
- ➢ Copy cataloguing

Original Cataloging – Preparation of a bibliographic record from scratch, without the aid of a pre-existing catalog record for the same edition, more

time-consuming for the cataloger than copy cataloging. – i.e.: Do-it-yourself cataloging!

Copy Cataloging – Adaptation of a pre-existing bibliographic record (usually found in OCLC, RLIN, NUC, or some other bibliographic database) to fit the characteristics of the item in hand, with modifications to correct obvious errors and minor adjustments to reflect locally accepted cataloging practice, as distinct from original cataloging (creating a completely new record from scratch). Synonymous with derived cataloging. • i.e. Copy from others cataloging!

But what are we actually doing when we catalog a book or whatever?• We"re entering information about the book into the library"s catalog, so that when patrons are searching, they can find what they"re looking for, or, at least, something that will help them find an answer to their question.

What is a card catalog?

 Card Catalog – A list of the holdings of a library, printed, typed, or handwritten on catalog cards, each representing a single bibliographic item in the collection. Catalog cards are normally filed in a single alphabetical sequence (dictionary catalog), or in separate sections by author, title, and subject (divided catalog), in the long narrow drawers of a specially designed filing cabinet, usually constructed of wood (see this example). Most large- and medium-sized libraries in the United States have converted their card catalogs to machine- readable format. Also spelled card catalogue. Compare with online catalog.

 Online Catalog– A library catalog consisting of a collection of bibliographic records in machine-readable format, maintained on a dedicated computer that provides uninterrupted interactive access via terminals or workstations in direct, continuous communication with the central computer. Although the software used in online catalogs is proprietary and not standardized, most online catalogs are searchable by author, title, subject heading, and keywords, and most public and academic libraries in the United States provide free public access, usually through a Web-based graphical user interface. Click here to log on to the online catalog of the Library of Congress in Washington, D.C. Synonymous with OPAC. – OPAC=online public access catalog

Why make this distinction?

There are those who call an online catalog the "online card catalog" or something similar.• There are no cards on the computer, so that calling the

online computer the "card" catalog is a misnomer• "Card" refers only to the medium the catalog appears on – PLEASE DON"T DO IT!

Elements of cataloging From ODLIS definition
  - ➢ bibliographic description
  - ➢ subject analysis
  - ➢ assignment of classification notation (meaning the symbols used by the classification system)
  - ➢ activities involved in physically preparing the item for the shelf
  - ➢

Basic bibliographic information (AKA bibliographic description)
Author, title, publisher, date – Edition• Basic physical information (AKA physical description): – Size, no. of pages, whether illustrated, if it has a bibliography and/or index – Format (book, recording, electronic, etc.)• Subject information (AKA subject analysis)

International Standard Bibliographic (ISBD)
International Standard Bibliographic 12 Description (ISBD) is the worldwide standard (not to be confused with ISBN!) Clean draft of revised consolidated ISBD for worldwide review ISBD: International Standard Bibliographic Description Consolidated Edition Berlin/Munich: De Gruyter Saur, 2011This is the new edition of the first consolidated ISBD that was published in 2007.

Methodology
It is a historical-based study.
1. Provides a standard for the sequence of the elements in the catalog record
2. Provides a standard for punctuation that makes it easy for people to recognize the elements, no matter what language the catalog record is in
ISBD"s prescribed order
  - ➢ **Area 1** Title and statement of responsibility – Includes the full title, as it appears in the item • Subtitle(s) are separated from the title proper (i.e., the main title) by space colon space Prince Caspian: the return to Narnia – The title is followed by the statement of responsibility (who wrote, compiled, etc.) • The two are separated by a space / space Beginning cataloging / Jean Weihs and Sheila S. Intner
  - ➢ **Area 2** Edition area – Any information listed on the item about this particular edition, such as 1st ed., Rev. (for revised) ed., 7th ed., New American ed., etc. is listed here. • General material designation and other record elements – Abbreviation is allowed

here. Thus, even if the title page or the cover of the book says "Fifth Edition" it would be entered as 5th ed.

➢ **Area 3** Material or type of resource specific area – Used only for cartographic materials (maps) or periodicals (magazines, journals, etc.) – Provides information about the scale of the map or the numbering of a periodical

➢ **Area 4** Publication area – This is where you find out where, by whom and when the item was published – Order: • City (and state or country as needed) space : space Name of publisher, year of publication Santa Barbara, Calif. : Libraries Unlimited, 2010 Notice the spaces before and after the colon

➢ **Area 5** Physical description – The physical description area is made up of three sections: extent of item, other details, and dimensions. In the extent of item section, the number of pages is listed for a book, and the number of items is listed for a non-book entry, along with the length of the playing time if applicable. If the item is a book, the other details section contains information about whether or not the item is illustrated. It tells whether a non-book item has such features as sound, color, analog, digital, stereo, mono, etc. Punctuation: Extent of item space colon space other details space semicolon space dimensions e.g. viii, 294 p. : ill., maps ; 23 cm

➢ **Area 6** Series area – Indicates whether the item is part of a series. – The SERIES AREA is enclosed in parentheses and lists the title of the series and, if there is a number, it is always listed as a further identifier, after a space, semicolon, space, within the parentheses. • Series information, Notes and ISBN

➢ **Area 7** Notes area – Notes can be any information that is relevant or interesting to the library staff or patrons using the catalog. Notes include information such as a summary of a work, credits for performers, lists of contents of various kinds, indicated age levels, special format information, system requirements for computer files, and the ISBN number if there is one. Notes can be created by the cataloger to give additional information about the item being cataloged, or can be more formal. The notes area can be used to include information that there is no specified area for in the previous cataloging rules. • Series information, Notes and ISBN

➢ **Area 8** Resource identifier (e.g. ISBN, ISSN) and terms of availability area – Terms of availability—paperback vs. hardback, etc., and the price paid. ISBN 978-0-226-82337-9 (pbk : alk. paper) : USD17.00 Note the spaces before and after the colons!

What does the punctuation look like? Spaces before and after the special GMD=General material punctuation (shown in red)! designation. New rules: [ ] not ( ) Slide from presentation Introduction to Description: History of Cataloging Codes what is cataloging? March 18, 2012
Example Author Edition Title Author Notice the spaces! Slide from presentation Introduction to Description: History of Cataloging Codes
What do the punctuation symbols mean?[. . .] usually means that what''s included within the [ ] is the General Material Designation, i.e. physical or electronic or other format (now replaced by Area 0): usually indicates a separation between two important elements within that area e. g. that what comes first is the main title and what comes after is the subtitle (if there are spaces before and after) OR , in a different section of the record, that what comes first is the place of publication and what comes after is the publisher, etc./ means that what follows is the "statement of responsibility", i.e. author, editor, etc
An *example* in German GMD= General Material Designation Subtitle Title (in this case: electronic resource) Statement of responsibility Publication area Series information Standard Number Physical Description
An *example* in Bulgarian Author Title Subtitle (or possibly GMD?) Statement of responsibility Edition area Publication area Physical description Standard number Classification number Photograph from the card catalog of the library of Sofia University Dewey Decimal
ISBD in an online catalog / shows statement of responsibility, i.e. author, follows General Material Designation Spaces before and after punctuation to separate important elements

 What does AACR2 have to do with this?
Anglo-American Cataloguing Rules (AACR) – A detailed set of standardized rules for cataloging various types of library materials . . . which is divided into two parts: rules for creating the bibliographic description of an item of now any type and rules governing the choice and form of entry of headings (access points) in the catalog. Click here to read a brief history of AACR2 up to the 2002 revision, courtesy of the JSC.
 Do we need to learn all these rules? If you plan on specializing as a cataloger, especially in a large research library, where you will be doing a lot of original cataloging, then you will need to learn the rules. • As an LMS, most of your cataloging will be copy cataloging, so that a general awareness of the rules will be all you need—plus knowing where to look them up!In any case—the times, they are a- chang in" More later about RDA, FRBR, and FRAD!

Conclusion

This study shows the importance of cataloguing for LIS professionals in Uttar Pradesh. Tool and technology has been one of the major factor causing changes in the field of library and information science which people or user can communicate, retrieve and disseminate and used information. A library globally has undergone a significant change due to the application of tool and technology in library services. Overall catalogue card is a very important tool of libraries. Catalogue card is a just like searching tool. A good Cataloger is a good Searcher. The paper highlighted the present status of cataloguing (technique) and catalogue card (tool). It also disclosed some suggestion to improve and development of the tool and technique programs in the rural libraries or LIS professionals in Uttar Pradesh.

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Role of Information technology in rural development in India: Problems in disseminating Information

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Abstract

The paper discuss the information requirements of rural people, government initiatives in this field with modern technology and also emphasizes the challenges faced by the information agencies

Keywords: rural people information needs, CLIC, VKC, E- Chaupal etc

Library is a store house of knowledge. Human knowledge can be store and preserved in different type of format, as print format and Non-Print format. some years back. Print medium for information is regarded he best for information storage and dissemination. but with the development of science and technology electronic medium have been widely used for preservation of knowledge in academic as well as special library. However it must be admitted that libraries in ancient times were not like those of the present days. Libraries are dynamic and grow along with human civilization. The urge of social, economic, intellectual and cultural improvement necessitates the development of different kinds of libraries.

Dissemination of right information to the right reader /user at the right time is the dictum of all the library and information centers. In short library is an agency for dissemination of information

Libraries in Rural areas

Rural areas are those places that are not in main city line and have many problems such as poverty , illiteracy, lack of functional school, electricity good roads etc . Libraries placed in rural areas can help the poor people in many ways. First they would have the knowledge of information needs of rural people Information needs of rural people

1. They need the information about weather and local weather forecast.
2. Market price of their product
3. Agricultural information related to cultivation method.
4. Information about the government schemes running for rural development.
5. Yellow pages (addresses of doctors, carpenters, masonry people.
6. Proper information about vaccination medical facilities available in health centre.
7. Rules and regulation about employment exchange.

8   Fish segregation over the coast etc.
9   Wages fixed by government.
10

Efforts of Governments in India

National Institute of Rural Development is an apex research and training institute for rural development in India. The major function of NIRD are to collect , organize and disseminate rural development information pertaining to not only to India but also other developing countries for the development of rural community.

To develop an information system for rural development is not easy because many organizations, governmental and non-governmental and thousand of personnel involved in policy making, planning and implementation of development programmes spread throughout India. Keeping in view the information requirements of rural people NIRD developed a project called CLIC

CLIC(computerized library and Information clearing house)

 A project of NIRD called Computerised Library and Information Clearinghouse (CLIC) for rural development as a scheme of 9th plan. CLIC is an in-house facility for selection, acquisition, processing and retrieval of information on rural development using Web technologies in keeping with the mission of NIRD. The uniqueness of CLIC is that it collects information on different aspects of rural development in India and other developing countries at one single point and makes it accessible through Web.   The information technology provides, links that have been established to various Web sites in India and abroad that give information on rural development research and training aspects.

Food and Agriculture organization (FAO)

India through its project in India introduced an information system for the farmers of Andhra Pradesh called APFAMGS (Andhra Pradesh Farmer Managed Ground water System) has literally made available information on sustainable groundwater management for improving crop water efficiency by using Kiosk information system

Kiosk

The information Kiosk is a facility that rural community can avail without the need of outsider It helps the farmers in decision making They collect the data from different farms and Kiosk help them in decision making related to groundwater and cropping system changes.

It explains the information in tables and in animation Graphics and audio visual means. The Kiosk software is totally touch screen driven.(No physical keyboard) with large icons displaying limited but focused data created by graphics and animation .As the system has multilingual facility , Local language can be used and it has very simple navigational path

VKS (Village Knowledge Information Centre)
Village knowledge centre serves as information dissemination centre. It facilitate the rural community to access the latest information available in the field of agriculture , start from crop production to marketing

Akashganga

It is an ICT project for rural dairy producers It deploys appropriate It to facilitate the timely collection of milk and thereby generate higher higher profit for rural milk producer in Anand State of Gujrat.

Community Information centre
The central and state governments of India, especially the Ministry of Information Technology, have taken several initiatives for rural development through community information centres. These may be considered as rural electronic libraries. The project has been started in Sikkim and North Eastern states of India to provide IT facility in each and every block. Each CIC will have one server computer system and five client configuration computer systems linked in a local area network and connected to a V–SAT for Internet access. The facility will help government functionaries to use e–mail and the Internet for communicating with district and state officers. Efforts are being made to use the IT Infrastructure at the CICs to capture local information of the block and make them available worldwide through the Internet.

E–Chaupals Project
The Project launched in the year 2000 has been quite popular in rural areas of India. The e–chaupals enables rural people to access information in their local languages on crops and market prices. Around 2,700 e–chaupals provides services to more than half a million farmers in five states of the country, *viz.* Maharashtra, MP, Karnataka, Uttar Pradesh, and Andhra Pradesh

I –Shakti

Hidustan Liver launched I Shakti , an IT based rural information service that is related to information needs of rural people . This project satisfy the information needs of 10 million rural people of 75000 village on Andhra Pradesh

Vidya Vahini Project

This is an encouraging initiative of the Department of IT and Ministry of Communication of the government of India towards bridging the digital divide. The Project aims to connect government and government–aided or secondary schools in the country. It enables schools to form their own intranet and Internet facilities for information exchange. Phase one is planned to cover 140 government–aided senior secondary schools in seven districts across the country, and it will be later extended to other districts.

Digital Mobile Library

It is a Joint project of Government of India and C-Dac Pune It provide one million digitized books door to door to rural people.

The Internet enabled digital library will promote literacy The mobile van with satellite based internet connection   will be fitted   with scanners, printers and binding machine for providing books in bound form to end users

In spite of all these facilities there are some basic hindrances in information communication in this technology era Hindrance in Information communication to rural People

1 The first and foremost problem is illiteracy

2: Poor Infrastructure in dissemination of information due to lack of fund.

3: If fund is available then there is not proper allocation according to need.

4: Lack of awareness about the benefits provided by information communication technology.

5: There is a need of proper computer training   without knowledge of computer rural development will suffer a lot.

6:   Cost of computer implementation and access to network facility is beyond the reach of rural people.

7:     Development in Information technology is not according to needs of rural areas and cannot be imposed one   project that is made for Assam to whole country as social geographical condition is vary to one another.

8 : using and maintain service delivery centers involve substantial costs and become a major concern for constitution of information communication technology project.

9:   A major problem of rural development is power cut that   prevent free flow of information to rural people.

10 The market power of traditional rural intermediaries may act as a barrier in using new developed IT based buy and sell process.

Suggestions

The importance of needs of information in the development of society is well known, so the efforts should be made to overcome the problem of information dissemination to rural people

1: Government efforts should be as such that the people can avail proper education.

2: The educational infrastructure should be IT supported.

3:    There is a need of multilingual content presentation in the websites that are related to rural community.

4: IT infrastructure setting loan should be introduced.

5: To redefine the objective of the library and information service in India.

6: Raising the standard and promoting excellence in library and information science education, including reorientation and training of library professionals.

Conclusion

Information technology through libraries can play an important role in the development of rural people, in it is launched in planned way .

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Growth of Development of Public Libraries in India: Special Reference with Uttar Pradesh

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Abstract

The study deals with the Public libraries in India as well as tries to highlight the public library system in the Uttar Pradesh. The study deals with Raja Rammohun Roy Library Foundation"s (RRRLF) role in the development of public libraries. As the library legislation is widely recognized as a helpful means for the establishment and development of public libraries as it provides the smooth financial support for the proper functioning of the libraries. The paper deals with the present status of public libraries in India+ as well as Uttar Pradesh

Introduction: Growth and Development

Public libraries arose worldwide along with growth in education, literacy, and publications. Every country has its own public library history with influential leaders. Monarchs, wealthy people, and philanthropists have all made a contribution to society in the form of public library development.

India is no exception. Libraries were established in ancient India mainly by the patronage extended by emperors, major capitalists, and scholars. Indian emperors and kings were supported scholars and scholarship. There is evidence of well-developed libraries even in the sixth century A.D. The famous Nalanda University in Bihar had its own magnificent library with a massive collection of manuscripts covering the universe of knowledge. Admission to library was restricted to scholars. Other ancient universities, such as Taxila and Vikramashila, also had valuable libraries. Muslim influence in India during the 13th century A.D. marked the dawn of another era of learning and scholarship. The Mughal period gave a further stimulus to the growth of libraries. Mughal rulers attached considerable importance to libraries and appointed scholars as librarians. The Mughal emperors were patrons of art and literature. In the period of Emperor Babur, Humayun, and Akbar many new libraries were established and existing ones further developed. Mughal libraries featured magnificent buildings, rare manuscripts, and scholar librarians. The names of Maharaja Sawai Man Singh of Jaipur and Maharaja Ranjit Singh of Punjab will be remembered with appreciation in the history of library services in India. The Maharaja of Tanjuar started the famous SaraswatiMahal Library in 17th century A.D. It

remains a unique institution in its nature of collection and services (Sathikumar 1993, p. 18)

Libraries established by the kings and capitalists functioned like private institutions and the admission was limited. Service to the general public had to wait for the British (Sathikumar, 1993, p. 18-19). Unfortunately, the arrival of the British and resulting political disorder also brought chaos to the Indian way of life. This was a severe blow to the cultural heritage of India, which had arisen from the Indus valley civilization. When libraries began developing in India during the early nineteenth century, they were a western product.

In 1808, the Government of Bombay proposed to register libraries, which were to be given copies of books published from the "funds for the encouragement of literature" (Dutta, 1970, p. 100). According to the "Sinha Committee", this was the beginning of the first phase of public library development in India. During the first half of the 19th century, the three presidency towns of Bombay, Calcutta, and Madras had public libraries (Jagdish, 1979, p. 19). These libraries were mostly financed by Europeans residing in these towns. Of these, the establishment of the public library at Calcutta in 1835 was the most significant. This was the library which later developed into the National Library of India. Almost simultaneous, subscription libraries were started in many Indian cities. These were, of course, not public libraries in the true sense of the term, and did not provide free books for all. Founded in imitation of their western counterparts, the use of these libraries was confined to small, affluent portion of society.

The first three decades of the 20th century can be looked on as the golden age of the Indian library system. On January 31, 1902, the Imperial Library Act was passed and Lord Curzon transformed the Calcutta Public Library into the Imperial Library in 1906.

Developments in Baroda were also notable. Espranza (1999, p. 12)) sums them up:

The development of public libraries in Baroda was unique. Baroda developed a network of public libraries to serve the entire Princely State. Maharaja Sayaji Rao Gaekwad III of Baroda who traveled all over the world was deeply impressed by the role played by public libraries in the promotion of education in the United States and thought of extending such benefits to his own subjects. In 1910 he invited an American expert, William Alson Borden to organize the public library system for his state. The public library movement that flourished in Baroda was a glorious one. But that was not a general trend of that period because in no other part of India, a parallel development occurred.

Yet another development during the period was the organisation of a host of conferences such as:

• The first conference of library workers and persons interested in the library movement was held at
Beswada, Andhra in 1914.

• The first All India Library Conference of Librarians was held in 1918 at Lahore.

• The first All India Library Conference was held at Calcutta in 1933.

• The first All India Public Library Conference was held at Madras in 1934.

With the existence of democratic governments in several provinces beginning in 1937, another phase of the library movement began. Between 1937 and 1942, a number of village libraries and travelling libraries sprang up in Assam, Bihar, Punjab, and Travancore. It was estimated that there were about 13,000 village libraries in India in 1942 (Verma & Agarwal, 1994, p. 6). Another remarkable development was the appointment of the "Library Development Committee" by the Government of
Bombay, with A.A.A. Fyzee as its chairman. The Committee ambitiously recommended a comprehensive library system to be implemented in three successive stages. Because of financial constraints, the government could only implement part of the recommendations.

After Independence

After independence, the growth of libraries in general has been remarkable, although not as remarkable as that of academic and special libraries. At the time of independence, India was facing a host of challenges. Those in the rural population, 88 percent of the total, were nearly all illiterate. Transportation was poor and mass media merely nominal. Nevertheless, the public library scene in India improved considerably during the post independence period, though it is still lacking on several fronts. Verma & Agrawal (1994, p. 8) argue that to compare our public libraries with those of the developed nations on equal footing, we have to go a long way.

The 1951 census, the first conducted after independence, found 2,843 local governments in the urban and rural areas in India, of which 320 were rural district boards. Only about one third of local governments maintained public libraries, about 950. In addition, there were about 1,500 subscription libraries. So-called public libraries were primarily reading rooms with a few hundred books for reading on the premises.

The Delhi public library deserves special mention. It was founded in 1951 as the first UNESCO Public Library Pilot Project under the joint auspices of UNESCO and Government of India. The purpose of the library was to adapt "modern techniques to Indian conditions" and to serve as a model public

library for Asia (Verma &Agarwal, 1994, p. 8). The establishment of Delhi Public Library, the involvement of union government in the public library movement, and the enactment of public library legislation in some

states are the main factors which contributed to the improvement of public libraries after independence. Although the government of India allotted funds for public library development in its five-year plans, this funding was not connected to effective planning.

Advisory Committee for Libraries

The Government of India appointed a committee in 1957 to report on the status of public library development in the country. It is also called the Sinha Committee, after its chair, the late Dr. A.P. Sinha, who was at that time Director of Public Instruction in Bihar.

The Sinha Committee''s charge included:

Determining present reading needs, how they are met, and what part existing library systems play in meeting the needs;

• Determining reading tastes, what agencies provide suitable literature, and how reading taste can be improved;

• Recommending future library structure in India;

• Recommending areas of cooperation between libraries and education systems;

• Considering the training of librarians and the conditions of their service;

• Recommending the administrative and financial measures necessary to support public libraries in India (Ministry of Education, India, 1961, p. 126).

The committee submitted its report to Dr. K.L. Shrimali, who was Minister for Education, on the 12th of November, 1958. The Committee described the situation as dismal and called libraries in most cases, "a stagnant pool of books," because new books were not added regularly. The committee at the same time observed that wherever large collections did exist, they were not fully used because of rigid rules. Library users were not trusted and were required to deposit large sums of money as a kind of insurance, which lower income people could not afford. According to the report, as of March 1954 there were 32,000 libraries in India, with a little more than 7,100,000 books and a total circulation of about 37,700,000. The report observed that genuine public library service was rarity, and that public library service throughout the country was unsatisfactory. The committee recommended creating state library networks based on uniform library legislation.

The chief recommendations of the report were:

Library service should be made free to every citizen of India ;

• The hierarchy of public library service in the country should begin with National Library, and proceed to State Central Library, District Library, Block Library, and Panchayat Library;

• An independent Director of Social Education and Libraries should be set up in every state, with a fulltime senior class-1 officer of the rank of Deputy Director of Education to plan, organize, and administer library services;

• An All India Library Advisory Council should be constituted as a central agency to review and assess the work done at the state level;

• Library Associations should actively assist the development of libraries in the country;

• University libraries should cooperate with public library systems by allowing selected public readers to use their collection;

• State governments should accept responsibility for public library services in their states;

• Librarians and social education workers should cooperate to promote literacy;

• A library cess (tax or fee) of six paisa for each rupee of property tax should be levied with the permission of local bodies.

• State and national governments should enact comprehensive state library laws incorporating the

right of every citizen to have free access to libraries. The Government of India should provide necessary financial assistance to the state governments for this purpose. (Ministry of Education, India, 1961, p. 126)

• The Government of India should match the amount collected in the states. State governments should also give matching grants to local bodies over the succeeding 25 years; their contribution should be raised to three times the cess collected.

Role of Raja Ram Mohan Roy Library Foundation
The year 1972 is a significant year in the history of library movement in India. The country was celebrating silver jubilee of independence. It was the bicentenary year of the birth of Raja Rammohun Roy, a pioneer social reformer who had stressed the need for modern education for the progress of the nation. The year was also being celebrated as an International Book Year with the slogan BOOKS FOR ALL. Emphasis was laid on promotion of reading habit among the masses for betterment of their lives. It was in this auspicious year that Raja Ram Mohan Roy Library Foundation (RRRLF) was established in May, 1972 by the Ministry of Culture, Govt. of India to spread library services all over the country in cooperation with State Governments, Union Territory Administration and Organisation working in the field.

The foundation is an autonomous organization fully financed by the Ministry of Culture, Government of India. It is registered under the West Bengal Societies Registration Act, 1961. The basic idea behind established the foundation was to take the library movement not only to small towns and villages but also to the remotest corner, in cooperation with the state government, union territory administrations and other organization engaged in the library service and mass education.

Some important objectives are

- To promote library movement in the country;
- To enunciate a national library policy and to help build up a national library system;
- To provide financial and technical assistance to libraries;
- To provide financial assistance to organizations, regional or national engaged in the promotion of library development;
- To publish appropriate literature and to act as a clearing house of ideas and information on library development in India and abroad;
- To promote research in problems of library development;
- To advise the government on all matters pertaining to the library development in the country.

As "library service" comes under the aegis of state governments, the Foundation has to function within the limited parameters of constitutional provisions. States vary in their size, population, literacy rate, production of literature in regional languages and library infrastructure. Sometimes unforeseen administrative procedures stand in the way of some states to assistance from the Foundation. Some states, such as, Tamil Nadu (1948), Andhra Pradesh (1960), Karnataka (1965), Maharashtra (1967), West Bengal (1979), Manipur (1988), Haryana (1989), Kerala (1989), Goa (1993), Mizoram (1993), Gujarat (2000), Odisha (2001), Uttarakhand (2005), Rajasthan (2006), Uttar Pradesh (2006)u, Bihar (2008, Chhattisgarh (2009), Arunachal Pradesh (2009) have adopted library legislation and they have developed better infrastructure for library service. Library legislation adopted by the states is at different stages of implementation. Even without legislation, some state establish and sponsor libraries, while some others promote library service mainly through aided libraries and voluntary organizations. In some states, like Himachal Pradesh, Uttar Pradesh, Rajasthan where library service is not available at the grass root level, the library service, at the initiative of the concerned state government has been started in the schools for the rural mass. In Madhya Pradesh Rajiv Gandhi Siksha Mission is establishing Nodal Centres under its Continuing

Education Programme where they are also rendering public library service for the rural clientele. There are also number of public libraries sponsored by some central government organizations viz. Nehru Yuvak Kendras, Jawahar Bal Bhavans, etc. With the limited resources at its disposal, the Foundation extended assistance to all types of organizations rendering library service.

The Growth and Development of Public Library System in Uttar Pradesh

The present state of Uttar Pradesh was formed in 1956. Its capital is Lucknow and it has 70 districts with an area of 2,94,411 sq km. Uttar Pradesh is famous for its manuscript libraries. Manuscripts were collected and housed in the Rampur Library. The Allahabad Public Library was established in 1864. Carmicheal Library, Benaras, was set up in 1872, the Lyall Library and Reading Room were founded in Meerut in 1866, and a good number of public libraries were started and maintained by voluntary organizations. The Uttar Pradesh Library Association was founded in 1949. A Hospital Library service is being run at Lucknow, Kanpur under the auspices of the Association. Dr S R Ranganathan drafted the Uttar Pradesh Public Libraries Bill in 1949 and published it in the form of a book. Dr Sampurnanand, the then Education Minister, wrote the introduction for this book entitled Library Development Plan with a draft Library Bill for the United Province. The Bill was submitted to the Government and circulated to all the Members of the legislation assembly. Despite the Education Minister''s keenness in putting the Public Libraries Act into the statute book, his efforts did not materialize. Ultimately the Government issued gave an ordinance in 2006 for Library Legislation.

Application of Modern Technology

The new information revolution has absolutely emphasizing the professionals to redefine the concept and role of library and librarians. Information storage and retrieval devices of recent times have promised enormously the task of selecting ordering and dissemination of vast amount of information when libraries are facing the financial crunch accessing the information through networks saves time, money and space. The time is ripe to convert the public libraries as community information resources centers rather than a mere collection of books. This can be done introducing rapid computerization of libraries. Networking has to be established amongst all types of libraries at all levels. At present computerization of Public libraries is in progress but not so fast, it is so urgent and cannot be delayed any further.

Conclusion

Public libraries have always been the door to learning for a great majority of the populations that they serve. They are knowledge centers and contribute to lifelong learning. For India, there are bumps in the road that leads to the goal of having an institution to serve the masses, which is even more imperative in the present information society, in a nation where 40 percent of the population is living below the poverty line. A massive investment in public libraries is needed to make them true information resource centres for the layman

All is not well with the Uttar Pradesh Public library system. With the existing provisions in the Act, still development would have been much more than what is existing today. Lot of negligence and indifferent attitude has marred the growth of the system as a whole.

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The Role of Libraries in Social Orientation and Rural Development

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Abstract

All over the world libraries are dedicated to providing free and equitable access to information for all, be it in written, electronic or audiovisual form. They play a key role in creating a literate environment and promoting literacy by offering relevant and attractive reading materials for all ages and all literacy levels and by offering adult and family literacy classes. They embrace the social responsibility to offer services that bridge social, political and economic barriers and traditionally make a special effort to extend their services to marginalized people.

Libraries are friendly and hospitable places, ideally with service oriented opening hours and approachable staff. Adults with low literacy levels often have bad memories of schools and a negative attitude towards formal education. They can be invited to the library to enjoy non-reading activities, such as lectures, movies or discussion groups to facilitate their first step back into learning.

This paper will show how library and information services in public and school libraries, in community learning centers or NGO resource centers are dedicated to creating a literate environment that supports social orientation and rural development.

Key words- *Libraries, Society, Rural development, Problem and challenges, Support.*

Introduction

In many countries, people cannot imagine daily life without written information. They start the day reading newspaper, they pass through many posters and advertisements on the way to work or while running errands, they read and write e-mails and reports at work, they look through the daily mail and enjoy an interesting magazine or a good book in the evening.

But in many countries of the developing world there is a serious lack of reading materials and hence a lack of reading culture.

Libraries play an important role in providing a wide range of reading materials free of charge to parents who cannot afford to constantly buy new material. Positive examples are libraries that are not waiting for parents and educators to use their services, but are reaching out to them by

co-operating with community organizations and initiatives, such as health centres, worship places kindergartens and schools.

Libraries in Schools

School libraries provide access to supplementary materials that complement and enhance the leaning provided by prescribed textbooks. As education involves not merely memorizing information but the ability to learn independently throughout life, students need to learn how to do research on their own and to explore a subject beyond the information that is given in class. Teachers can encourage these critical literacy skills by introducing students to the library and by teaching them information retrieval skills. Unfortunately, a UNESCO/ADEA survey for the 2000 Education for All assessment revealed that "as the decade came to a close, school libraries were said to have the lowest of priorities in educational spending. The majority of schools possessed no library. Where some semblance of school library did exist, it was often no more than a few shelves of outdated and worn-out material, inadequately staffed" (Montagnes, 2001;27).

Role of Libraries in Society and Social change

Having a comprehensive, country-wide network of libraries in literate societies is a relatively recent phenomenon dating from the late nineteenth century. Historically, public libraries have a strong tradition in Anglo-American societies. The United Kingdom passed the first library law in 1850. Libraries were first introduced in the North-American colonies with the aim to educating the settlers in the new world. Early discussion clubs, modeling themselves on English benevolent societies, developed small book collections for their member"s use. Religious denominations also contributed to public education and supported the emergence of free public libraries. As early as the 1890s, the public library in the United States responded to the language and literacy needs of a large influx of immigrants, providing English and citizenship classes in many urban libraries. At the beginning of the twentieth century, libraries were part of an awakening consciousness that saw education as an instrument for social change. After World War II, mainstream libraries gradually started to extend their services to community groups and, by the 1960s, a special focus was set on reaching marginalized groups. In the following years, libraries played an important role in nation literacy campaigns, for example in Thailand. In the 1980s, more flexible and proactive facilities, often called resource centers, began to emerge as a force in movements for social change and the democratic reconstruction of civil society. These centres began to explore new relationships with their users, valuing local culture, supporting community development, and preserving indigenous knowledge (Adams, 2002: 33-34).

Libraries are also custodians of the local and national culture by storing popular and academic knowledge and material for current and future generations. Public libraries play the most important role worldwide in helping to bridge the information gap by providing free access to information and communication technologies, particularly the Internet. They are inclusive in that they build bridges between individuals at the local level and the global level of knowledge. In industrialized countries, access to modern information technology is currently one of the most attractive library services. For example, in the United Kingdom, public libraries secured government funding in the middle of the 1990s for computers in every library as part of the "People"s network project" (Bertlesmann Stiftung, 2004: 24), a project that assures that no one needs to be excluded from the information revolution. Compared to providing access to ICTs and the Internet in other public spaces such as post offices have the educational role of assisting users in finding information online.

A best practice study of the German Bertelsmann Stiftung, (Bertelsmann Stiftung, 2004) showed that the library systems in the United Kingdom, Denmark, Finland, United States of America and Singapore are modern examples of highly developed library system. They share a common trait-they have established themselves as an integral part of a national education and information strategy based on library laws and appropriate funding. They offer free access to information, are highly service-oriented, and constantly improve their services through co-operation and networking. These are hybrid libraries that offer traditional media and have a strong focus on providing access to online information. As a result they are used and highly appreciated by 75-90% for the population.

Libraries, increasingly in co-operation with other community organizations, offer a varying amount of activities including author readings, creative writing classes, introduction to information and communication technologies and the internet, reading groups, exhibitions, summer reading programmes, study support, discussion groups and art classes such as drama, poetry and song. The list in endless and activities over the decades show the flexibility of library services to address the needs of the community.

The library can also help to overcome the problem of gender differences in reading acquisition by maintaining collections of materials that appeal to males and females. Many language classes at school and many adult literacy classes focus on fiction texts, which tend to be less appealing to boys and young men. By providing interesting reading material in the areas of sports, science, politics of Do-It-Yourself manuals, the

library can counteract the problem that a large percentage of males are perceived to be slow or non readers.

Libraries and Rural Development

In Botswana, Village Reading Rooms were established to support and extend library services to literacy graduates in rural areas. As they were mainly established in primary schools, they are today mostly used by pupils and teachers. Nevertheless, they provide a useful and cost effective means of giving access to educational materials in areas where no traditional library service operates.

In Slovenia, public libraries were among the first providers of intergenerational lifelong learning processes that included children, youth and adults who came together and learned from each other by exchanging knowledge, experiences and viewpoints (Adams, 2002: 30)

In order to express and record local culture, knowledge and research and to translate relevant material into indigenous languages, it is important to have a strong local publishing industry. Unfortunately, in many countries the complex book chain, linking author to reader, via publishers, booksellers and librarians, is often small and struggling. The situation is particularly complicated in countries that have several local languages, especially if it is government policy that pupils should be taught in their mother tongue for the first few years of primary schooling.

Africa produces a mere 2% of the world''s books, despite having 12% of the world''s population. It is estimated that sub-Saharan Africa imports close to 70% of its books. The majority are universities text books and vocational training books and cost an average of US $25 per copy (Makotsi, 2004: 4).in countries where people struggle for daily survival, it is beyond their purchasing power to afford reading materials. One practical solution and useful tool for promoting literate communities, despite a lack of local publishing capacity, are local newspapers in indigenous languages. These can be produced by libraries, NGOs or community centers. An example of this is provided by CODE-Ethiopia, a local NGO, which operates a programme of local newspaper generation in conjunction with their network of 62 community libraries in the north and west of Ethiopia.

The personnel for literacy classes in libraries will come mainly from two sources: the library staff (existing or additional) and volunteers. In order to provide long-term quality service, training and constant development of tutors is crucial. Several countries and organizations have worked on guidelines, some for establishing literacy programmes in libraries, especially public libraries, others for specific types of programmes, such as family literacy programmes, and some for developing training guidelines for library workers. The most comprehensive set of

guidelines to date appears to be the Guidelines for Public Libraries Promoting Literacy, developed by UNESCO in 1993 under contract from the International Federation of Library Associations (IFLA) and under the direction of Barbro Thomas (Fitzgibbons, 2000).

Problems and challenges of Libraries

The situation of libraries differs enormously worldwide. Some countries and regions, such as the United Kingdom, have well-supported library systems, where a well-established library network extends to every community. In stark contrast are countries such as Kenya with only 36 public libraries, Namibia with 48 and Zambia with 22 public libraries (Rosenberg, 2000: 7).

The following is a list of the major problems and challenges in the creation, organization, maintenance and use of libraries. These include lack of funds, lack of professional staff, irrelevant material, colonial mode of librarianship, lack of appropriate training opportunities, lack of needs analysis, ICT challenges, inappropriate buildings and the lack of co-operation and a national information policy.

Need for International Support for Libraries

There is an urgent need for international support for libraries as many governments in poorer countries simply cannot afford to establish effective library systems. Several governments, charities and private groups in the developed world have established book donation programmes. Probably the most professional and complex examples of book donation agencies are Book Air International (BAI) in the United Kingdom and the Canadian Organization for Development through Education (CODE). Both organizations can look back on more than 40 year of professional support in developing countries, mainly in sub-Saharan Africa. They work in partnership with public library services and the local book trade through the donation of books and learning resources, which are culturally relevant and increasingly locally published. They furthermore provide training and capacity building to maximize the effectiveness of their local partners. Many projects are with other overseas organizations along with those in local communities. One example of the many innovative and interesting current projects of Book Aid International is in partnership with the British Council in Palestine, where they provide access to appropriate books for disadvantaged children in the West Bank and Gaza, including refugees, orphans, the urban poor and Bedouin communities (Books for Children in Palestine, 2002: 3).

Several case studies in this paper reveal the important role of (international) NGOs in providing access to reading materials to the general public, often in partnership with governments and NGOs. This role is not

merely restricted to initiating and financing projects but encompasses day-to-day management.

Conclusion

This paper shows that investing in books and libraries is at the heart of educational reform, literacy enhancement and sustaining literacy skills for life, leading subsequently to development and poverty reduction. By providing equitable access to information for all, libraries encourage critical citizenship in a global democratic society.

Today the role of libraries and professional librarians is changing worldwide. They are no longer passive keepers and preserves of books, rather, they have evolved to become facilitators of information and lifelong learning opportunities with an emphasis on service, identifying user needs and communicating solutions. Modern libraries are unfolding the community''s leaning potential by providing information on community issues, such as health, employment, continuing education and local history. This equitable access to information is essential to enable educated and informed citizens to participate in democratic global community.

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Social Network and Libraries in 21st Century: An Overview

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Abstract
The social networking services can effectively be used by the libraries to share information with its clients in the easiest way possible. With social networking tool one can create bookmark collections, share notices and more.

This paper is therefore an attempt to examine the present scenario in library services delivery with these new and emerging technologies. In this paper we highlighted conceptual meaning of social networking, changing environment of libraries, some important different type of social networking sites, role of librarians in social networking era, and challenges and recommendations for 21st century library and librarians.

Key word - WWW, Social Network, YouTube, Flickr, Facebook, ICT

Introduction
Up to some years back, there was no problem in identifying the information sources in libraries as the majority of them were in only printed from such as books, periodicals, govt. publications, dissertations and thesis, patents, standards, specification etc.

The emergence of the internet particularly the WWW as a new medium represents a revolution in information storage and retrieval. It has shown a paradigm shift in information render and information seeking behaviour of the regular users.

In the present era of information explosion, more and more information is available on web. All the sources of information are now available in electronic media like on-line and other stored electronic formats. The old traditional methods and models of information seeking needs to be redefined in new context i.e. in digital age.[1]

Social networking is a concept that has been around much longer than the internet or even mass communication. People has been always social creature; our ability to work together in group, creating value that is greater than the some of its part, is one of the our greatest assets. In traditionally networking terms, what are being linked are device or object; phones, fax machines, computer, documents etc. The rapid rise of social networking sites has already provide this a reality, even though they are "wall garden". By mid-2004 there were over 200 social networking sites, including Friendstar, Linkdline, Ryse, Orkute, ZeroDegrees, Meetup, Tickle, and many more are coming In this communities, an initial set of founders send out message inviting members of their own personal network to join the site. New member repeat the process, growing the total number of members and link in the network site then offer feature such as automatic address book updates, viewable profile, the ability to form new links through "introducing services" and other form of online social connections.[2]

Conceptual meaning of Social Network/ Media

Social network is a social structure that lets the user interact and work collaboratively with other user, in an environment where the facility to browse, search, and invite friends and to connect and interact with WWW.[3]

In other word Social networking is an evolutionary development of online participation where people of common interest communicate, share and contribute content on the social cyberspace. It is a viable tool for cooperation and sharing of knowledge in an open access platform. In the Social Network Space (SNS), people with common interests are able to share information with each other via a huge variety of social networking sites (*sites created specifically to make sharing, communicating, and creating information as simple and efficient as possible*). Social networking is a new way of providing library service through new internet technologies, with emphasis on "user-centered", two-way interaction and communication of information. With new networking tools, information can now flow in a multi-faceted dimension *(library to user, user to library, library to library, and user to user)*, rather than the one way stereotype form of library to user. It is constantly expanding the world of participatory and collaborative scholarly communication and learning. It is a new model of online service that encourages an increased flow of information from library to users and from the user back to the library. Online participation and content contribution are core issues in the present social networking practices. Social networking tool is a platform where users are both consumers and producers of online content. With these tools, librarians can constantly evaluate and update content to meet the changing needs of users.

These tools are used for collaboration and sharing of ideas and it is becoming an integral part of library services. It also calls for libraries to encourage users" participation and feedback mechanism in the development and maintenance of library services. The active participation of users enables them to contribute content, establish communication links, and stay informed of new developments in the social network space. With information and ideas flowing in both directions – from the library to the user and from the user to the library – library services have the ability to evolve and improve on a constant and rapid basis.[4]

Useful Social Networking Tools for Librarians

Social networking site is commonly known as social networking website and promote a number of social network services. It allows to user to share ideas, activities events and interest within the individuals networks. Some social network have additional feature, such as ability to create groups that share common interest or affiliation, upload or stream live videos and hold discussion in forums.

As a librarian, you want to be able to share information with patrons and students in the easiest way possible, and social networking offers a great way to do just that. With social networking tools, you can create bookmark collections, share notices, and more. We have profiled some of the best here. With these social networking tools, it should be easier than ever to stay in touch, organized and well connected. You may even find that you have got more access to information than you ever did before. Of course as an added bonus, you will now be known as the "cool " librarian because you are on Facebook.

Some of the popularly used social networking communication, distribution and organization sites are briefly discusses as follows:[5]

Communication

Facebook: most popular now because it is librarian- friendly, with many applications like JSTOR search, World Cat, and much more. Librarians can interact with users to know their information need. Libraries try to link some of these specialized library applications to Facebook.

MySpace: In Academic institutions where the students are; libraries have taken advantage of this site to post, calendar, custom catalog search tools, and blog features to improve their presence.

Ning: Librarians can get connected with users, library associations, and more. You can also use it to share information with many people at a time.

Blogs: Here, librarians can periodically post messages; share information on a particular subject or issue, and allow users to contribute to content.

They can write articles, news on topical issues and expect an instant reaction from their users.

LinkedIn: Librarians can get patrons connected with specialists in their particular field of interest via LinkedIn. Librarians can use this platform to render specialized services such as Strategic Dissemination of Information (SDI).

Twitter: a micro blogging application, to keep staff and patrons updated on daily activities, like frequently updated collections. Users can utilize this platform to type in short messages or status update.

Distribution

YouTube: Institutions can highlight the inaugural lectures, conferences and workshops disseminated via the YouTube.We can see how other libraries are using YouTube by checking out the youtubeandlibrarieswiki.

Flickr: Librarians can use this tool to share and distribute new images of library collections. Cover page of new arrivals of both books and journals can be disseminated to users via Flickr.

Wikipedia: Wikipedia is an online encyclopedia updated by users. You can use this tool to share your knowledge by editing or simply point library patrons in the right direction.

Organization

Library Thing: Atool that enriches the library OPAC. Once an account is created, a list of books with ISBNs is sent to Library Thing which sends back a piece of code which is pasted into the footer of the Library OPAC. Librarians can utilize this to send a list of current publications to users.

aNobii: This site for book lovers is a place to share reviews and recommendations. You can also take advantage of due date alerts, lending and discussions.

Lib.rario.us: Another social cataloguing site, you can put media such as books, CDs, and journals on display for easy access and tracking.

The Changing Library Environment

This paper discusses about the changing library environment from early period to 21st century libraries, reading material, retrieval techniques and also discusses about the five fundamental laws of library science.[6]

Five Fundamental Laws of Library and Information Science.

1st stage	2nd stage	3rd stage
1. Books are for use.	1. Information is for use.	1. Library serves humanity.

2. Every reader his/ her book.	2. Every reader his/ her information.	2.Respect all forms by which knowledge is communicated
3. Every book its reader.	4. Every information its reader.	3. Use technology intelligently to enhance service.
5. Save the time of reader.	3. Save the time of information user.	4. Protect free access to knowledge.
6. Library is a growing organism.	7. Information is a growing organism.	5. Honour the past and create the future.

Reading Materials and Retrieval Techniques of Early Period library to 21st Century library

Period	Reading Material	Retrieval Techniques
Early Period	• Early reading material such as Pinakes, Clay tablets, Parchment, Vellum Bark of trees, Palm leaves, Papyrus, etc.	• Scholar librarian usually depended in memory. • Limited collections confined to religious institutions, royals and rich.
Mediaeval Period	• Paper, printing and books: • Paper was invented in 11th century in China, but rest of the world came to know only in 13th century.	• Still books were limited called incunabula, often kept in chain and locked. • Scholars were the moving catalogues.
16th and 17th Centuries	• Printing press was invented in the mid 16th century. • Movable letter presses and changes in social structure such as democracy and sovern states, resulting in the movement for education for the masses. • Birth of many educational institutions including Universities.	• Production of books became easy • Demand for books has increased • Need arose for libraries storing books in rooms made of bricks with large collections. • This resulted for the

		birth of Librarianship as a profession. Librarians were still scholars and were mostly depending on their memory for retrieval. Often prepared list of books (what we now call catalogues)
18th and 19th Century	• Saw the production of large number of books • Libraries were created for the benefit of citizens	• Classification and cataloguing dominated as two techniques of Information retrieval, assisted by personal assistance leading to Reference Service.
20th Century	• Periodical/Publications and serials became handy as quicker and faster means of Information communication	• Documentation work and service by producing Documentation lists.
	• Non-conventional documents: • Microforms, microfilms, micro-fiche, micro card • Video-audio tapes • Computer readable material Floppy, CDs and other e-documents, net worked libraries etc.	• Indexing, Abstracting, CAS, SDI, Repackaging were invented for Information retrieval. • Creation of large data bases, on-line retrieval • Public access system, etc.
21st Century	• Euphoria of Internet Revolution	• On-line services (with the help of clicks)

The important characteristics of social networking for libraries are:

- **Participatory** - Users have the opportunity to actively engage in the construction of knowledge rather than being passive consumers of content;
- **Educative** – Users are kept abreast of the latest developments and can have open access to knowledge;
- **Collaborative** –Social Network ensures knowledge sharing, establishes communication link with experts and allows users to develop a team working skill and
- **Fascinating** – It is inspiring, interesting and users can be engrossed in the use of social network   sites; some users garner information with these sites in an easy and unencumbered manner; and Flexibility – Easy content creation and sharing, easy to update files and personal contact.

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Role of Librarians in Social Network Era

Libraries play important roles in providing information for research and access to knowledge. In order to stay relevant in the socially networked environment and meet the growing needs of their users, libraries therefore need to pro-actively embrace the new technologies and face the challenges for better services delivery. Librarians are responding to the popularity of social networking sites and their expanding role in the creation, use, and sharing of information by engaging them as a central medium for interacting with library patrons and providing services to meet their information needs. The ways in which people communicate, acquire and share knowledge, will inevitably have an impact on the library, its services, and its staff. Librarians should follow the public conversations, posts, updates, and events of these key individuals, and pro-actively offer advice, resources, and help. He should act as an active participant of the social space and be able to identify the needs of the members of the library communities and to proffer solutions by offering information, links to the websites that are relevant to their information needs; and even direct offers of help. There is an urgent need for libraries to adopt the new social networking tools in their services as a strategy to embrace change while promoting a participatory role for library users in knowledge creation. The growing use of social networking tools calls for librarians to develop 21st century skills on digital technologies. Libraries can connect their social networking sites with their library Websites to links to their catalog, chat reference pages, research guides, calendar of events, news etc. Some of the roles of the social networking librarian include: understanding and articulating the nature of social networking sites, creating webpage and content, establishing friendly user interface over the network, creating

online database management, evaluating and applying information, and assisting users with skill acquisition. Other skills for a social networking literate librarian include: searching and navigating the web, creating social network space, teaching, and providing quality online library services. The Model below is an adaptation of Richter and Koch (2008) model on *process of IT supported social networking*. This model encapsulates the future roles of the 21st century librarians in the dynamic technological environment. Librarians must possess these skills:

Identity management **–** Librarians should be able to examine profiles of users to mirror their information needs and match them with the library collections.

Network awareness **-** Should be able to share views and create awareness of the different social network sites and their uses

Expert search **–** The 21st century librarian should be an expert in web navigation; able to find friends of friends, and potential library users with common interest.

Contact management **–** Librarians can cross-link people and ideas among the conglomerate of different groups.

Context awareness **–** should be diversified in knowledge and able to link information to people''s profiles.

Challenges of Social Networking
- Lack of awareness
- Bandwidth problem
- Technophobia
- Poor connectivity
- Afraid of handling computers
- Unreliable power supply
- Lack of maintenance
- Lack of training staff
- Government intervention
- Copyright Issue

The above identified challenges could be solved by librarian through the following strategies:
- Organizing a public awareness forum such as library orientation, conferences, symposia, workshops to create awareness and educate librarians and users on the social networking services and applications.
- Embracing current change in order to remain relevant and adapt to the new ICT driven environment.

- Imbibing a maintenance culture so as to manage the few available ICT facilities effectively.
- Provision of stable power supply will encourage and facilitate the effective use of these tools.
- Pro-active training of librarians to acquire 21st century skills to adapt to the changing ICT environment.
- Government should take an active role in providing ICT facilities to institutions.
- Educating the public on the issue of copyright law and violation.

Conclusion:

In conclusion, this paper has tried to examine the concept of social networking and its application to library services. It has been observed that librarians not fully embraced these social networking tools in library services. As such, there is a need for a pro-active awareness and training to educate both the librarians and the users on the invaluable importance of utilizing social networking in library services. 21st century librarians adapt to the new ICT driven environment and will be able to implement a successful social media programs, and utility to prove the value of their collection.

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भारत में सार्वजनिक पुस्तकालयों का पुनरोद्धार : एक सिंहालोकन

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सारांश

वर्तमान परिदृश्य में भारत विश्व की तीव्र गति से उभरती हुई आर्थिक शक्ति है, देश की आर्थिक विकास की गति को सतत् रखने हेतु सार्वजनिक सेवाओं पर ध्यान केन्द्रित करने हेतु अधिक धन की आवश्यकता है। राष्ट्रीय ज्ञान आयोग ने भारत में ज्ञान आधारित संरचना विकसित करने के लियें प्रधानमंत्री को संस्तुतियां प्रदान की। आयोग की संस्तुतियों के एक भाग में लम्बे समय से नगण्य पुस्तकालय तन्त्र को विकसित करने पर बल दिया गया। इस लेख मे भारत के सार्वजनिक पुस्तकालय तन्त्र पर विशेष ध्यान देने और उसके साथ जुडे सामाजिक विकास के लाभ के सम्बन्ध में आयोग की संस्तुतियों की छान–बीन की हैं। भारत के सार्वजनिक पुस्तकालयों की सामुदायिक सूचना केन्द्र के रूप में सेवा करने की क्षमता पर प्रकाश डाला गया हैं। यह लेख सार्वजनिक पुस्तकालय जैसे महत्वपूर्ण मुद्दे के सम्बन्ध में ठोस कार्यवाही, विचार और बातचीत के निमन्त्रण के रूप में आमन्त्रित करता है।

परिचय
भारत में उन्नत सार्वजनिक सेवाओं की आवश्यकता

भारत विश्व का सबसे बड़ा लोकतांत्रिक राष्ट्र है और वैश्विक स्तर पर तीव्र गति से उभरती शक्ति है। इस देश के तीन सौ लाख मध्यमवर्गीय लोग सूचना और संचार प्रौद्योगिकी के क्रय और उपभोग में भागीदार होने के कारण किसी भी पश्चिमी विकसित देश से प्रतिद्वन्दिता के लिये तैयार है, मगर भारत में अच्छी तरह से प्रचारित सूचना और संचार प्रौद्योगिकी के बावजूद ग्रामीण और शहरी गरीब आबादी इससे काफी हद तक अप्रभावित रही। भारत में शहरों का विकास तीव्र गति से होने के साथ साथ स्लम आवास की दर भी तीव्रता से बढ़ रही है। अमीर और गरीब के बीच की खॉई इन शहरी क्षेत्रों में लगातार बढ़ती जा रही है। भारत की तीव्र आर्थिक विकास दर के बावजूद, विस्तृत जनसंख्या में इसके लाभ का वितरण असमान्य है। भारत के लोगों की आवश्यकताओं को समझे बिना, आर्थिक विकास की गति दीर्घ समय तक सत्त नही रह सकती है। आजादी के पश्चात लोगों की आधारभूत सुविधाओं जैसे शिक्षा की उपलब्धता में सरकार असमर्थ रही, यह तर्क का विषय हो सकता है। इन कमियों को दूर करने के लिए एक तरह से ऐसी शिक्षा, सूचना और पुस्तकालय सेवाओं के रूप में, बेहतर सार्वजनिक बुनियादी ढॉचे में पुनर्निवेश करने की आवश्यकता है।

केन्द्र सरकार (2007) ग्रामीण क्षेत्रों में लोगों के बीच पढ़ने की आदत को प्रोत्साहित करने के उद्देश से देश भर में इन्टरनेट की सुविधा के साथ कम्प्यूटर होने कें बारे मे 7000 पुस्तकालयों की स्थापना करने की योजना बना रहा है। इन पुस्तकालयों पर राष्ट्रीय मिशन (National Mission on Libraries- NML) की भागीदारी के रूप में, देश में सार्वजनिक पुस्तकालय आन्दोलन कों पुर्नजीवित करने के उद्देश से केन्द्र सरकार की पहल के रूप में खोला जायेगा।

यदि यह प्रस्ताव स्वीकार होता है, तो नये पुस्तकालयों को अन्य प्रमुख शैक्षिक पुस्तकालयों और सांस्कृतिक संस्थाओं के साथ जोड़ने के अतिरिक्त आधुनिक गैजेट्स और ब्रॉडबैण्ड कनेक्टिविटी से सुसज्जित किया जायेगा।

इन सिफारिशों को बनाने में यह महसूस किया कि प्रौद्योगिकी के युग में ये सुविधायें आवश्यक है और सिफारिशों में कहा गया कि लोगों को पुस्तकालयों में वापस लाने के लिये यही एक रास्ता है।

सूत्रों के अनुसार, ''ग्रामीण क्षेत्रों में छात्रों को शैक्षिक लाभ पहुँचाने के लिए प्रस्तावित नए पुस्तकालयों को खोला जाना चाहिए''।

सूत्रों के अनुसार ''मन्त्रालय को मानव संसाधन विकास मन्त्रालय के साथ मिलकर काम करना होगा और जिन ग्रामीण क्षेत्रों के विद्यालयों में पुस्तकालयों की सुविधा नही है उनकी पहचान करने को कहा गया''।

सूत्रो के अनुसार ''पुस्तकालयों की स्थापना सार्वजनिक विद्यालयों के पास की जानी चाहिए ताकि छात्रों में पढ़ने की आदतों को विकसित व प्रोत्साहित किया जा सके और इसके अलावा पुस्तकालय स्टाफ को तकनीकी उपकरणों को प्रयोग करने के लिए प्रशिक्षित किया जायेगा''।

सूत्रों में यह भी कहा गया कि पुस्तकालयों में विकलांग लोगों को विशेष सुविधायें प्रदान की जाए। मानव संसाधन विकास मन्त्रालय द्वारा एन0 एम0 एल0 (National Mission on Libraries-NML)की भागीदारी के रूप में देश भर में सार्वजनिक पुस्तकालयों को बनाने की रूपरेखा को पूर्ण रूप देने की योजना बना रहा है। सूत्रो के अनुसार '' देश भर में सार्वजनिक पुस्तकालयों में आधुनिक उपकरणों की उपलब्धता के मिशन से लाभ होगा''।

भारतीय सार्वजनिक पुस्तकालयों की स्थिति

भारत में प्राचीन काल से ही पुस्तकालय अस्तित्व में हैं, शासकों के अदालतों में, मन्दिरों और विश्वविद्यालयों में ज्ञान के खजाने के रूप में सेवारत रहे हैं, हालांकि वर्तमान में पश्चिमी प्रभाव अधिक है। (पटेल और कुमार, 2001)

आजादी की बाद की अवधि में, देश में सार्वजनिक पुस्तकालयों का विकास 1948 में मद्रास सार्वजनिक पुस्तकालय अधिनियम पारित होने के साथ हुई, यह सार्वजनिक पुस्तकालय सेवा प्रदान करने लिए नये स्वतन्त्र भारत में पहली विधान सेवा है। (भट्टाचार्य,2002)

भारत में सार्वजनिक पुस्तकालयों की भविष्य के पुस्तकालयों के लिये मार्ग प्रशस्त करने की अवधारणा का विकास, उन्नीसवी सदी के मध्य में ब्रिटिश औपनिवेशिक काल में बम्बई, मद्रास और कोलकाता जैसे शहरों में सार्वजनिक पुस्तकालयों के साथ हुई। (भट्टाचार्य,2002)

डा0 एस0 आर0 रंगनाथन ने भारत में सार्वजनिक पुस्तकालयों द्वारा ज्ञान का व्यापक प्रसार करने का सपना अपने द्वारा दिये गये पुस्तकालय के पाँच सूत्रों के माध्यम से देखा था। रंगनाथन के बाद के दशकों में अन्य राज्यों को पुस्तकालय विधान के लिए प्रेरित किया गया। सार्वजनिक पुस्तकालय राज्य सरकारों के अधिकार क्षेत्र में है लेकिन वर्तमान में केवल 19 राज्यों में औपचारिक पुस्तकालय विधान है। राज्यों में सार्वजनिक पुस्तकालयों का प्रबन्धन करने हेतु भारत सरकार ने राजा राम मोहन राय पुस्तकालय संस्थान (RRRLF) को विशेष रूप से ग्रामीण क्षेत्रों में, सार्वजनिक पुस्तकालयों के लिए एक समन्वय शाखा के रूप में कार्य करने के लिये कोश उपलब्ध कराया। राजा राम मोहन राय पुस्तकालय संस्थान पिछड़े क्षेत्रों में सार्वजनिक पुस्तकालय सेवाओं को विस्तार करने के लिये राज्य सरकारों और गैर सरकारी संगठनों (NGO) के साथ सहयोग करता है। भारतीय सार्वजनिक पुस्तकालय विकास की स्थिति राज्यों में गुणवत्ता स्तर में भिन्नता के कारण देश भर में असमान है। दक्षिण भारत के राज्यों विशेष रूप से तमिलनाडु, आन्ध्र प्रदेश और कर्नाटक में सार्वजनिक पुस्तकालय विकास उच्च स्तरीय है। परन्तु उत्तर भारत के राज्यों के विशेष रूप से उत्तर प्रदेश, उत्तराखण्ड और बिहार में सार्वजनिक पुस्तकालयों की स्थिति दयनीय है। पुस्तकालय के विभिन्न श्रेणियों के साथ—साथ विविधताओं के बावजूद देश के अधिक सम्पन्न शहरों में पुस्तकालय तन्त्र बेहतर गुणवत्ता के साथ स्थापित हो जाते हैं।

सार्वजनिक पुस्तकालय सामुदायिक सूचना केन्द्र के रूप में :—

ग्रामीण पुस्तकालयों को सार्वजनिक स्वास्थ्य, प्रौढ़ शिक्षा आदि क्षेत्रों में स्थानीय सूचना केन्द्र के रूप में कार्य करना चाहिए, नेपलिस (NAPLIS) के पूर्व ज्ञान और घोषणाओं के बावजूद, इन सिफारिशों को राजनीतिक और नौकरशाही के कारण कभी लागू नही किया जा सका। आयोगों के आने और जाने के बाद भी भारतीय सार्वजनिक पुस्तकालयों के लिए चुनौतियाँ और परिवर्तनकारी सम्भावनायें रहेंगी। भारत में सामुदायिक सूचना केन्द्र मॉडल के लिए सम्भावनायें मौजूद हैं परन्तु भारत में सार्वजनिक पुस्तकालयों को आम तौर पर अभी भी किताबों के खजाने और अन्य मुद्रित सामग्री कें रूप में देखा जाता है, इन्हे सामुदायिक सूचना के प्रमुख प्रदाताओं के रूप में नही देखा जाता है।

सामुदायिक सूचना सेवाओं के पुस्तकालय और सूचना अध्ययन के क्षेत्र में महत्व को समझा गया और विकासशील देशों में पुस्तकालय सेवा मॉडल के क्षेत्र में इसको महत्व दिया गया है। सामुदायिक सूचना को समाज के सभी लोगो की सूचनायें उपलब्ध कराने के रूप में परिभाषित किया गया है। साथ ही साथ अधिकार और सामुदायिक सूचना सेवाओं द्वारा लोकतान्त्रिक प्रकिया में भागीदारी और आवास, रोजगार, शिक्षा, कल्याण, नागरिक अधिकारों जैसे मुद्दों को सुलझानें व दैनिक समस्याओं में व्यक्तियों और समूहों की सहायता का लक्ष्य रखा गया। सामुदायिक सूचना सेवाओं को सूचना और रेफरल सेवाओं को हाशिए पर गई आबादी के लिये आपस में जोड दिया गया है। सामुदायिक सूचना सेवा मॉडल एक प्रकार सें सूचना संप्रेशण प्रौद्योगिकी पर आधारित हो सकता है लेकिन इसे भी बस समुदायों के लिये प्रासंगिक जानकारी उपलब्ध कराने में शामिल कर सकते है। सामुदायिक सूचना के प्रावधान के अलावा सामुदायिक सूचना केन्द्र एक पुस्तकालय के रूप में सांस्कृतिक और सामुदायिक केन्द्र के रूप में प्रतिस्थापित हो सकते है। इस सांस्कृतिक केन्द्र मॉडल के भागीदारी में स्थानीय कारीगरों व उनके कार्यों और स्थानीय लोक परम्पराओं के सामान्य संवर्धन को शामिल कर सकते हैं। इस प्रकार समुदाय की आवश्यकताओं और मूल्यों के प्रति संवेदनशील होने के कारण सार्वजनिक पुस्तकालय प्रणाली, भारत जैसे एक समृद्ध और विविध सांस्कृतिक विरासत वाले देश में अप्रयुक्त स्थानीय सांस्कृतिक को पुर्नजीवित करने वाले संसाधन हो सकते हैं।

भारत में सार्वजनिकपुस्तकालय और प्रौद्योगिकी परियोजनाये

सार्वजनिक पुस्तकालय में सामुदायिक सूचना प्रदाता होने की सम्भावनायें है जबकि पुस्तकालयों के अन्य लाभ समुदायों के लिए सामाजिक सम्पदा में वृद्धि करना है। सामाजिक सम्पदा को सामाजिक संगठनों के रूपों में नागरिक व्यवसाय और लोकतान्त्रिक भागीदारी बढ़ाने के रूप में परिभाषित किया गया है और इसके विकास के महत्व को भारतीय सन्दर्भ में सकारात्मक परिणाम कें रूप में दिखाया गया है। सार्वजनिक पुस्तकालय भी सरकारी जानकारी तक पहुँच प्रदान करने हेतु लोकतान्त्रिक मध्यस्थ के रूप में सेवा कार्य कर सकते है। भारतीय पुस्तकालयों में ई–प्रशासन सेवाओं और स्वास्थ्य, सूचना सम्प्रेशण अधिगम उपकरण और बुनियादी साक्षरता विकास की जानकारी प्रदान करने की सम्भावनायें मौजूद है। जब की भारत में सार्वजनिक पुस्तकालयों में इन सेवा तन्त्र को अपनाने के लिये और पूरी तरह से उनके लोकतांत्रिक क्षमता विकसित करने के लिये मन्द गति से कार्य किया गया है। ऐसी सेवाओं के द्वारा सुदूर क्षेत्रों में कृषि मूल्य की जानकारी, स्वास्थ्य देखभाल की जानकारी और मौसम की जानकारी के रूप में प्रासंगिक जानकारी सेवाएं प्रदान की जा सकती है। इस प्रकार की सूचनाओं के माध्यम से सामाजिक व आर्थिक विकास में सहयोग किया जा सकता है। इस प्रकार की परियोजनाओं में हितधारकों की एक विस्तृत श्रृंखला के विकास के साथ–साथ प्रभावी समुदाय की भागीदारी और स्वामित्व महत्वपूर्ण है। इन तत्वों के बिना किसी भी प्रकार की परियोजनायें प्रभावी ढ़ग से लोगों की सामुदायिक सूचना आवश्यकताओं को पूरा करनें में असफल हो सकती है। कुछ समुदाय प्रौद्योगिकी परियोजनाओं की सफलता के बावजूद, इन परियोजनाओं की स्थिरता एक महत्वपूर्ण चिन्ता का विषय बनी हुई है।

निष्कर्ष

वर्तमान समय में भारत सरकार द्वारा सामाजिक विकास के प्रमुख सुधार एक दिवास्वप्न ही प्रतीत होते है। देश की बढ़ती हुई अर्थव्यवस्था जनसंख्या के एक बडे वर्ग की आकांक्षाओं और उम्मीदों को उत्साहित तो करती है लेकिन इस विकास के लाभ असमान रहते है। इस प्रकार विश्व में भारत की बढ़ती आर्थिक स्थिति के बावजूद, सामाजिक क्षेत्र और सार्वजनिक सेवाओं में उचित निवेश की उपेक्षा अन्ततः इस विकास में बाधा और भारतीय समाज में असमानता को जारी रखेगा। सार्वजनिक पुस्तकालय सेवाओं में निवेश एक मात्र समाधान है जिसके द्वारा सामाजिक विकास और शिक्षा के लक्ष्यों को एक उपलब्धि के रूप में प्राप्त किया जा सकता है। भारत में तीव्र दर से शहरीकरण हो रहा है लेकिन देश में प्रमुख रूप से साठ प्रतिशत से अधिक आबादी ग्रामीण ही है इसलिए ग्रामीण पुस्तकालय क्षेत्र को अनदेखा नही किया जाना चाहिए वर्तमान समय महत्वपूर्ण है, इसका सदुपयोग करते हुये देश के नागरिकों को सार्वजनिक पुस्तकालय सेवाओं से लाभ प्राप्त करने के लिए सार्वजनिक पुस्तकालय में सुधारों की शीघ्र आवश्यकता है।

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वर्तमान परिपेक्ष्य में ग्रामीण पुस्तकालय सेवायें: छत्तीसगढ़ के संदर्भ में

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सार

भारत एक कृषि प्रधान देश है, यहाँ पर 70 प्रतिशत से अधिक जनसंख्या ग्रामीण क्षेत्रों में निवास करती है। जिसमें से अधिकतर लोग कृषि से अपना जीवन निर्वाह करते है। इनकी सूचना की आवश्यकता प्रायः कम होती है,लेकिन यदि इन्हें इनके व्यवसाय, स्वास्थ्य, कृषि, शिक्षा, मनोरंजन इत्यादि की नवीनतम सूचना प्राप्त हो जाती है तो इनका जीवन–स्तर बेहतर हो सकता है। व्यक्ति एवं राष्ट्र की प्रगति में सूचना एक आवश्यक एवं उपयोगी संसाधन है। सही समय पर सही एवं संबंधित सूचना प्रदान की जा सके तो बहुत सारी समस्याओं का समाधान हो सकता है। ग्रामीण क्षेत्र में सूचनाओं के साधन के रुप में समाचार पत्र, रेडियो, टेलीविजन प्रमुख है। ग्रामीण क्षेत्रों में पुस्तकालयों का अत्यंत अभाव है। छत्तीसगढ़ में सार्वजनिक पुस्तकालय अधिनियम वर्ष 2008 में पारित हुआ है, लेकिन अभी तक इसका कार्यान्वयन नही हो पाया है। यदि इसका कार्यान्वयन समय पर हो गया होता तो ग्रामीण क्षेत्र के लोग भी इससे लाभान्वित हो सकते थे।

ग्रामीण पुस्तकालय के महत्व पर चर्चा की गई है एवम् ग्रामीण क्षेत्र में निवास करने वाले कृषक, व्यवसायी, महिलायें, विद्यार्थी एवं बच्चों के लिए किस प्रकार की पाठ्यसामग्री ग्रामीण पुस्तकालय में संजोना चाहिये इसके बारे में वर्णन किया गया है। छत्तीसगढ़ के ग्रामीण क्षेत्रों में पुस्तकालय का अभाव है, यदि यहाँ पर पुस्तकालयों की स्थापना की जाती है, तो ग्रामीण क्षेत्र में निवास करने वाले लोग भी नवीनतम सूचनाओं से अपने ज्ञान में वृद्धि कर सकेंगे एवं देश के विकास में अपना बहुमूल्य योगदान दे सकेंगे।

प्रस्तावना

भारत एक कृषि प्रधान देश है, यहां पर 70ः से अधिक जनसंख्या ग्रामीण क्षेत्रों में निवास करती है। जिसमें से अधिकतर लोग कृषि से अपना जीवन निर्वाह करते है। ग्रामीण क्षेत्रों में निवास करने वाले लोगों में किसान, व्यवसायी, सरकारी सेवक इत्यादि होते है। सूचना की आवश्यकता सभी लोग महसूस करते है, यदि इन्हें नवीनतम सूचना चाहे वह परिवार से संबंधित, व्यवसाय से संबंधित, खेती कार्य से संबंधित, शिक्षा से संबंधित, मनोरंजन इत्यादि की सूचना सही समय पर उपलब्ध हो जाती है तो इनका सामाजिक–आर्थिक विकास बेहतर हो सकता है। ग्रामीण क्षेत्रों में प्रायः पुस्तकालय का अभाव होता है। ग्रामीण पुस्तकालय वह है जो स्थानीय लोगों को उनकी सूचना आवश्यकता की पूर्ति करती है। शहरी क्षेत्रों में सूचना प्राप्त करने के लिए अनेक स्त्रोत उपलब्ध होते है, लेकिन ग्रामीण क्षेत्रों में किसी प्रकार के स्त्रोत उपलब्ध नहीं होते है। छत्तीसगढ़ राज्य की स्थापना 1 नवम्बर 2001 को हुई है। यहां की 75ः से अधिक जनसंख्या ग्रामीण क्षेत्रों में निवास करती है। ग्रामीण पुस्तकालय लोगों के विकास में महत्वपूर्ण भूमिका अदा करती है।

उद्देश्य

ग्रामीण पुस्तकालय की स्थापना उद्देश्य गांवो में निवास करने वाले लोगों के लिए बेहतर सूचना सेवायें प्रदान करना है। जिससे उनकी सूचना संबंधी आवश्यकताओं को पूरा किया जा सकें।

महत्व

पुस्तकालय एक माध्यम है, जो व्यक्तियों के ज्ञान वृद्धि में एक सहायक की भूमिका अदा करती है

1. सूचना आवश्यकता की संतुष्टि।
2. बेहतर सामाजिक जीवन निर्माण में सहयोग।
3. स्व विकास में सहायक
4. बेहतर समाज निर्माण में सहायक
5. गांवों के विकास में सहायक
6. जागरूकता का उदय
7. ज्ञान वृद्धि में सहायक
8. साक्षरता में सहायक

पाठ्य सामग्रीयों का संकलन

ज्ञान अनिश्चितता को समाप्त करती है, पुस्तकालय ज्ञान का भंडार होती है, जो सभी प्रकार के लोगों के लिए खुली है, कोई भी व्यक्ति इसका लाभ उठा सकता है। ग्रामीण क्षेत्रों में निवास करने वाले लोगों में किसान, व्यवसायी, विद्यार्थी, बुजूर्ग, महिलायें युवा वर्ग होती है, इनके सूचनाओं की आवश्यकताओं को ध्यान में रखकर पाठ्य सामग्रियों का संकलन किया जाना चाहिए।

1. **किसान** ग्रामीण क्षेत्रों में निवास करने वाले में अधिकांश व्यक्ति किसान श्रेणी के अन्तर्गत आते है। इनके कृषि ज्ञान में बढ़ोत्तरी के लिये ग्रामीण पुस्तकालय निम्नलिखित पाठ्य सामग्री का संकलन किया जाना चाहिये :–

   ➤ फसल से संबंधी पाठ्य सामग्री।
   ➤ वैज्ञानिक खेती पद्धति।
   ➤ कीटनाशक दवाओं से संबंधित पाठ्य सामग्री
   ➤ शाक–सब्जी से संबंधित
   ➤ कृषि विभाग / विश्वविद्यालय से प्रकाशित पुस्तकें।
   ➤ मैगजीन (स्थानीय भाषा / हिन्दी)
   ➤ कृषि संबंधी साप्ताहिक समाचार पत्र
   ➤ न्यूज लेटर का संकलन इत्यादि।

2. **विद्यार्थी** ग्रामीण क्षेत्र के स्कूलों में पुस्तकालय अत्यंत आवश्यक है, जिससे विद्यार्थियों का बेहतर विकास संभव हो सकता है। ग्रामीण पुस्तकालयों में विद्यार्थियों के लिये निम्नलिखित पाठ्य सामग्रियों का संकलन किया जाना चाहिये।

   ➤ कहानी की पुस्तकें।
   ➤ जीवन चरित्र की पुस्तकें।
   ➤ सामान्य ज्ञान
   ➤ खेलकुद की पुस्तकें।
   ➤ रोजगार परक पुस्तकें।

3. **प्रौढ़ शिक्षा** ग्रामीण क्षेत्रों में साक्षरता का अनुपात कम होता है, ग्रामीण पुस्तकालय के माध्यम से ग्रामीण लोगों को शिक्षित किया जा सकता है।

4. **महिलायें** ग्रामीण महिलायें गृह कार्य के अलावा कृषि कार्य में भी सहयोग करती है। महिलाओं में पढ़ने की रुचि जागृत कर परिवार व समाज का बेहतर विकास किया जा सकता है। महिलाओं हेतु निम्नलिखित पाठ्य सामग्री का संकलन किया जाना चाहिए।

   ➢ मैगजीन
   ➢ स्वास्थ्य पत्रिका
   ➢ मनोरंजन संबंध पाठ्य सामग्री
   ➢ कुटीर उद्योग से संबंधित पाठ्य सामग्री

5. **युवा वर्ग** विश्व में युवा जनसंख्या का प्रतिशत भारत में सबसे अधिक है। ग्रामीण पुस्तकालय से युवाओं को शिक्षा के प्रति जागृत करना, रोजगार परक साहित्य उपलब्ध कराना।

   युवाओं की सबसे महत्ती आवश्यकता रोजगार की होती है :—
   ➢ रोजगार परक साहित्य।
   ➢ रोजगार समाचार पत्र।
   ➢ सामान्य ज्ञान संबंधी पुस्तकें।
   ➢ सामान्य ज्ञान मैगजीन
   ➢ प्रतियोगिता पुस्तकें।
   ➢ प्रेरक पुस्तकें।

छत्तीसगढ़ सार्वजनिक पुस्तकालय अधिनियम 2008

सार्वजनिक पुस्तकालय नागरिकों की सूचना संबंधी आवश्यकताओं एवं स्व विकास पर बल देने हेतु स्थापित किया जाता है। छत्तीसगढ़ राज्य में इसे 10 सितम्बर 2008 से लागू किया गया है :—

➢ इस अधिनियम में ग्रामीण पुस्तकालयों के विकास हेतु पाठ्य सामग्री संकलन में सहयोग प्रदान किया जायेगा।
➢ सामान्य जनता को स्ववाचन की सुविधा प्रदान करना।
➢ क्षेत्रीय / स्थानीय हित की सामग्री का संग्रह करेगा।
➢ चल पुस्तकालय सेवाओं की व्यवस्था करेगा।
➢ ग्राम पुस्तकालयों के कियाकलापों में समन्वय स्थापित करेगा और उसका पर्यवेक्षण करेगा।

निष्कर्ष – ग्रामीण पुस्तकालय गांवों में निवास करने वाले लोगों के विकास में एक वरदान साबित हो सकता है। वर्तमान में ग्रामीण क्षेत्रों में पुस्तकालय का अभाव है, जिससे वह इस सुविधा व लाभ से वंचित है। छत्तीसगढ़ सार्वजनिक पुस्तकालय अधिनियम पारित होने के बावजूद इसका कार्यान्वयन नहीं किया जाना, यहां के लोगों के सूचना संबंधी आवश्यकता में बाधा के रूप देखा जा सकता है। निकट भविष्य में ग्रामीण पुस्तकालय का सुचारू संचालन यदि पंचायत के माध्यम से किया जाता है तो लोगों की सूचना आवश्यकता को पूरा किया जा सकेगा।

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छत्तीसगढ़ राज्य में विद्यालयीन पुस्तकालय सेवाएँ : बिलासपुर शहर के संदर्भ में

कुन्दन झा
सहायक प्राध्यापक
पुस्तकालय एवं सूचना विज्ञान अध्ययनशाला
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सार

प्रस्तुत शोध बिलासपुर नगर के विभिन्न विधालयीन पुस्तकालय की जानकारी तथा पुस्तकालय द्वारा प्रदान की जाने वाली सेवाओं के विषय जानकारी प्रदान कराना है ।

1. **परिचय** – पुस्तकालय एक समाजिक एवं प्रमुख सूचना संस्थान है। मानव सभ्यता के विकास में पुस्तकालय का एक महत्वपूर्ण योगदान रहा है। मानव शिक्षा के लिए एक प्रबल पुस्तकालय शक्ति है। जन–शिक्षा एवं जन चेतना के प्रसार का एक मात्र माध्यम ग्रंथालय ही हैं। आज के प्रजातन्त्र–युग में पुस्तकालयों की अवधारणा, कार्य सेवाओं में परिवर्तन आया हैं। प्राचीन काल में पुस्तकालय मात्र पुस्तक भंडार होते थे, जहां पर पुस्तकों को केवल संरक्षण के लिए रखा जाता था। उनका प्रयोग आज जनता के लिए नही था बल्कि समाज के कुछ ही लोग होते थे जो उनका उपयोग कर सकते थे।

शैक्षणिक पुस्तकालय शिक्षा के प्रसार तथा सूचना के संचार का प्रभावशाली माध्यम है । शैक्षणिक पुस्तकालय औपचारिक शिक्षा में अपनी महत्वपूर्ण भूमिका निभाता है । औपचारिक शिक्षा के अंतर्गत मनुष्य किसी विशेष पाठ्यक्रम के आधार पर विशेष स्तर की शिक्षा प्राप्त करता है । यह शिक्षा विद्यालय, महाविद्यालय तथा विश्व विद्यालयों तथा शोध संस्थानों के माध्यम से प्राप्त होती है । पुस्तकालय किसी भी शैक्षणिक संस्था का महत्वपूर्ण अंग होता है। पुस्तकालय को शैक्षणिक संस्था का हृदय कहा जाता है ।

2. **शोध का उद्देश्य** – प्रस्तुत शोध के निम्नलिखित उद्देश्य है:–
   - बिलासपुर शहर में स्थित विद्यालयीन पुस्तकालय की वर्तमान जानकारी प्रदान करना
   - विद्यालयीन पुस्तकालय के प्रबंधन एवं कुल संग्रह विकास की जानकारी प्रदान करना
   - विद्यालयीन पुस्तकालय द्वारा प्रदान की जाने वाली पुस्तकालय सेवा की जानकारी प्रदान करना
   - विद्यालयीन पुस्तकालय के प्रलेख के रखरखाव के विषय में जानकारी देना
   - विद्यालयीन पुस्तकालय के प्रचार्य, पुस्तकालसध्यक्ष एवं पुस्तकालय के अन्य कर्मचारी की जानकारी प्रदान करना।

3. **शोध की प्रविधि** – प्रस्तुत शोध में आंकड़ो को एकत्रित करने में निम्न विधियो का उपयोग किया गया है :–
   - प्रश्नावली द्वारा।
   - पुस्तकालयों के व्यक्तिगत सर्वेक्षण एवं साक्षात्कार द्वारा।

4. **शोध का क्षेत्र** – प्रस्तुत शोध में मुख्य रूप से बिलासपुर नगर के विद्यालयो से संबंधित है। यहां पर स्थित निम्नाकिंत विद्यालयो में अध्ययन किया गया है :–

क्र.	भाहर का नाम	संस्था का नाम
1.	बिलासपुर	सेन्ट जेवियर्स हायर सेकण्डरी स्कूल बिलासपुर

2.	बिलासपुर	गुरूनानक उच्चतर माध्यमिक शाला बिलासपुर
3.	बिलासपुर	आन्ध्र समाज उच्चतर मा.शाला बिलासपुर

प्रस्तुत शोध अध्ययन शिक्षण सत्र 2013–2014 पर आधारित है।

तथापि बिलासपुर नगर उपलब्ध पुस्तकालयों के अध्ययन जो तथ्य व आंकडो प्राप्त हुए हैं वे इस प्रकार है

4.1 सेन्ट जेवियर्स हायर सेकेण्डरी स्कूल बिलासपुर।

4.2 गुरूनानक एवं खालसा उच्चतर माध्यमिक शाला, बिलासपुर।

4.3 आन्ध्र समाज उच्चतर माध्यमिक शाला, बिलासपुर।

4.1 सेन्ट जेवियर्स हायर सेकेण्डरी स्कूल बिलासपुर

इस विद्यालय की स्थापना सन् 1998 में हुई थी। यहां विधार्थियों के शिक्षा विकास में उचित ध्यान दिया जाता हैं। जिससे इस विद्यालय के शिक्षा प्रणाली मे और अधिक गतिशीलता आ गयी है। इस विद्यालय की पुस्तकालय की स्थापना सन् 1998 में हुई जो विधार्थियों एवं शिक्षको की आवश्यकता को ध्यान में रखकर स्थापित किया गया। इस विद्यालय के प्राचार्य श्री ए.सामन्त राय एवं ग्रंथपाल पी.जे.नथानियल, एम.ए.बी. लिब.आईएस.सी.है। जिन्हे 8 वर्ष का अनुभव हैं। इस विद्यालय की ओर अधिक वर्धन शील बनाने में अपना बहुमुल्य योगदान प्रदान कर रहे है। इस विद्यालय में कुल प्रलेखो की संख्या 14000 हैं जो कि शिक्षा के लिए छात्र–छात्राओ की शिक्षा में बहुत ही अधिक श्रेश्ठता का साधन बनती है।

इस विद्यालय के पुस्तकालय में सामान्य ग्रंथ, पाठ्य पुस्तक, संदर्भ ग्रंथ तथा अन्य प्रकार के ग्रंथ का संग्रह किया जाता हैं। जिसका उपयोग शिक्षकों एवं छात्रों द्वारा किया जाता है। यहां समाचार पत्र एवं पत्रिकाओं का भी संग्रह किया जाता है जो पाठको तथा शिक्षको को नवीनतम जानकारी प्रदान करती है। इस विद्यालय में छात्रो की संख्या 3000 हैं। यहां उनके उपयोग हेतु पुस्तकों की संख्या 7000 है। ग्रंथालय भवन की व्यवस्था हैं एवं ग्रंथालय के लिए फन्ड स्कूल फन्ड से किया जाता है। यहां पर पुस्तकालय के कार्य में सहयोग प्रदान करने हेतु तीन पुस्तकालय परिचायक की व्यवस्था हैं।

प्रलेख संग्रह की स्थिति

क्र.	कुल पुस्तको की संख्या	पाठ्य पुस्तको की संख्या	संदर्भ पुस्तकों की संख्या	पत्र–पत्रिकाओ की संख्या	जर्नल्स की संख्या	समाचार पत्र की संख्या	योग
1	7000	5500	1465	26	5	4	14000

विभिन्न उपयोगकर्ताओं की संख्या

क्र.	छात्र संख्या	शिक्षकों की एवं कर्मचारी की संख्या				
		अध्यापक	सहायक	अन्य कर्मचारी आफिस	चपरासी	योग

1.	3000	100	25	10	3	3138

पुस्तकालय द्वारा प्रदत्त सेवाएं

क्र.	सुविधाएँ	प्रदत्त/अप्रदत्त
1.	अध्ययन कक्ष की सेवा	हाँ
2.	रिप्रोग्राफी (फोटोकॉपी) की सेवा	नहीं
3.	इन्टरनेट की सुविधा	हाँ
4.	पुस्तक आदान–प्रदान की सुविधा	हाँ
5.	संदर्भ सेवा	हाँ

ग्रंथालय बजट

क्र.	शासकीय अनुदान	अन्य स्त्रोत से प्राप्त अनुदान	शुल्क व जुर्माना	दान व उपहार
1.	नही	हाँ	हाँ	नहीं

पुस्तकालय द्वारा दी जाने वाली सुविधाएं

क्र.	विशेष सुविधाएँ	हाँ/नही
1.	बुक बैंक का प्रावधान	हाँ
2.	केटलॉग के लिए रजिस्टर का उपयोग	नही
3.	पुस्तक चयन के लिए सदस्य	हाँ विशय शिक्षक द्वारा
4.	प्रणाली बंद या खुली	बंद
5.	ग्रंथालय में दशमलव वर्गीकरण पद्धति	नही

पुस्तकालय उपकरण

क्र.	उपकरण	संख्या
1.	आलामारी	10
2.	टेबल–कुर्सी	2—5
3.	अध्ययन टेबल–कुर्सी	10—40
4.	कम्प्यूटर उपकरण	1
5.	कम्प्यूटर प्रिंटर	1

4.2   गुरूनानक एंव खालसा उच्चतर माध्यमिक शाला बिलासुपर

इस विद्यालय की स्थापना सन् 1948 में हुई है। वर्तमान में गुरु नानक स्कूल के प्राचार्य श्री डी0पी0गोस्वामी व खालसा स्कूल की प्राचार्या श्रीमति एस0दानिकर है । यह विद्यालय अशासकीय (अनुदान प्राप्त) संस्था के रूप में कार्यरत है एवं शिक्षा की उत्तरोत्तर वृद्धि में अपना बहुमूल्य योगदान दे रहा है ।इस विद्यालय की ग्रंथालय की स्थापना सन् 2006–07 में हुई है । यह अभी एक नवीन विद्यालय ग्रंथालय के रूप में धीरे–धीरे विकसित हो रहा है । इस विद्यालय के ग्रंथपाल प्रभारी आर.एस.चौहान है जिनकी शैक्षणिक योग्यता एम.ए., बी.एड है। इनका एक वर्ष का अनुभव है। इस विद्यालय में बंद प्रणाली का प्रयोग किया जाता है । यहॉ छात्र के लिए अध्ययन कक्ष की व्यवस्था की गई है । पुस्तकों को व्यवस्थित व अच्छी तरह से रखनें के लिए आलमारी का प्रयोग किया जाता है , जिससे पुस्तकों को लम्बी अवधि तक सुरक्षित रखा जा सकें । वर्तमान में इस ग्रंथालय में कुल पुस्तकों की संख्या 5000 है । केटलॉग में रजिस्टर की व्यवस्था के द्वारा की जाती है । यहां सामयिक प्रकाशन स्थानीय एजेंसी से प्राप्त की जाती है । यहॉ पर पुस्तकों के चयन के लिए 5 सदस्यों की नियुक्ति की गई है । यहॉ ग्रंथालय के लिये फण्ड स्कूल फण्ड से किया जाता है । ग्रंथालय भवन की व्यवस्था है, यहां पर पुस्तकालय के कार्य में सहयोग प्रदान करने हेतु पांच पुस्तकालय परिचायक की व्यवस्था हैं।

सामयिकी प्रलेख संग्रह की स्थिति

क्र.	कुल पुस्तको की संख्या	पाठ्य पुस्तको की संख्या	संदर्भ पुस्तकों की संख्या	पत्र–पत्रिकाओ की संख्या	जर्नल्स की संख्या	समाचार पत्र की संख्या	योग
1	5000	3956	1000	35	4	5	10000

विभिन्न उपयोगकर्ताओं की संख्या

क्र.	छात्र संख्या	शिक्षकों एवं कर्मचारी की संख्या				
		अध्यापक	सहायक	अन्य कर्मचारी आफिस	चपरासी	योग
1.	2000	70	30	12	5	117

पुस्तकालय द्वारा प्रदत्त सेवाएं

क्र.	सुविधाऍ	प्रदत्त / अप्रदत्त
1.	अध्ययन कक्ष की सेवा	हॉ
2.	रिप्रोग्राफी (फोटोकॉपी) की सेवा	नहीं
3.	इन्टरनेट की सुविधा	नही
4.	पुस्तक आदान–प्रदान की सुविधा	हॉ
5.	संदर्भ सेवा	हॉ

ग्रंथालय बजट

क्र.	शासकीय अनुदान	अन्य स्त्रोत से प्राप्त अनुदान	शुल्क व जुर्माना	दान व उपहार
1.	नही	हॉ	हॉ	नहीं

पुस्तकालय द्वारा दी जाने वाली सुविधाएँ

क्र.	विशेष सुविधाएँ	हाँ / नहीं
1.	बुक बैंक का प्रावधान	हाँ
2.	केटलॉग के लिए रजिस्टर का उपयोग	हाँ
3.	पुस्तक चयन के लिए सदस्य	5 सदस्य
4.	प्रणाली बंद या खुली	बंद
5.	ग्रंथालय में दशमलव वर्गीकरण पद्धति	नही

पुस्तकालय उपकरण

क्र.	उपकरण	संख्या
1.	आलामारी	36
2.	टेबल–कुर्सी	4—10
3.	अध्ययन टेबल–कुर्सी	6—40
4.	कम्प्यूटर उपकरण	1
5.	कम्प्यूटर प्रिंटर	1

4.3   आन्ध्र समाज उच्चतर माध्यमिक शाला, बिलासपुर

इस विद्यालय की स्थापना सन् 1939 में हुई। यहां के प्राचार्या का नाम श्रीमती बी.एस. लक्ष्मी हैं। यहां ग्रंथपाल की व्यवस्था नहीं हैं तथा ग्रंथपाल की नियुक्ति नहीं की गई हैं। यहा बुक बैंक की व्यवस्था हैं तथा शिक्षक को प्रभारी नियुक्त किया गया हैं। यहां ग्रंथालय की स्थापना 1982 को किया गया हैं। इसके लिए कोई अलग से ग्रंथालय भवन की व्यवस्था नही है, यहाँ शिक्षको के द्वारा ही बुक का आदान प्रदान किया जाता है। स्कूल की एक क्लास रूम में आलमारी में पुस्तके एकत्रित किये जाते हैं। यहां कुल पुस्तकों की संख्या 250 हैं तथा यहां पत्र–पत्रिका की व्यवस्था की गई हैं। यहां विद्यालय अर्ध शासकीय विद्यालय संस्था के रूप में कार्यरत् है। तथा इस विद्यालय में पुस्तकों के चयन के लिए समस्त शिक्षको की समिति नियुक्त की जाती है। ग्रंथालय के लिए फन्ड स्कूल फन्ड से किया जाता है। यहां पर पुस्तकालय के कार्य में सहयोग प्रदान करने हेतु दो पुस्तकालय परिचायक की व्यवस्था हैं।

सामयिकी प्रलेख संग्रह की स्थिति

क्र.	कुल पुस्तको की संख्या	पाठ्य पुस्तको की संख्या	संदर्भ पुस्तकों की संख्या	पत्र–पत्रिकाओ की संख्या	जर्नल्स की संख्या	समाचार पत्र की संख्या	योग
1	250	200	40	5	3	2	500

विभिन्न उपयोगकर्ताओं की संख्या

क्र.	छात्र संख्या	शिक्षकों की एवं कर्मचारी की संख्या				
		अध्यापक	सहायक	अन्य कर्मचारी आफिस	चपरासी	योग
1.	600	15	6	3	2	26

<div align="center">ग्रंथालय बजट</div>

क्र.	शासकीय अनुदान	अन्य स्त्रोत से प्राप्त अनुदान	शुल्क व जुर्माना	दान व उपहार
1.	नही	शाला संचालन समिति द्वारा	नहीं	नहीं

<div align="center">पुस्तकालय द्वारा प्रदत्त सेवाएं</div>

क्र.	सुविधाएँ	प्रदत्त / अप्रदत्त
1.	अध्ययन कक्ष की सेवा	नहीं
2.	रिप्रोग्राफी (फोटोकॉपी) की सेवा	नहीं
3.	इन्टरनेट की सुविधा	नहीं
4.	पुस्तक आदान–प्रदान की सुविधा	हॉ
5.	संदर्भ सेवा	हॉ

<div align="center">पुस्तकालय द्वारा दी जाने वाली सुविधाएँ</div>

क्र.	विशेष सुविधाएँ	हॉ / नही
1.	बुक बैंक का प्रावधान	कोई जवाब नहीं
2.	केटलॉग के लिए रजिस्टर का उपयोग	नहीं
3.	पुस्तक चयन के लिए सदस्य	विषय शिक्षक द्वारा
4.	प्रणाली बंद या खुली	बंद
5.	ग्रंथालय में दशमलव वर्गीकरण पद्धति	नही

<div align="center">पुस्तकालय उपकरण</div>

क्र.	उपकरण	संख्या
1.	आलामारी	2
2.	टेबल–कुर्सी	नहीं
3.	अध्ययन टेबल–कुर्सी	नहीं
4.	कम्प्यूटर उपकरण	नहीं
5.	कम्प्यूटर प्रिंटर	नहीं

सुझाव –

1. शिक्षा विभाग द्वारा समस्त विद्यालयों में पुस्तकालय को अनिवार्य घोषित किया जाना चाहिए और उनमें प्रशिक्षित पुस्तकालयाध्यक्षों की नियुक्ति की जानी चाहिए साथ ही उन पुस्तकालयों में अन्य कर्मचारी की पर्याप्त मात्रा में नियुक्ति भी की जानी चाहिए , जिनमें उपयोगकर्ताओं की समस्याओं का समुचित समाधान हो सके ।

2. विद्यार्थियों को उपर्युक्त सामग्री का उपयोग करनें के लिए विद्यालयी पुस्तकालय में अध्येता परामर्शदायी सेवा की उपलब्ध भी अति आवश्यक है । अतः इनकी भी व्यवस्था करना उचित प्रतीत होता है।

3. बालको को दृश्य–श्रव्य उपकरण अधिक प्रकाशित करते है जिनके लिये पुस्तकालय में चित्रलेखों से परिपूर्ण विश्व कोशों , चित्र ,पुस्तकों ,शब्दकोशों , फिल्मों आदि के संग्रह पर अधिक ध्यान केन्द्रित किया जाना चाहिए , जो सेवा की दृष्टि से अति आवश्यक एवं महत्वपूर्ण सिद्ध होता है ।

4. पुस्तकालय विज्ञान में निपुण तथा दक्ष पुस्तकालयाध्यक्षों की नियुक्ति विद्यालय पुस्तकालयों में होना चाहिए , जिसमें विद्यार्थियों में पुस्तक के प्रति आकर्षक एवं ज्ञान भण्डार का आत्मसात कर सके ।

5. पुस्तकालय समिति की अनुशंसा अनुसार किसी भी पुस्तकालय में उस संस्था के बजट का कम से कम 6 प्रतिशत राशि खर्च किया जाना चाहिए किन्तु बिलासपुर नगर के विद्यालयीन पुस्तकालयों 6 प्रतिशत तो दूर की बात है , आवश्यक दैनिक समाचार पत्र, सामयिक पत्र, पत्र–पत्रिकाऐं भी नहीं मंगायी जा रही है ।

6. विद्यालयीन स्तर की पुस्तकालयों के लिये भी नवीन जानकारियों एवं सेवाओ के लिए अभिमुखीकरण पाठ्यक्रम की व्यवस्था की जानी चाहिए ताकि पुस्तकालय सेवाओं के विभिन्न नवीन आयामों से परिचित हो सकें।

उपसंहार – अंत में प्रस्तुत अध्ययन में यह कहा जा सकता हैं कि यद्यपि बिलासपुर नगर के विद्यालयीन पुस्तकालयों में पुस्तकालय सेवा का उपयोग समुचित मात्रा में नहीं किया जाता है, तथापि विद्यालयों के प्रबंधकों, प्राचार्य एवं शिक्षकों तथा पुस्तकालाध्यक्षों से मिले संकेत के अनुसार यदि समुचित वित्त की व्यवस्था शासन द्वारा पर्याप्त मात्रा में की जाय तो, विद्यालयीन ग्रंथालयों में पुस्तकालय सेवा के माध्यम से विधार्थियों में अध्ययन–अध्यापन के प्रति जागरूकता एवं उनके भावी नैतिक मूल्यों के विकास में उत्तरोत्तर वृद्धि की जा सकती हैं।

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Section-4

Trends in Information Retrieval
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Abstract

Information has always been of immense value to the human beings. It has affected the course of life of the users. The availability of right piece of information at right time is very necessary. Only availability of right piece of information can not fulfil the need if it is not retrieved efficiently, which is a challenge to the information systems. There has been continuous research in this area and this paper tries to evaluate the scenario from its very beginning.

Introduction

Information has always been viewed as the most important aspect of the society. It is the vital force necessary to sustain the life of human beings. The human beings have been categorised as information processor. The quality and the quantity of the required information varies from user to user, the same piece of information can be of immense value to a particular user and side by side can be of no value to another, since his information requirement has different dimension. This information requirement and use has created a gap between the information have and have not's. The country and of course its people which has access to the classified information is treated to be most developed one in comparison to those who lack this access. To be treated as powerful one must have the facility to access the right information at the right time. One must know the location of information and the process of retrieving it.

Methodology of study

Method employed for this study is survey of literature. Various literatures from Web of Science, Google scholar have been scanned for the literature search. Results have been presented in the following paragraphs.

Result & Discussion

Before World War II, the subjects were mostly simple and compound in the nature. Those were the time when indexing of the term was simple, alphabetical and hierarchical one. Retrieving of information was based upon manual processes. Indexes and abstracts were simple with the simple terms derived from the documents itself. Libraries were well organised and accessibility was closed one i.e. only to selected few, those who were the staff of the library.

After World War II, there has been tremendous growth in the short scientific and technical literature, due to research for more advanced weaponry to combat the menace of the world, and also to reinstate the war

torn world. It further increased due to extension in the boundaries of the disciplines like bio-medical. It was estimated that 2 million papers were published in 1964. The nature of subjects or disciplines has grown from basic and compound to complex one with boundaries ramifying in diverse subjects. This led into the inadequacy in the existing means of indexing and retrieval system. It prompted M. Taube of Library of Congress along with Thompson to give new dimension to indexing in the form of coordinate indexing in 1952. The coordinate indexing was nothing but the Uniterm mode of coordinate indexing and application of Boolean logic or operator in information retrieval. This could only be achieved due to invention of computers by Charles Babbage. Later in 1957-1959, computers were introduced for keyword matching and sorting. Computerised Information Retrieval was introduced as DIALOG by Library of Congress in between 1960s and 1970s. That was the time when actually various related services developed like online thesaurus, Ranked output of information, automatic inclusion of synonyms in the search terms and Boolean logic as well as left and right truncation of the quarry terms, cited reference searching and natural language free text searching.

These developments helped a lot in retrieval of right information but was not user friendly, in the sense that user could not search them directly without any assistance or intermediaries. They require the help of Information Scientists, information or library professionals. Besides these Information Retrieval systems were quite costly due to other hidden charges like database management cost, telecommunication and connection costs etc. Users were recognised to be end users, since they cannot search information themselves. Access of information at this time was with the help CRT (Cathod Ray Tube) terminals and printers in the form of inkjets. These CRTs were gradually replaced by PCs.

H. P. Luhn of Germany was the pioneer in the field of PCs. He was associated with IBM invention and field of information science. Due to his IBM machine, called electronic searching selector (Schultz, 1968) also called Luhn Scanner which became very helpful in searching and retrieval of information. He was also a pioneer in the field of KWICK indexes, which was later used by Chemical Titles in 1968, automatic indexing and abstracting and selective dissemination of information systems. This development of SDI by Luhn led to the development of intelligent system for IR.

But the term information retrieval was coined by Calvin. N. Moores in 1950 which is nothing but finding information whose location or existence is not known before hand. Gerard Salton pioneered the SYSTEM OF MANIPULATING AND RETRIEVAL OF TEXTS (SMART) besides

passage retrieval, Vector Space model term weighting relevance feedback clustering are some of the important development by G. Salton. There is hardly any area in Information Retrieval where contribution of G. Salton can not be seen.

Another significant development in the field of IR was the introduction of NLP or Natural Language Processing by Karen Spark Zones in 1994 for text based IR. The use of natural language processing could only be possible for Information retrieval if the system is interactive and user friendly. The advent of www by Tim Burnner's Lee in 1991 and the introduction of intelligent terminal by H.P. Luhn helped a lot in this area. Natural Language Processing for efficient retrieval of information can only be possible if there is an intelligent intermediary with expertise similar to that of human beings. This became possible with the development of expert system and its use in Information Retrieval. Still the problem of efficient retrieval remains as such since "users are required to transform their information needs, using the chosen IRR language, into queries that can then be executed in the database with the searching mechanism provided. Researchers have long been aware of the complexity involved in this task."

As has been reported by Blair and Maron (1985), "It is impossibly difficult for users to predict the exact words, word combinations, and phrases that are used by all (or most) relevant documents" (p. 295).

Conclusion:

Thus Information Retrieval has always been a problem from the very beginning, whatever may be the situation of libraries its services. Although with advent of ICTs and its application to the libraries, again the availability of information on the Web, there has been a sea change in form and format of information and information bearing document and accessibility, still the challenge of efficient retrieval is their. Work is still going on in this direction and everything depends upon the future, what course will it take? How to solve this problem of efficient retrieval?

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Preservation of Print and Digital Sources of Information: Problems and Solutions

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Abstract

This paper defines the concept of preservation of documents and describes the strategy of preservation of library materials. It discusses the importance of preservation of print and digital materials in an advance library and information centre. We can see in this paper the work of preservation of information or knowledge has been one of the important aspects of all the libraries of the past, and the means and ways adopted for the purpose changing from time to time.

Keywords: Preservation, digital, CD, DVD, Migration, Replication, Emulation, OAIS.

Introduction

Since time immemorial human being were communicating with one another through gesture, symbols, sounds, words, written and printed books, electronic media and other types of documents which is also known as print and digital media of information. These documentary sources enabled human civilization to communicate with each other. During the past two thousand years of human civilization , and even before, it was evident that the intellectual products of human thought and endeavor were being procured , processed , and the thought content embodied in them is disseminated through various methods, and the documents are conserved and preserved in various types of libraries which is must for future dissemination of knowledge.

The environment for document collections consists of physical or natural environment and physical condition. The natural environment to which document collection is exposed has profound effect on their long- term survival. Aspects of natural environment includes: floods, fires, earthquakes and cyclones. These cannot be prevented but strategies can be developed to mitigate their effects.

Specific environment factors that are harmful to document collections include: Heat, humidity, light, air pollution, animals and insects (silver fish,

bookworm, termites, moths, cockroaches, rats and mice), poor handling, display practices, and finally vandalism and theft.

What is preservation?
Preservation is an aspect of the management of the library. Its objective is to ensure that information survives in a usable form for as long as it is wanted. The essential characteristic of preservation is that it is a large scale operation concerned with the effective management of the library stock as information resource.

In other words we can say that "preservation is not an antiquarian exercise for keeping objects form the past simply because they are old. It is a managerial tool for making information available to users. The basic issues of the preservation policy can therefore best be stated in forms of the intended or predicted use of the materials.[1]

Need of preservation
There is an urgent need to conserve and preserve such invaluable print and non print documents. The protection and safeguards extended to our ancient sites, monuments and buildings through legislative and administrative measures should equally be extended to our rare and invaluable library documents in the public and other libraries.

Print and Digital Sources of Information-
We Know that knowledge is recorded, preserved and made available in different formats and in different shapes to all those who needed. They played an important role in ancient times in the absence of paper. Print and non print sources of information are as fallows-

Print Sources of Information
Although increasingly information resources are demanded and supplied electronically, we do still hold an important amount of information in print form. This includes, of course, books and print journals but also maps; photocopied articles and book chapters; theses and dissertations. Books and Journals provide help on locating the books and print journals that you have discovered in the Library Catalogue.[5] Different forms of printed material are as fallows-
(a) **Palm-leaf**- leaves of a palm tree trimmed to uniform size, flattened and polished for use as a writing surface. The text was scratched in the surface then rubbed with dark pigment to make the character more visible.

(b) Parchment-parchment paper was made of goatskin that had been soaked in lime and scraped to remove hair. The surface was then burnished with pumice to create a smooth surface for writing.

(c) Clay- the method of writing varied according to their material on stone, letters could be incised or written with ink, clay could be impressed before drying and metal could be cost in a mold.

(d) Coins & Wood- The hard surfaces of stone, wood or metal were not easily inscribed and this difficulty restricted the amount of text recorded. Those ancient cultures that utilized these materials to preserve their written record chose their words carefully.

(e) Papyrus- Papyrus is made of reeds that grow in marshes and along riverbanks like a Nile. The fibrous plant stem was sliced into thin strips that were overlapped to form sheets; the sheets were pressed together with the fibers running cross-grained to form long rolls of flexible "paper" and the surface was polished with a pumice stone.

(f) Bark- Many cultures adopted tree bark for record keeping. In the Himalayan region and in the Americas sheets and rolls of bark were used.

(g) Paper-Paper was invented by Chinese about 2000 years ago. According to contemporary records of AD 105, under the region of emperor Hi-Ti, Ts'ai Lun of Lei-young conceived of the idea of making paper from the bark of trees, papyrus etc.[2][3]

Digital Sources of Information

Digital materials are rapidly becoming important information and learning resource materials for the every field of information. Because of their long experience in organizing and utilizing informational materials, libraries represent highly appropriate repositories and sites for utilization of these new materials. Digital materials differ from printed materials in several ways; one of the most important differences is that a machine must serve as mediator between the information and the user of non-print materials.

Digital material is available in different formats and in different shapes. They play an important role in the modern libraries. Following are some of the examples which form part of the library collections as non print material-

(a) Online Databases- An online database is a database that is accessible from computer network either for a fee or as part of library online catalogue system.

(b) **CD-ROMs**- It has become the standard medium for distributing large quantities of information in a reliable package. The total amount of digital data that must be stored on a CD is: 783,216,000 bytes.

(c) **DVD-ROM**- A DVD (Digital Versatile Disc) is very similar to a CD-ROM, but it has a much larger data capacity. A standard DVD holds about seven times more data than a CD does.

(d) **Microforms**- Microfilm is an analog storage medium for any type of paper document s, typically books, periodicals, legal documents and engineering drawings. Microfilm is a continuous strip of film that is wound on a reel and viewed frame by frame. Microfilm comes is several different formats including 16mm, 35mm and the less used 105 mm format. Three types of film are common in microform collections: Silver-gelatin, diazo, and Vesicular.

(e) **Digital Images**- Digital storage media such as zip disks, CDs, or DVDs last only a definite period the medium begin it degrade. We know that today's media will most likely be unreadable by computers 10 or 20 years from now. Thus, digital images must be transferred to a more reliable medium in order to be preserved.

(f) **Magnetic media, Video-cassettes, Tapes, Hard Disks**- As with CDs and computer hard disks, audio and videotapes will not last. Magnetic media have a very limited life period.[4]

Causes of Deterioration of Print and Digital Materials

We can see that the various causes of deterioration of print and non-print materials are as follows:[3]

Print Library Materials	Non Print Library Materials
High acidity	Oxidation
Wear and tear due to excessive Xeroxing	Magnetism
Air pollution	High humidity
High temperature	Moisture
Relative humidity	Dust
Excessive light	Excessive light
Biological agents (termite, spiders, cockroaches etc.)	Biological agents
Bad shelving	Atmospheric pollutants

Preservation Techniques of Print and Digital Sources of Information
We know that documents being organic in nature are bound to decay with the passage of time. This process of decay is governed by the elements of physical and chemical nature. Further, the documents containing the materials of food value for some insects are damaged by them. Careless handling and neglect by the people m generally also results in their damage.

In view of the above, to keep the documents safe and secure for the use of future generations, their preventive conservation is a must. Preventive and curative cares are the two elements of preservation. If preventive measures are effective and well executed, the necessity of curative treatment can be avoided for a long. The essential elements for preventive conservation are:

(a) Suitable building facilitating ideal storage conditions and scientific storage.
(b) Responsive fire prevention, detection and controlling measures.
(c) Preventive measure against biological agencies.
(d) Safety and security measures.

Suitable Archival Building: Without suitable building, neither the records cannot be preserved against various enemies nor are safety and security measure ensured. For preservation and security of sources of information from enemies it is essential to construct a specially designed building with air condition facility.

The first part of a building, involves suitable site, design, orientation, provision for prevention, detection and control of fire, effective light control system, ideal storage conditions, dust removing provisions, proper air circulation, up-to-date storage facilities and good housekeeping.

The second part of the building needs planning that the various sections, involved in performing various activities, such as reception, fumigation repair, photocopying etc.

Biological Agents (Insects): We have to control the insects following steps are to be taken.

(a) Keep the premises clean.
(b) Provide insects treatment at the time of construction of building.
(c) Borax powder should be sprinkled for silver fish,
(d) Close windows at night.
(e) No food should be placed or eaten near the collection.

(f) Staff should have proper knowledge of chemicals which can be used as insecticides and repellants.

(g) Contacts should be maintained with experts and other Institutions,

(h) Remove infected books and seek help for insect treatment.

(i) Proper records of insect attacks should be maintained for reference.

We can use Herbs and plants like, Margosa (Neem) leaves, tobacco leaves as disinfectant and insect repellent. Rather than these we can also use some commercial insecticides e.g. Naphthalene Bricks ($C_{10}H_8$), Gammexane ($C_6H_6Cl_6$), baygon, clenofix (contents are Pyrethrum, D.D.T., Pine-oil), Shelfox (contents are Diedlrin, Pyrethrum emulsion) and Pip (contents are Pyrethrum and D.D.T.).

Fire: It is a process of oxidation by heat, light of oxygen. It converts our documents and other properties into ashes. Necessary steps should be taken to prevent fire.

Fumigation Chamber: It is very important for every library if any insect or fungus attacks the books, it may be treated in the fumigation chamber. First we have to separate the affected documents. Those documents should be mechanically cleaned to remove the fungus, spores, larva, insects etc.

Temperature: Suitable temperature is very important. The fluctuations in temperature cause mechanical damage because of expansion of material. Hence temperature should be maintained 20°C to 23°C. Air conditioning of galleries and storage area is the only remedy for controlling the temperature. The Chinese librarian had studied the living condition of the bookworm and found that it would freeze to death at a temperature of 40°C below zero. Therefore, some of the libraries in china use method of freezing to kill the bookworm. The disadvantage of this method is that the container of the freezer is too small, for the bookworm should be frozen to death after 48 hours at 40°C below zero.

Relative Humidity: Moisture comes through air. The moisture is an important factor foe deterioration of books. Maintenance of

Relative humidity of 45% - 55% is most effective way for preservation of paper and rare books. Digital data preservation refers to the management of digital information over time. Digital preservation can therefore be seen as the set of processes and activities that ensure the continued access to information and all kinds of records, scientific and cultural heritage existing in digital formats.[3] [4]

Refreshing: Refreshing is the copying data onto newer media. Sometimes this involves a change of media: CD-ROMs will be copied onto Hard disks, floppy disks may be copied onto CD-ROMs. Refreshing will likely always is necessary due to the deterioration of physical media.

Migration: Migration is the transferring of data to newer system environments. This may include conversion of resources from one format to another (e.g., word to PDF), from one operating system to another (e.g., windows to Linux).

Replication: Creating duplicate copies of data on one or more systems is called replication, data that exists as a single copy in only one location is highly vulnerable to software or hardware failure and environmental disaster like fire, flooding etc. digital data is more likely to survive if it is replicated in several locations.

Emulation: Emulation is the process of recreation of the hardware and software environment required to access a resource. Emulators may be built for applications, operating systems, or hardware platforms. Emulation has been a popular strategy for retaining the functionality of old video game systems.[6]

Foundations for Digital Preservation: Some foundations are initiated for preservation of digital material which is given below.-

Preserving Digital Information (1996):
Archival community recognized challenges for long-term preservation of digital information. Research Libraries Group (RLG) and Commission on Preservation and Access (CPA) formed a Task Force on in 1994 for Archiving of Digital Information with taking action to ensure long-term

preservation and continued access to the digital records. The Task Force submitted final report 1996 with the title "Preserving digital information: Report of the task force on archiving of digital information." became a fundamental document in the field of digital preservation that helped set out key concepts, requirements, and challenges. [7][8]

The Task Force proposed development of a national system of digital archives that would take responsibility for long-term preservation and access to digital information with introducing the concept of trusted digital repositories and defined their roles and responsibilities. They identified five features of digital information integrity (content, fixity, reference, provenance, and context). [9]

OAIS (Open Archival Information System)

Open Archival Information System (OAIS) was developed for standardize digital preservation and provide a set of recommendations for preservation program implementation. It is concerned with all aspects of a digital object's life cycle which is ingest, archival storage, data management, administration, access and preservation planning. The OAIS model also addresses metadata issues and recommends that five types of metadata be attached to a digital object: reference information, provenance, context, fixity, and representation. [10]

Trusted Digital Repository

In 2000 OCLC and RLG start a collaboration to establish attributes of a digital repository for research institutions, building on and incorporating the emerging international level standard of the Reference Model for an Open Archival Information System. In 2002, OCLC and RLG published "Trusted Digital Repositories: Attributes and Responsibilities." "Trusted Digital Repository" (TDR) means "one whose mission is to provide reliable, long-term access to managed digital resources to its designated community, now and in the future." The TDR include the following seven attributes; administrative responsibility, financial sustainability, organizational viability technological and system security, procedural suitability, procedural accountability. They also recommended the collaborative development of digital repository certifications, models for cooperative networks, and sharing of research and information on digital preservation with regard to intellectual property rights. [11]

InterPARES (International Research on Permanent Authentic Records in Electronic Systems)

It is a collaborative research started by the University of British Columbia that is focused on issues of long-term preservation of authentic digital records. The research is being conducted by various institutions in North America, Europe, Asia, and Australia, with an objective of developing methodologies and theories that provide the basis for strategies, standards, policies, and procedures necessary to ensure the reliability, trustworthiness and accuracy of digital records over time. [12]

This project started in 1999 and run up to 2001 with the first phase known as InterPARES 1. It is focused on establishing requirements for authenticity of inactive records generated and maintained in large databases and document management systems created and maintained by government agencies. InterPARES 2 (2002–2007) examined records produced in dynamic environments in the course of artistic, scientific and online government activities and concentrated on issues of reliability, accuracy and authenticity of records throughout their whole life cycle. The (InterPARES 3) was initiated for utilize theoretical and methodological knowledge generated by InterPARES and other preservation research projects for developing guidelines to long-term preservation of authentic records for small and medium-sized archival organizations.[13]

Conclusion

There is an old adage that "Prevention is better than cure". The same is true for the science of preservation. The concept of preservation is now gradually becoming a central issue in modern librarianship and preventive conservation, plays a key role in preserving the documentary heritage for posterity, therefore in every library or information centre at least preventive conservation should be practiced to keep the documents in healthy, good and usable condition.

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Library in Your Pocket: Tools and Techniques for Developing Successful Mobile Services in Academic Libraries

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Abstract

Mobile technology brings many new opportunities for potential users to access digital information of the libraries effectively and efficiently. Library and Information services are being rejuvenated through innovative emerging tools which include mobile technology. It will help libraries in the direction of building good relationship and providing better services to their existing remote users. This paper deals with the use and application of mobile technology in the libraries, their benefits, creation of mobile website, mobile applications and library services through mobile technology.

Keyword: Mobile Technology, Mobile Applications, Mobile Document Supply, E-Resources.

Introduction:

The Information and Communication Technology has changed our life style in all respect. With the instigation of Information Communication Technology (ICT) in library, the creation, storing, classification and dissemination of information have changed significantly. The ICT has forced the libraries to rethink and remodel their mode of sources and services with the recent trends of technologies along with the changing needs of their users.

Now a day's Libraries are using Digital collection to offer multiple and wide range of access through web and other portable computing devices such as PDAs, Ultra Notebooks, Smart Phones, etc. Nowadays libraries are always ready to adopt new technologies such as: Wi-Fi, Bar code system RFID systems, mobile based library services, etc. to cope user needs.

The mobile technology has made communication and information sharing very effortlessly and timely. Now days, Mobile Phones have more

advanced features and capabilities than ever before such as music players, text, audio, video and image messaging, streaming videos, mail synchronise, third generation network connectivity (3G), Video Calling, Wi-Fi, Bluetooth, GPS (Global Positioning System), etc. The craving on computers is decreasing rapidly and interest of people shifting towards mobile technology because they are handier, easily data handling, speed of access multi use, etc.

As reported in The Hindu news paper that [1] India has bypass Japan to become world third largest users of internet after China and US. The Telecom Regulatory Authority of India (TRAI) pegged that the number of internet subscribers in India at 164.81 million as of March 31, 2013, with seven out of eight accessing the internet from their mobile phones. According to IBN live news channel[2] India has 55.48 crore mobile users as per our India Mobile Landscape (IML) 2013 study.

With the growing popularities and opportunities of mobile phones in India, libraries and other information institutions used it as a tool to provide better library services to their users and easily reach to the mass users. People mostly use mobile phones for internet surfing, watching television, reading books, novels and interact with their friends, so after few years mobile phones become an integral part of every people life to access and share information.

Libraries are serving for society and acts as bridge between human generated knowledge and their users. Many of the library users owning smart phones, it is a good time for libraries and librarians to tackle the advantage of mobile technology. The librarians and other information professional's needs to be in touch with these technological changes and adopt these changes to stay connected with their users instantly and provide next generation facilities.

The Darwin theory of survival of the fittest is now suitably applicable to the Libraries. If they change themselves according to present changing environment of the ICT then only they can survive. Otherwise the Libraries will remain only as mere warehouses of books and this empty place will be taken by other computer professionals.

Library Services through Mobile Technology:

Library is a service centre where librarians provide services to satisfied library users information needs. To fulfil the fourth law of library science, librarians introduced many ICT based library services in the library so that they can save the time of users. In continuation to this attempt, the following library services may be providing through mobile technology:

1. **Alert or Notification services**
   Library can provide alert services to their users regarding latest arrivals, due date, renewals, outstanding fines, issue return notifications and regarding other things related to the libraries and their host institutions in the form of quick SMS and MMS. Such notifications can be generated with the help of integrated library management software.
2. **Learning Services**
   Mobile phones are best for e-learning concept. Academic libraries can easily provide e-resources through mobile technology to promote e-learning, distance learning and many other research activities.
3. **Browsing Services**
   Libraries provide vide range of e-resources to their users, with the help of their smart phones they can easily search the library database and get their needed information. Users can easily search library OPAC to know the status of available resources.

4. **Personal Space**
   In the personal space users can make their profile, manage their online resources, categorise their resources, check loaned items on their account, due dates, overdue charges, send requests, manage their friends, send and receive e-mails or notifications, etc.
5. **Access to e-Resources.**
   Many publishers are creating e-books, e-magazines, etc which are compatible with the mobile devices so that users can easily access and read them.
6. **Library Guide.**
   Users can access library guides and library tutorials from their smart phones.
7. **Document Supply**
   Users can get non-print materials and other multimedia contents from their smart phones.
8. **Reference Services**
   The library can easily provide reference services through mobile phones in the form of SMS, MMS, e-mails, etc.
9. **QR Codes**
   QR stands for Quick Response codes in the form of two dimensional bar codes which contains any alpha numeric information and mainly known as mobile tagging.

(Source: http://www.sos.wa.gov/library/libraries/projects/librarynow/)

Most Popular Mobile Technologies:

The use of ICTs has brought out structural, cultural and behavioural changes in the way people access organize and communicate information. These technologies have eliminated the constraints of space and time and transform the world into a global village and we can find solutions of all problems on internet through mobile phone. The majority of the users having mobile phone, therefore, provision of library services through mobile phone has more prospects among university and college students. In the market different type of mobile phone are available and different users are using different type of mobile phones like:

1. PDAs (Personal Digital Assistant)
2. Smart Phones
3. Cell Phones
4. iPods and MP3 players
5. Tablets

Things Needed for Mobile Based Library Services:
Now users want easy and instant access to right information without much effort and application of mobile phones to provide library services will prove to be a boon to users. It will facilitate the users to use library anytime, anywhere. Text alerts, SMS reference, library website for mobile and mobile OPAC are the major services which easily may provide to library users. To provide these mobile services, following basic things are needed:

Mobile Based Library Services


```
Digital Library    Library Automation    Website with Mobile
                   Software with Mobile        Interface
                       Interface
```
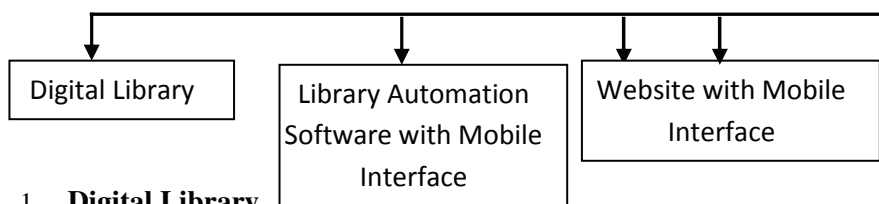
1. **Digital Library.**
Digital libraries are the libraries which have digital collections in the form of text, audio, video, graphics etc and round the clock availability accessible from any part of the globe.. It requires high speed internet connectivity and provides online facilities to their users.

2. **Integrated Library Automation and Management Software with Mobile Technology Interface:**
The integrated library automation and management software are that automation software which computerizes all the library works such as acquisition, classification, cataloguing, circulation, etc. These systems

have inbuilt services such as SMS notification, check in check out notification, overdue notification, payment notification, registration notification, etc.

3. **Website with Mobile View Interface:**

Basically the library websites are designed for the laptops and desktop view. If any user opens it on their mobile phone they are not opening properly due to their resolution and design. So it is necessary to design websites which are compatible with mobile devices.

4. **Trained Staff:**

The trained and expert staffs were needed to provide such kind of facilities.

Sources for Creating Mobile Website, OPACs and Application[3]:

1. **Android Developers** (*Access:* http://developer.android.com). Resources for creating Android applications. Includes developer's guide, tutorials, and videos.

2.

3. **AirPac (Innovative Interfaces)(** *Access:* http://www.iii.com/products/airpac.shtml**).**
   Offers a mobile version of the Innovative Interfaces (III) library catalogue. Includes features such as cover images, integrated library locations with Google Maps software, request and renew items, and more. Contact Innovative Interfaces for pricing.

4. **Boopsie (***Access:* http://www.boopsie2.com/**).**
   Specializing in public and academic libraries and universities, Boopsie can deliver mobile applications that are compatible with all Web-enabled phones. Contact the site for a price quote.

5. **Create an iPhone Optimised Website using JQTouch** (*Access:* http://www.tuttoaster.com/create-an-iphone-optimised-website-using-jqtouch/**).**
   Freelance Web Designer and Developer Matthew Leak outlines one way to create an iPhone-friendly version of a Web site. Coding examples are included in this tutorial.

6. **Library Anywhere -**
   (*Access:* http://www.librarything.com/forlibraries**).**

Created and sold through LibraryThing, Library Anywhere is a mobile catalogue for any library. Includes mobile Web and apps for iPhone, Blackberry, and Android. Prices range from $150 annually for schools to $1,000 annually for universities (additional fees may apply).

7. **MobileTuts+(** *Access:* http://mobile.tutsplus.com/.**).**
   Tutorials for all mobile developers, regardless of platform. Topics include techniques for building mobile apps and mobile Web sites.

8. **MobiSiteGalore (***Access:* http://www.mobisitegalore.com**).**
   Build a mobile Web site in less than 60 minutes. No technical or programming knowledge required. Packages range from basic (cost: free) to unlimited (cost: $24.99 per month).

9. **MoFuse (**Access: http://mofuse.com/**).**
   Build a mobile version of an existing Web site or blog with the MoFuse (short for Mobile Fusion) content management platform. Plans range from $7.95 per month to $199 per month. All accounts come with a 14-day risk-free trial.

10. **Mobile Web Best Practices 1.0: Basic Guidelines (***Access:* http://www.w3.org/TR/mobile-bp/**).**
    Created by the World Wide Web Consortium (W3C), this document specifies guidelines for developing Web-based content for mobile devices.

11. **W3C MobileOK Checker (***Access:* http://validator.w3.org**).**
    Validate mobile-optimized Web sites for compatibility with current Web standards. Results include severity, category, and description of the error along with best practices for fixing issues.

Advantages of Mobile Technology:
The use of mobile technology has grown over in last decade and its uses are going up in very fast because it is cheaper than computer and easy to handy and it influenced the daily life of a common man to a great extent. Thus, the rapid growth in use of mobile technology is based on factors such as simplicity of use technology, cost and portability.

Application of mobile phones to provide library services offers new avenues for libraries and they can improve the efficiency of library services by communication of information and fast delivery of services to

several users at the same time even then they are on move. In all over the world, many college and university libraries are successfully providing library services through mobile phones. There are a lot of advantages of application of mobile technology in libraries like:

1. **Easy to Use:**
   Most of the library users use mobile phones and they easily access web based information provided by their library.

2. **Modified Service:**
   In the mobile services users may be categorised in many sections and according to their needs library provides services to them.

3. **Saves Time:**
   Users need not required to come library, from their mobile phones they can easily access library OPAC to know the status of available resources, reserve their resources, etc.

4. **No Geographical Restrictions:**
   From any part of the globe they can access the library. Things only needed are an active internet connection, access to library website and a smart mobile phone.

5. **Multiple Access:**
   A single resource of the library can be accessible from many mobile phones.

6. **Active User Participation:** Through designing of mobile based website, library makes it more interactive by adding chat rooms, blogs, social interface, etc.

7. **Access Management:**
   Through access management library can easily manage to accessibility of library collection.

8. **Quick Feedback:**
   Through mobile technology users can give quick feedback related to library service and get quick response related to their queries.

Limitations or Barriers:
Application of mobile technology in libraries has facilitate librarians and libraries to provide very fast information services to the users and there are a lot of benefits of this application but there are some limitation of this technology which are discussed as:

1. **Less Data Transfer Speed:**
   In India internet speed on mobiles phones are the major problems. Due to slow downloading and uploading speed users have difficulties in accessing these services from their mobile phones.

2. **Primary Cost:**
   The initial cost for the installation of these services is quite high and as we all know that libraries depend upon their host institutions.

3. **Digital Rights Management:**
   In the digital era the flow of information and continue increase in the numbers of users it's very difficult for the libraries to maintain ownership and copyrights of the digital contents.

4. **Privacy & Security:**
   It's very difficult for the libraries to maintain their privacy and security of their resources such as violation of copyright laws, wrong distribution, modifying, etc are the common things.

5. **Lack of Trained Staffs:**
   In the field of library and information science there is lack of technically known and skilled staff that can manage and take care of all these things.

6. **User Education:**
   Users are less aware of how to access and use library resources. They need some kind of user education programme so that they can effectively and efficiently use library services.

Mobile Web Sites Used by Some Institutions[3]:

In addition to or in place of mobile applications, some companies and organizations also develop mobile versions of their Web site that are better optimized for viewing on mobile devices.

1. **Encyclopedia Britannica Mobile (**http://i.eb.com/**).** Offers a search box and a list of suggested searches. Results include full-text entries with enlargeable images.

2. **MedlinePlus Mobile (**http://m.medlineplus.gov**).** Produced by the U.S. National Library of Medicine, MedlinePlus Mobile provides information about specific diseases, conditions, and wellness issues. The site also contains prescription drug information, medical dictionary, and current health news.

3. **WorldCat Mobile** (http://www.worldcat.org/m**).** Search the WorldCat catalogue for books, movies, music, games, and more. Results include items available at local libraries.
4. **Adelphi University Libraries Mobile (AU2GO) (***Access:* http://m.adelphi.edu/library/**).** Offers library hours, library staff contact information, a link to the library's blog "bibliography," and more.
5. **Albertsons Library, Boise State University (***Access:* http://library.boisestate.edu/m**).** Simple text navigation offers various ways to find the library and its contents. An interesting feature is the inclusion of a "Find in Our Building" category, which lists call number locations and popular locations such as study rooms and computers, each linked to an animated floor map.
6. **North Carolina State University (NCSU) Libraries (***Access:* http://www.lib.ncsu.edu/m/home/?browse=iphone**).** Elegant interface with icons representing categories such as room reservations, group finder, and Webcams. Another interesting feature is the ability to view the number of available library computers.
7. **PENN Libraries, University of Pennsylvania (***Access:* http://www.library.upenn.edu/m/**).** A multitude of information at your fingertips, such as mobile versions of databases, image search, library video clips, and more.
8. **University of California Riverside Libraries (***Access:* http://m.library.ucr.edu**).** Glossy icons designate many useful categories, including research guides, library workshops, and links to the library's social media profiles.
9. **Virginia Tech University Libraries (***Access:* http://m.lib.vt.edu/**).** A simple but effective layout offers important information, such as library hours, contact information, catalogue search, and library maps.
10. **BHU Library (Access:** http://www.bhu.ac.in/bhulibrary/bhulibweb/bhulibmobile/m.bhulib raryiconview.html)**: It provides all the basic information available in website like catalogue search, contact information, cyber library information, Mahamana digital library etc.**

Conclusion:
The future of internet depends upon the mobile technology because of the rapid increase of mobile users. It is the golden opportunity for the libraries and other information institutions to rethink and remodel their existing services by adopting mobile technology facilities. There are many tools

and techniques through which libraries can easily provide services through mobile technology and there are many individual and institutions that are engage in developing, monitoring and using mobile technologies in higher education. Development of websites for Indian libraries for mobile phones leads to prompt information services to the maximum number of users.

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Digital Object Identifier (DOI): A Unique Number

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Abstract

A digital object identifier (DOI) is a unique alphanumeric string to identify content and provide a persistent link to its location on the Internet. DOI has wide applicability to all forms of intellectual content and can therefore be applied to all forms of related materials, such as articles, books, classroom exercises, supporting data, videos, electronic files, and so on. It is like a social security number for a document online. It's a unique and permanent identifier that will take you straight to a document no matter where it's located on the Internet. Information about a digital object may change over time, including where to find it, but its DOI name will not change. DOI names can be used for any form of management of any data, whether commercial or non-commercial.

Keywords: Digital Object Identifier (DOI), PURL, URL, persistent identification.

Introduction

A **digital object identifier** (**DOI**) is a character string (a "digital identifier") used to uniquely identify an object such as an electronic document. Metadata about the object is stored in association with the DOI name and this metadata may include a location, such as a URL, where the object can be found. The DOI for a document remains fixed over the lifetime of the document, whereas its location and other metadata may change. Referring to an online document by its DOI provides more stable linking than simply referring to it by its URL, because if its URL changes, the publisher need only update the metadata for the DOI to link to the new URL.

The DOI as article Identifier

All DOI numbers begin with a *10* and contain a prefix and a suffix separated by a slash.

The Prefix The Prefix begin with "10" to distinguish the DOI from other implementations of the Handle System followed by a four-digit number or string (the prefix can be longer if necessary). In general each member has one prefix, but it is possible for members to have multiple prefixes (e.g. a prefix for each journal title).

The Suffix The suffix is determined by the publisher. The DOI is case insensitive (e.g. 10.1006/abc is the same as 10.1006/ABC) and the suffix must be unique within a prefix.

Definition

Cross Ref (2002) defines A DOI is a "unique alphanumeric string assigned to a digital object, such as an electronic journal, article, report, or thesis. Each DOI name is unique and serves as a stable, persistent link to the full-text of an electronic item on the Internet. Unlike a URL, a DOI name doesn't change over time; even if the item moves to a new location, the DOI name stays the same."

International DOI Foundation defines "the DOI is a system for identifying and exchanging intellectual property in the digital environment. Developed by the International DOI Foundation, it provides a framework for managing intellectual content, for linking customers with content suppliers, for facilitating electronic commerce, and enabling automated copyright management for all types of media."

The American Heritage Dictionary of the English Language defines "a code for identifying information, especially intellectual property, on the Internet independently of the location of the file that stores the information".

History
The DOI system is implemented through a federation of registration agencies coordinated by the International DOI Foundation which developed and controls the system. The DOI system has been developed and implemented in a range of publishing applications since 2000; by late April 2011 more than 50 million DOI names had been assigned by some 4,000 organizations. By April 2013 this number had grown to 85 million DOI names assigned through 9,500 organizations.

Handle system
The Handle System provides efficient, extensible, and secure resolution services for unique and persistent identifiers of digital objects, and is a

component of Corporation for National Research Initiatives (CNRI)'s Digital Object Architecture. Digital Object Architecture provides a means of managing digital information in a network environment. A digital object has a machine and platform independent structure that allows it to be identified, accessed and protected, as appropriate. A digital object may incorporate not only informational elements, i.e., a digitized version of a paper, movie or sound recording, but also the unique identifier of the digital object and other metadata about the digital object.

The Handle System includes an open set of protocols, a namespace, and a reference implementation of the protocols. The protocols enable a distributed computer system to store identifiers, known as handles, of arbitrary resources and resolve those handles into the information necessary to locate, access, contact, authenticate, or otherwise make use of the resources.

Purpose of DOI

The Primary Purpose of DOI is:
- ➢ to provide a framework for managing intellectual content,
- ➢ link customers with publishers,
- ➢ facilitate electronic commerce,
- ➢ enable automated copyright management,
- ➢ to make a collection of identifiers actionable and interoperable.

7- The linking functions of DOIs:

The DOIs in the reference list function as links to the content you are referencing. The DOI may be hidden under a button labeled *Article, CrossRef, PubMed,* or another full-text vendor name. Readers can then click on the button to view the actual article or to view an abstract and an opportunity to purchase a copy of the item. If the link is not live or if the DOI is referenced in a print publication, the reader can simply enter the DOI into the *DOI resolver* search field provided by the registration agency CrossRef.org and be directed to the article or a link to purchase. Locating the article online with the DOI will give you electronic access to any online supplemental archives associated with the article

DOI: where do we find it?

The location of the DOI can depend on many things. Here are some places to look for the DOI:
- • First page of the electronic journal article

- Near the copyright notice
- Database landing page for an article
- Hidden behind a button
- In the citation generated by the database
- Online using the free DOI lookup on **www.crossref.org**
- Abstract of an article

The DOI system.
- The DOI System provides a framework for persistent identification, managing intellectual content, managing metadata, linking customers with content suppliers, facilitating electronic commerce, and enabling automated management of media. DOI names are widely used in scientific publishing to cite journal articles. More than 98% of all DOI registered are for scholarly articles. The use of DOI names for the citing of data sets makes their provenance track able and citable and therefore allows interoperability with existing reference services.

- It Developed by a group of international publishers, the DOI System provides a means of persistent identification for managing information on digital networks. The DOI System is implemented through registration agencies such as Cross Ref, which provides citation-linking services for the scientific publishing sector.

Cross Ref: is dedicated "to enable easy identification and use of trustworthy electronic content by promoting the cooperative development and application of a sustainable infrastructure". Cross Ref's participants have developed a system that provides **two critical functions. First,** they assign each article a "unique identifier and underlying routing system" that functions as a clearinghouse to direct readers to content, regardless of where the content resides. **Second,** they collaborate to use the DOI as an underlying linking mechanism "embedded" in the reference lists of electronic articles that allows click-through access to each reference. Cross Ref currently has more than 2,600 participating publishers and scholarly societies.

Entertainment Identifier Registry (EIDR): A registry of movies, television shows, and other commercial audio/video assets.

Data Cite: DOI names for accessing registered research datasets.

Institute of Scientific and Technical Information of China (ISTIC): DOI names for Chinese journals, data sets and dissertations:

Japan Link Center (JaLC): DOI names for Japanese Journal articles

Airiti, Inc.: DOI applications to Traditional Chinese materials.

China National Knowledge Infrastructure (CNKI): China-based information resources, including Chinese politics, economics, humanities, social science, science, and technology, CNKI publishes databases contain e-journals, newspapers, dissertations, proceedings, yearbooks, references works, and more.

Publications Office of the European Union (OP): OP is the official publisher of the institutions, bodies, offices and agencies of the European Union. As such, it is responsible for assigning DOI names on behalf of these clients. Coverage includes the identification of all EU monographs, the Official Journal of the EU and its individual acts, as well as a number of scientific articles.

Multilingual European DOI Registration Agency (mEDRA) : Persistent citation system for Internet documents, Relation tracking between intellectual property entities, Certification of voluntary deposit including time stamping and digital signatures.

PubMed: Pub Med is produced by the U.S. National Library of Medicine (NLM) and is one of several databases available from the NLM. It covers medicine, nursing, dentistry, veterinary medicine, the healthcare system, preclinical sciences and other life sciences. It is a bibliographical database citation and abstracts from about 5,000 biomedical journals. It includes details such as authors, titles and abstracts, but not the full text of journal articles. Pub Med also has links to online full-text articles from participating publishers.

Persistent Uniform Resource Locator (PURL): It is a Type of URL that act as an intermediary for a real URL of a web resource. When you enter a PURL in a Browser, the browser sends the page request to a PURL server which then returns the real URL of the page. PURL are persistent because once a PURL is established, it never needs to change. The real address of the web page may change but the PURL remains the same.

PURL is managed by the ONLINE COMPUTER LIBRARY CENTER (OCLC).

DOI System and Persistent URLs (PURLs):

"A PURL is a Persistent Uniform Resource Locator. Functionally, a PURL is a URL. However, instead of pointing directly to the location of an Internet resource, a PURL points to an intermediate resolution service. The PURL resolution service associates the PURL with the actual URL and returns that URL to the client as a standard HTTP redirects. The OCLC PURL Service has been strongly influenced by the active participation of

OCLC's Office of Research in the Internet Engineering Task Force Uniform Resource Identifier working groups. PURLs are an approach to fixing the problem of unstable URLs.

Application of DOI:

Major applications of the DOI system currently include:

- persistent citations in scholarly materials (journal articles, books, eBooks, etc.) through Cross Ref, a consortium of around 3,000 publishers;
- research datasets through Data Cite, a consortium of leading research libraries, technical information providers, and scientific data centers;
- European Union official publications through the EU publications office;

Permanent global identifiers for commercial video content through the Entertainment ID Registry, commonly known as EIDR.

Benefits of the DOI system:

The DOI system offers a unique set of functionalities:

- *Persistence*, if material is moved, rearranged, or bookmarked;
- *Interoperability* with other data from other sources;
- *Extensibility* by adding new features and services through management of groups of DOI names;
- *Single management* of data for multiple output formats (platform independence);
- *Class management* of applications and services;
- *Dynamic updating* of metadata, applications and services.

Benefits of implementing the DOI system include facilitating internal content management and enabling faster, more scalable product development, by delivering four key advantages in making it easier and cheaper to:

- *Know what you have* (users able to look at catalogues of content available throughout the enterprise);
- *Find what you want* (users able to search and browse for content to be used or re-purposed);
- *Know where it exists* (able to see where the item exists within the organization);
- *Be able to get it* (users and production tools able to retrieve the content).

Conclusion:

In the fast-changing world of electronic publishing, there is the added problem that ownership of information changes and location of electronic files changes frequently over the life of a work. Technology is needed that

permits an identifier to remain persistent although the links to rights holders may vary with time and place.

The network environment creates an expectation among users that resources can be linked and that these links should be stable. The DOI system provides a way to identify related materials and to link the reader or user of content to them.

A DOI name differs from standard identifier registries such as the ISBN and ISRC. The purpose of an identifier registry is to manage a given collection of identifiers, whereas the primary purpose of the DOI system is to make a collection of identifiers actionable and interoperable.

Reference:
1- http://www.doi.org/RA_Coverage.html
2- http://libguides.uhv.edu/content.php?pid=228519&sid=1890377
3- http://www.doi.org/demos.html
4- http://link.aip.org/jhtml/doi.jsp
5- http://en.wikipedia.org/wiki/Digital_object_identifier
6- https://www.datacite.org/whatisdoi
7- http://www.apastyle.org/learn/faqs/what-is-doi.aspx
8- **http://www.yourdictionary.com/digital-object-identifier**
9- http://www.crossref.org/
10- http://www.crossref.org/01company/15doi_info.html
11- http://www.dentalhospital.ie/wp-content/uploads/2010/10/PubMed-Guide.pdf
12- http://www.doi.org/factsheets/DOI_PURL.html
13- https://canvas.instructure.com/courses/808464/discussion_topics/1597428

पुस्तकालयों के बदलते स्वरूप में आर0एफ0आई0डी0 : एक नयी तकनीक

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सार—

जैसा कि सर्वविदित है कि आधुनिक युग को सूचना विज्ञान का युग माना जाने लगा है इसका तात्पर्य यह है कि आधुनिक समय में समाज के विभिन्न कार्य जैसे शिक्षा एंव संस्कृति का प्रचार –प्रसार, विकास की योजनाएं सम्पूर्ण विश्व में होने वाले विभिन्न प्रकार के अनुसंधान, पर्यावरण को बचाने के किये जा रहे विभिन्न प्रयास इत्यादि जैसे अनिगनत क्षेत्रों का आदान–प्रदान है। यह कहने में तनिक भी अतिश्योक्ति नही है कि सूचना विज्ञान के इस युग में सूचनाओं के विस्फोट की जैसी स्थिति उत्पन्न हो गयी है अतः इस स्थिति में अन्य संस्थानों के साथ–साथ पुस्तकालयों को भी एक वृहद जिम्मेदारी का निर्वाह करना पड़ रहा है। तथा पुस्तकालयों का स्वरूप बदल कर सूचना केन्द्रों के समान हो गया है। जिनके सामने आज सबसे बड़ी चुनौती अपने उपयोगकर्ताओं को उनकी आवश्यकतानुसार समस्त सूचनाओं को कम से कम समय में उपलब्ध करवाना है। यही कारण है कि आज के ग्रंथालय डिजिटल हो गये है तथा उनमें निहित सामग्री केवल पुस्तकों में ही समाहित नही है बल्कि पीरियोडिकल्स, जर्नल्स, सीडी, डीवीडी, माइकोफिल्मस, टेप, संदर्भ ग्रंथ आदि के द्वारा भी सूचनाओं का आदान–प्रदान होने लगा है। यही कारण है कि अपने देश में भी 1965 से ही सूचना विज्ञान के क्षेत्र में कम्प्यूटर का प्रयोग किया जाने लगा है। आज स्थिति यह हो गई है कि **इंटरनेट** के बिना किसी ग्रंथालय की कल्पना करना भी अत्यंत दुष्कर है।

परंतु मानव स्वाभावतः एक अनुसंधानशील जीव है थोड़ा पाकर संतुष्ट हो जाना उसके स्वभाव में ही नही है। यही कारण है कि पुस्तकालयों के क्षेत्र में भी विभिन्न तकनीक के अनुप्रयोग होने पर भी नित नवीन तकनीक के लिये प्रयोग होते रहते हैं और **रेडियो आवृत्ति पहचान (Radio Frequency Identification)** तकनीक इन्ही प्रयोगों का ही परिणाम है यह तकनीक आज न केवल पुस्तकालय एंव सूचना विज्ञान के क्षेत्र में अपितु अनेक क्षेत्रों में विकास के नये आयाम प्रस्तुत कर रही है। यह एक लचीली तकनीक है जिसमें रेडियो तरंगों का प्रयोगकरके काफी दूर से वस्तु को पहचाना जा सकता है या संदेश को पढ़ा जा सकता है सुरक्षा की दृष्टि से यह तकनीक अत्यंत महत्वपूर्ण है। यही कारण है कि **आर0एफ0आई0डी0** तकनीकि पुस्तकालय विज्ञान के क्षेत्र में अपना महत्व पूर्ण स्थान रखती है इस तकनीक के माध्यम से पुस्तकालय में रखी विभिन्न प्रकार की कीमती पाठन सामग्री की सुरक्षा,कर्मियों तथा उपयोग कर्ताओं की सुविधा, वित्तीय मामले तथा कई प्रकार के अनुशासन सबंधी नियम–कायदो इत्यादि के क्षेत्र में कंाति लायी जा सकती है। (**रेडियो आवृत्ति पहचान**) अर्थात (Radio Frequency Identification)) नामक इस तकनीक का प्रारम्भ यूँ तो 1970 के दशक में सयुक्त राज्य अमेरिका में अन्तरिक्ष से संबधित तथा बंदर गाह से सबंधित कार्य में माना जाता है परंतु इस तकनीक का ठीक प्रकार से प्रयोग 1980 में Cattle tracing applications में किया गया। हमारे देश में भी इस तकनीक को पूर्व में रक्षा के क्षेत्र में प्रयोग किया गया हैं परंतु पुस्तकालय एंव सूचना विज्ञान के क्षेत्र में इसका प्रयोग 1990 से प्रारम्भ हुआ है।

आर0एफ0आई0डी0 एक ऐसी तकनीक है जो रेडियों तरंगो के इस्तेमाल के द्वारा वस्तु की पहचान करने तथा कई मीटर दूर के संदेश को पढ़ने व संकेतों को समझने में सक्षम है। समान्यतः आर0एफ0आई0डी0 तकनीक को एक **आर0एफ0आई0डी0 टैग** के रूप में ही संदर्भित किया जाता है क्योंकि टैग को सरलता से किसी उत्पाद, पशु,व्यक्ति या संयत्रं में लगाया जा सकता है। अधिकांश आर0एफ0आई0डी0 टैग **दो मुख्य भागों** से मिलकर बनें होते है। पहला भाग एक ऐसा **सर्किट** होता है जो बहुत से महत्वपूर्ण कार्य जैसे सूचना का भंडारण करने तथा

रेडियों तरंगों के संकेतों को समझ कर उन्हें कियान्वित करने या न करने का कार्य करता है दूसरा भाग एक **एंटीना** के रूप में होता है जिसका कार्य संकेतों को प्राप्त करना तथा प्रसारित करना होता है।

सामान्यतः **तीन प्रकार** के आर0एफ0आई0डी0 टैग होते है। <u>**पहला सकिय टैग**</u> इस प्रकार के टैगों में प्राप्त संकेतों का संचरण करने के लिये एक बैटरी लगी रहती है। <u>**दूसरे प्रकार के टैग निष्किय**</u> टैग होते है इस टैग के द्वारा संकेतों के स्वतंत्र परिसंचरण के लिये बाहरी स्रोत की आवश्यकता पड़ती है क्योंकि इसमें सकिय टैग के समान बैटरी नही लगी रहती है। <u>**तीसरे प्रकार के टैग को बैटरी समर्थित निष्किय प्रकार का टैग**</u> कहा जाता है इस प्रकार के टैग की बैटरी को सकिय करने के लिये किसी बाहरी स्रोत की आवश्यकता पड़ती है परंतु इस प्रकार के टैग की संकेतों को पकड़ने की क्षमता अत्यंत उच्च श्रेणी की होती है। अतः यह सूचनाओं के असीम भण्डार को **अपने अन्दर समाहित** कर सकता है।

यह एक अत्याधुनिक प्रकार की तकनीक है अतः इसे सामानों में छुपाना या डालना अत्यंत सरल है इस बात की सत्यता के लिये **ब्रिस्टल विश्वविद्यालय** के **शोधार्थियों** का उदाहरण लिया जा सकता है जिन्हाने **2009 में चीटियों** जैसे अति सूक्ष्म जीवों पर आर0एफ0आई0डी0 के **माइक्रोट्रांसपोंडर को चिपका** दिया था जिससे कि **चीटियों के व्यवहार का अध्ययन** किया जा सके।

यह तकनीक पुस्तकालयों के विभिन्न कार्यों में सहयोग करने के लिये प्रचलित <u>**बार कोड तकनीक**</u> (Bar Coad Technique) से भी अधिक आधुनिक है यही कारण है कि महत्वपूर्ण संस्थानों के डिजिटल पुस्तकालयों में पारम्परिक **बार कोड** के स्थान पर **आर0एफ0आई0डी** ने स्थान लेना शुरू कर दिया है **बार कोड** का प्रयोग करने की सीमाएं हैं जबकि **आर0एफ0आई0डी** चिप को कहीं भी पुस्तकों में, सीडी, डीवीडी, माइक्रोफिल्मस, इत्यादि में लगाया जा सकता है तथा इन सामग्रियों की स्कैनिंग के लिये इनके कवर को खोलने की भी आवश्यकता नही है। यद्यपि सिंगापुर वह देश है जिसने सर्वप्रथम पुस्तकालयों में आर0एफ0आई0डी तकनीक का प्रयोग किया था तथापि संयुक्त राज्य अमेरिका के अधिकांश शैक्षणिक पुस्तकालयों में इस तकनीक का प्रयोग बहुतायत से किया जाता है। आर0एफ0आई0डी तकनीक पुस्तकालयों में अनेक प्रकार से उपयोगी है विशेष रूप से परिसंचरण में इसका बहुत महत्व है इसके अतिरिक्त इस तकनीक के माध्यम से कर्मचारियों तथा उपयोगकर्ताओं दोनों के ही अमूल्य समय की बचत की जा सकती हे जैसे बारकोड में एक बार में एक पुस्तक का कोड स्कैन किया जा सकता है जबकि आर0एफ0आई0डी तकनीक के माध्यम से एक बार में पुस्तकों के पूरे एक ढेर (समूह) को स्कैन किया जा सकता है इसके अतिरिक्त इस तकनीक के माध्यम से नेत्र हीन व्यक्तियों को अपनी पसंद की श्रृव्य पुस्तकें (टेप्स) लेने में भी बहुत सुविधा रहती है। **आर0एफ0आई0डी** तकनीक के उपयोग के उपरान्त ही संसार के अनेक देशों के पुस्तकालयों में स्मार्ट शैल्वस की अवधारणा भी जोर पकड़ रही है। इन्टरनेट से भी अधिक अग्रिम पंक्ति की तकनीक होने के कारण **आर0एफ0आई0डी** ने संसाधन सहभागिता के क्षेत्र में नये आयाम प्रस्तुत किये हैं। आज वर्तमान समय में पुस्तकालय के अतिरिक्त अन्य बहुत से ऐसे क्षेत्र हैं। जिनमें **आर0एफ0आई0डी** तकनीक अत्यन्त कारगर सिद्ध हुई है। जिनमें से कुछ क्षेत्रों का उदाहरण निम्नलिखित है। जापान, ब्रिटेन, अमेरिका इत्यादि जैसे दुनिया के कुछ विकसित देशों ने अपने विद्यालय के छात्रों एवं कर्मचारियों की वर्दी, परिचय पत्र अथवा बैगों इत्यादि पर **आर0एफ0आई0डी** चिप का प्रयोग करना प्रारम्भ कर दिया है। जो कि इस चिप के द्वारा भवन के अन्दर उपरस्थित कर्मचारियों अथवा छात्रों को ट्रैक करने का कार्य करता है। साथ ही साथ अधिकांश संस्थानों में स्कूल के गेट पर **आर0एफ0आई0डी** चिप का प्रयोग किया जाता है। इसके अतिरिक्त संग्रहालयों, मॉल्स तथा बडे–बडे ज्वैलर्स, इत्यादि के शोरूमों में भी इस तकनीक का उपयोग किया जाने लगा है। इस तकनीक के प्रयोग से उपकरणों व सामानों की चोरी की संभावनाएं लगभग समाप्त हो जाती हैं।

1990 के दशक से ही में विभिन्न खेलों में भी जैसे एथलेटिक्स में **आर0एफ0आई0डी** तकनीक का प्रयोग खिलाड़ियों के समय को पता करने के लिए किया जा रहा है। विभिन्न प्रकार

की भर्ती प्रणालियों में आवेदन छाँटने में भी इस तकनीक का उपयोग किया जा रहा है। विकासशील देशों की तुलना में विकसित देशों में इस तकनीक का प्रयोग अधिक किया जाता है।

विकसित देशों में चालकों के लाइसेन्स में, विभिन्न महत्वपूर्ण संस्थानों में, हाइवे पर टैक्स की वसूली में, रेलवे स्टेशनों पर विशेषकर मेट्रों व बुलेट ट्रेनों में, गोल्फ के खेल में गेद पर, अस्पतालो में, कैसीनों में, हवाई अड्डों पर साथ ही साथ विभिन्न प्रकार के सम्मेलनों व बैठकों में भी इस तकनीक का प्रयोग किया जाने लगा है।

यद्यपि गोपनीयता के पैरोकारों ने **आर0एफ0आई0डी** चिप की प्रत्यारोपण प्रकिया का विरोध भी किया है। उनका मानना है कि इस चिप के द्वारा जासूसी भी की जा सकती है, अतः **आर0एफ0आई0डी** उपकरणों को जासूसी उपकरण कहकर इस तकनीक की निन्दा भी की गई है। लेकिन अन्त में हम यह कह सकते हैं कि समय की मॉग को देखते हुए तथा पुस्तकालय के बदलते स्वरूप को देखते हुए, पाठकों की आवश्कताओं को पूरा करने के लिए यह तकनीक सफलता के नये द्वार खोलकर आने वाले समय में अत्यंत लाभकारी सिद्ध होगी तथा विकास का मार्ग प्रशस्त करेगीं।

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इण्टरनेट युग में ग्रंथालयों की भूमिका एवं कार्य

प्रवीन कुमार पाण्डेय
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सार

इण्टरनेट के उद्भव एंव विकास ने पुस्तक व्यवसाय की कार्य प्रणाली को बदल दिया है। पाठ भी मुद्रित पुस्तकों की तुलना में इलेक्ट्रानिक पुस्तकों को अधिक पंसद कर रहें हैं। पुस्तकालय भी निरन्तर अपनी पाठ्य –सामग्रियों में मुख्य रुप से इलेक्ट्रानिक प्रलेखों की संख्या मे निरन्तर वृद्धि कर रहे है। इण्टरनेट आज के समय मे मनुष्य के लिए रोटी, कपड़ा और मकान जैसी महत्वपूर्ण वस्तुओं में सम्मिलित हो चुका है जिससे किसी भी समय और कहीं पर भी किसी भी प्रकार की सूचना प्राप्त की जा सकती है।

परिचय–

आधुनिक समाज में सभी क्रियाकलाप सूचना पर आधारित है इस तरह जो भी विकास की नींव रखी जाती है वह सूचना पर आधारित रहती है। इस प्रकार समाज में अनेक प्रकार की आवश्यकता पड़ती रहती है, इस लिए आधुनिक समाज को सूचना समाज कहा जाता है तथा इस प्रकार सूचना नवीन से नवीन क्षेत्रीय, राष्ट्रीय तथा अन्तराष्ट्रीय सूचना किस प्रकार तात्कालिक प्रभाव मे विशिष्ट उपयोक्ता के पास पहुंचाई जाए, इसके लिए हर प्रयास किया जाता है, जिससे कि समाज का कल्याण हो सके। सूचना प्राप्त करने के लिए कई प्रकार के उपाय किये जाते है जिससे कि ग्रन्थालयों को मशीनीकरण तथा कम्प्यूटरीकरण कर उन्हें आधुनिक रुप दिया जा रहा है जिससे की सभी प्रकार के कार्य सेवाओं देश काल के अन्त सार दक्षता से प्राप्त कर सके इस प्रकार के सूचना समाज को आधुनिक रुप से काफी बल दिया जा रहा है जिससे समाज के साथ ही राष्ट्र का भी कल्याण हो सके। इस प्रकार आधुनिक समय से जो भी पुस्तकालय का कार्य एवं सुचारु से इलेक्ट्रानिक रुप प्रदान किया जा रहा है इस प्रकार से सूचना को ईमेल तथा फैक्स टेलीटैक्स के माध्यमसूचना की प्राथमिक स्तर सूचना को समाज को प्रदान की जाती तथा आज का समाज वर्तमान काफी हद तक जागरुक हो चुका है, जिससे कि सूचना के बिना किसी भी देश तथा किसी कार्य की सफलता की कल्पना नहीं की जा सकती है। इस प्रकार आधुनिक समय में सूचना कैसे समाज तक पहुंचायी जाये इसका उपाय किया जा रहा है। वर्तमान में समाज विज्ञान और प्रोद्योगिकी के विकास के साथ तीव्र गति से प्रगति को ओर बढ़ रहा है जिससे कि अनुसंधान और विकास से सम्बंधित सूचना एक स्थान से दूसरे स्थान तक क्षण मात्र में पहुंच हो जाती है। पूर्व में सूचना और प्रौद्योगिकी के उन्नत न होने से सूचना समाज तथा शोधकर्ता का शोध पूरा नहीं हो पाता था, जिसके कारण सूचना को अभाव बना हुआ था। इस प्रकार विषय विशेषज्ञ या शोधकर्ता अपने विषय क्षेत्र में हो रहे अनुसंधान क्रियाकलापों के सम्बंध मे नवीन सूचना प्राप्त करना चाहता है। और यह जानकारी उसे सूचना के प्राथमिक स्रोतों से द्वारा ही उपलब्ध हो पाती है इस प्रकार यह सभी प्रकार के कार्य कम्प्यूटर और सूचना के माध्यम से प्राप्त हो जाती है। वर्तमान परिवर्तित समाज में अनेको प्रकार की संगठन संस्थाये एवं संघ और व्यक्ति एक संयुक्त संदेश वाहन के साधनों द्वारा परस्पर जुड़े रहते है। इस प्रकार आधुनिक समाज को सूचना समाज की संज्ञा दी गयी है। इस प्रकार से नवीनतम सूचना और ज्ञान की राष्ट्रीय सम्पदा के विकास के प्रमुख अंग मानते हुए विज्ञान, कृषि,उद्योग,तकनीकी आदि क्षेत्रों में सूचना केन्द्रों की स्थापना की जा रही है तथा ग्रन्थालय स्वरुप में तेजी से विकास हो रहा है।

परिवर्तन के कारक तत्व

आधुनिक समाज में मानव जीवन के विभिन्न पक्षों में जो परिवर्तन आया है उसके कारक निम्नलिखित है:–

1–शासन–प्रशासन

　　नियोजन में परिवर्तन नीति पालन तथा व्यवस्थापन आदि।

2– व्यवसाय एवं वाणिज्य

　　आयात और निर्यात अन्तर्राष्ट्रीय व्यापार बहुराष्ट्रीय कम्पनियों का प्रभाव आदि।

　　सामाजिक जनसंख्या का दबाब ,बढ़ता हुआ नगरीकरण, ग्रामीण विकास की गतिशीलता समूह आदि।

4–आर्थिक

　　समाज की व्यवसायिक संरचना　आय ,मूल्य मुद्रा स्फीति विकास की गतिशीलता,सूक्ष्म तथा वृद्ध स्तरों पर आर्थिक विकास आदि।

5–राजनैतिक

　　राजनैतिक परिवर्तन में प्रभावित राजनैतिक　ढ़ांचा ,राजनैतिक दलो की बहुआयामी गतिविधियों ,राज्य विधान सभाओं के विधायको और सांसदों की भूमिका ,सत्ता का ढ़ांचा आदि।

6–शैक्षणिक

　　शैक्षणिक परिवर्तनों से प्रभावित अध्ययन एवं अध्यापन प्रक्रिया,अध्ययन,अध्यापन सामग्री, आदि।

7–अनुसन्धान तथा विकास

　　प्रोद्योगिकी स्थानान्तरण उपयोगी सूचनाओं का प्रसारण ,विस्तार समाज के मानविकी के क्षेत्र में अनुसन्धान तथा विकास आदि।

　　उपरोक्त कारक तत्व निरन्तर मानव के जीवन समाज में तीव्रता से परिवर्तन ला रहे है जिसमं फलस्वरुप आधुनिक पुस्तकालयों और सूचना केन्द्रो की भूमिका में भी परिवर्तन हो रहे हैं।

पुस्तकालय एवं सूचना केन्द्र की परिवर्तित भूमिका

　　प्रारम्भ में जहां मुद्रित अध्ययन सामग्री प्रारम्भ अन्तर्गत ग्रन्थो और पत्र–पत्रिकाओं का संग्रहण किया जाता था, जबकि अब वहां सामाजिक　प्रकाशन सम्मेलन कार्यवाहियां ,शोध प्रबन्ध मानक तकनीकी रिपोर्ट, श्रव्य–दृश्य सामग्री माइक्रोफार्म　मशीन रीडेबेल फार्म मैग्नेटिक टेप्स सी. डी. रोम आदि सभी स्वरुपों में सूचना का संग्रहण किया जा रहा है। इस　प्रकार सूचना सामग्री का स्वरुप परिवर्तित हो रहा है तथा उपयोगकर्ताओं की आवश्यकताओं के　अनुरुप परिवर्तन होता आ रहा है। इस प्रकार दूर संचार माध्यमों के विकास में कम्प्यूटर पर आधारित पद्धतियों के विकास ने अपनी मुख्य　भूमिका निभाई है। पुस्तकालया एवं सूचना केन्द्र भी कम्प्यूटर और संचार सांधनों से अछूते नही रहे तथा संचार के माध्यम से　सूचना की पुनः प्राप्ति त्वरित गति से सम्भव हो गई है। इस प्रकार सभी क्षेत्रों में सूचना की महत्ता बढ़ने के कारण सूचना के प्रसारण एवं उपलब्धता की आवश्यकता के　फलस्वरुप नेटवर्किंग की अवधारणा का विकास हुआ है। आज वर्तमान समय में सूचना समाज में सभी विशिष्ट उपयोगकर्ताओ का सूचना के संचार के माध्यम से कल्याण हो रहा है। सूचना के बिना किसी भी वस्तु का कल्याण होना असम्भव है। नेटवर्किंग का उपयोग सूचना के विनिमय औरा संसाधन सहभागिता के लिये किया जाता रहा है। इस प्रकार पुस्तकालय एवं सूचना केन्द्रो की भूमिका मे तीव्रता से परिवर्तन हो रहा है। इस तर बतलाया गया है कि ग्रन्थालय एवं सूचना केन्द्र अपने आधुनिक परिवर्तित स्वरुप में भी आधुनिक सूचना सेवाओं की व्यवस्था कर अपने उपयोगकर्ताओं को उनकी मांग को आवश्यकतानुसार पूरा कर रहे है। इस प्रकार आधुनिक समय को सूचना समाज कहा जाता है क्योकि इसके बिना किसी भी क्षेत्र की कल्पना नहीं की जा सकती　इसलिए कम्प्यूटर तथा ई–मेल ,फैक्स के माध्यम से तत्काल सूचना प्राप्त होने पर क्षेत्र में तीव्र गति से विकास हुआ है।

　　मानव जिस समाज रहता है वो हमेशा से परिवर्तित होता आ रहा है, क्योंकि आज के वर्तमान मे समय–समय पर समाज में नवीन　प्रचलन प्रारम्भ होते जा रहे है। वर्तमान समय का समाज भी अनेक परिवर्तनों के बाद हमारे समक्ष होते आया है। इस प्रकार का युग है सूचना के

किसी भी क्षेत्र मे इलेक्ट्रानिक माध्यमो के द्वारा ही सूचना उपलब्ध कराई जाती है तथा सूचना उपयोग एवं सेवाओं की बढ़ती हुई विशाल संख्या ने यह प्रमाणित कर दिया है कि आज का समाज सूचना का समाज है आज हम सभी लोग सूचना समाज के अन्तर्गत जीवन–यापन कर रहे है।

सूचना समाज की विशेषतायें–
सूचना का उपयोग एक आर्थिक संसाधन के रुप मे किया जा रहा है इसलिए सूचना के बिना कल्पना नहीं की जा सकती है।
2– उपयोक्ताओं को वांछित सूचना की त्वरित एवं उपयुक्त आपूर्ति होती है।
3– सूचना सेवायें प्रदान करने की संरचना एवं दूरसंचार पर आधारित होती है।
4– उच्च स्तर की इलेक्ट्रानिक तथा कम्प्यूटर डेटा सचारण तथा सूचना प्रोद्योगिकी के क्षेत्रो में रोजगार के अवसर प्राप्त होते रहते हैं।
5–सामान्य जनता से सूचना के उपयोग के दर्षन किये जाते है।
6– औद्योगिक अर्थव्यवस्था सूचना अर्थ व्यवस्था से बदल जाती है अर्थात जिस प्रकार औद्योगिकी अर्थव्यवस्था में पूंजी एक प्रमुख संसाधन सहभागी होती है ठीक उसी प्रकार सूचना अर्थव्यवस्था में सूचना ही प्रमुख संसाधन है। स्पष्ट रुप से कह सकते हैं कि सूचना के व्यवहार मे अनेक प्रकार की प्राद्योगिकयों के उपयोग किये जाने के कारण आज का समाज सूचना समाज की संज्ञा दी जाती है।

सूचना समाज का प्रभाव
1–शिक्षा पर प्रभाव
इस प्रकार सूचना समाज के आगमन के कारण शैक्षणिक प्रक्रियाओं के नवीन से नवीन आयामों का प्रारम्भ हो रहा है। इस प्रकार सीखने एवं शिक्षण के आधुनिक उपकरण है तथा इसलिए किसी भी व्यक्ति को उसका वांछित लाभ प्राप्त करने एवं सीखने मे सहायक सिद्ध हो रहा है। इस प्रकार शिक्षण को देखेते हुए आज वर्तमान समय में सभी कालेजों में वर्चुअल क्लास रूम ने छात्र–छात्राओ की अध्ययन प्रक्रिया को सरल एवं सुयोग्य स्थापित कर दिया है तथा साथ ही साथ घरो मे विस्थापित कर दिया है। इस प्रकार आज का युग सूचना युग कहा जाता है।

2–अनुसंधान एवं विकास पर प्रभाव
अनुसंधान के क्षेत्र में सूचना एवं प्रौद्योगिकी का विशेष योगदान है। सूचना एवं प्रौद्योगिकी के उद्भव से बहुत बड़े– बड़े शोध कार्य आसानी से पूरे हो जाते है। शोध के दौरान आंकड़ो को एकत्रित करना, डिजिटल प्रश्नावली के माध्यम से आंकड़ा एकत्र करना, सम्पूर्ण विश्व से ऑनलाइन डिजिटल प्रश्नावली का प्रयोग करना, प्राप्त आंकड़ो का विश्लेषण करना तथा शोध रिपोर्ट लिखना इत्यादि।

3–सरकार पर प्रभाव
विश्व के लगभग सभी देशों की सरकारें अपने सभी कियाकलापों पर साख्यिकीय डेटा संग्रहीत व्यवस्थित एवं प्रसारित करती है, जिससे कि सरकारी योजनाओं की विशाल मात्रा में सूचना संसाधन के रुप में प्राप्त होती रहती है। इस प्रकार से आज तक सूचना प्रोद्योगिकी सरकारी क्रियाकलापों अत्यन्त व्यापक रुप से उपयोग मे लाई जा सकती है।
सूचना प्राचीन समय में काफी लोगो तक देर से पहुंचने के कारण सूचना पुरानी पड़ जाती थी, जिससे कि काफी दिक्कत का सामना करना पड़ता था इस प्रकार से आघुनिक समय में सूचना प्राद्योगिकी के आगमन से सूचना क्षण भर में उपलब्ध हो जाती है।

4–व्यापार एवं उद्योग–धन्धों पर प्रभाव

आज के वर्तमान समय में व्यापारिक एवं औद्योगिकी इकाईयां अपना आधुनिकरण करने हेतु विभिन्न नवीनतम उपकरणों, नवीन से नवीन प्रोद्योगिकी के उपयोग को काफी हद तक प्रोत्साहन प्रदान करती है। इस लिए व्यापार एवं उद्योग के लिए सूचना की आवश्यकता रहती है तथा यह सूचना प्रोद्योगिकी के कारण प्राप्त हो जाती है तथा यह सामान्य व्यापार से विशिष्ट व्यापार तक सूचना को प्रोद्योगिकी के कारण प्राप्त किया जा सकता है क्यों कि आज का समय सूचना समाज का युग है। इसलिए बिना सूचना के किसी भी प्रगति की कल्पना तक नही की जा सकती हे। ये दोनो ऐसे क्षेत्र है कि जिन्होने प्रबन्ध सूचना प्रणालियो का उपयोग सूचना उपलब्ध कराने में प्रारम्भ किया जा रहा था। इस प्रकार व्यापार उद्योग धन्धे भी सूचना समाज के प्रभाव से अछूते नही रह जाते हैं।

5–मनोरंजन एवं संस्कृति पर प्रभाव

व्यक्ति अपने आमोद–प्रमोद अनेक एवं मनोरंजन हेतु आधुनिक समय में कई प्रकार के कम्प्यूटर गेम जैसे विडियोगेम्स, सैकड़ो चैनल टेलीविजन, विडियो डिस्क एवं विडियो कैसिटस रिकार्डस आदि का उपयोग करते रहते हैं। पाश्चात्य देश प्रसारण एवं टेलीविजन नेटवर्क के माध्यम से मनोरंजन के दृश्य एवं प्रोग्राम विश्व को प्रसारित करते रहते है जो कि विश्व के प्रत्येक स्थान पर सूचना पर क्षण भर में सूचना प्राप्त हो जाती है। इस तरह से ई–मेल व फैक्स के माध्यम से अनेक व्यक्तियों को अपने कार्य से जुड़ा सूचना नेटवर्क के माध्यम से प्राप्त किया जाता है। इस प्रकार से सूचना को दूसरे स्थान कम्प्यूटर के माध्यम से प्राप्त किया जाता है।

6–व्यक्ति के दैनिक जीवन पर प्रभाव

एक साधारण व्यक्ति भी आज अपने दिन–प्रतिदिन के कार्यों में सूचना की आवश्यकता का अनुभव करता रहता है। इस प्रकार किसी को भी सूचना की आवश्यकता खाना बनाने तथा बागवानी हेतु गृज सज्जा एवं गृहस्थी के आदि कार्यों हेतु आवश्यकता होती है। इस प्रकार आधुनिक समय मे सूचना समाज मे सूचना प्रोद्योगिकी के आगमन से ऐसी सूचनाओं का अभिगम प्राप्त करना अत्यन्त सरल हो जाता है।

7–ग्रन्थालय एवं सूचना के क्षेत्र में प्रभाव

पिछले प्राचीन समयावधि में ग्रन्थालय एवं सूचना केन्द्रो मे टेक्नोलाजी आधुनिक उपकरणों का उपयोग होने लगता है तथा इस प्रकार अनेको सख्या में ग्रन्थालय आजकल वर्तमान समय मे ई–मेल, फैक्स तथा वाङमयात्मक एवं अवाङमयात्मक डेटा बेसों के आनलाइन अभिगमन उपलब्ध कराते है। इसके साथ ही साफ ग्रन्थलयों के गृह–रक्षण कार्यों तथा कम्प्यूटर भी आवश्यक एवं उपादेय उपकरण बन गया है तथा इस तरह ग्रन्थालय नेटवर्किंग ने भी ग्रन्थीय कला के दर्शन को बिल्कुल बदल दिया जाता है। यह आधुनिक समय में सूचना समाज की ही देन है।

उपसंहार

स्पष्ट रुप से यह कहा जा सकता है कि प्रारम्भ मे जहां मुद्रित अध्ययन सामग्री के अन्तर्गत ग्रन्थो पत्र–पत्रिका को संग्रहण किया जाता था एवं किया जा रहा है। सूचना प्रोद्योगिकी के तीव्र गति विकास फलस्वरुप आज वर्तमान समय प्रत्येक क्षेत्र में विशिष्टीकरण की आवश्यकता का अनुभव किया जा रहा है। आधुनिक समय में सभी क्षेत्रों मे सूचना की महत्ता बढ़ने के कारण सूचना के प्रसारण एवं उपलब्ध की आवश्यकता के फलस्वरुप नेटवर्किंग की अवधारणा का विकास किया जा चुका है। पुस्तकालय एवं सूचना केन्द्र भी कम्प्यूटर और संचार साधनों से अछूते नहीं रहे ।

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Section-5

Institutional Repository in India: Current Status and Development

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Abstract

Institutional Repository (IR) disseminates rich source of digitize materials drafted and published by research communities. In India major R&D institutions and few academic institutions provide Institutional Repository service to its user. The purpose of this article is to review the current status of Institutional Repository in India. It is an attempt to identity the Institutional Repository in India. It also gives the comprehensive listing of top most Institutional Repository in India. The paper closes with an outlook on various recommendations.

Keywords: Institutional Repository, Digital Repository, Digital Library

Introduction

Universities and research institutions are the main information and knowledge generation sources. Though new ideas and thoughts emanate everyday from these knowledge production centers through seminars, discussions, assignments and working papers, only some portion of them (the published research papers) reaches the public and other peer institutes.

As professional journals and working papers are the major information dissemination vehicles, most activities that take place inside the universities and research organizations go unnoticed. Even the information that gets disseminated through professional journals fails to reach many serious researchers as most of them do not have access to costly scientific journals. One solution put forward to control this unnecessary waste of intellectual output is that the organizations should publish their intellectual output online so that it can be accessed by anyone from any place on the web. That is, the organizations should create mechanisms that can capture/store/disseminate the various information products generated by the researchers and academicians. This kind of self-publication

software/hardware infrastructure created by an organization is called an Institutional Repository. A Repository will certainly contain the necessary tools that help the researchers of an organization self-publish their research output. It not only enables a person interested in an organization's intellectual output to access it, but it also has the potential to enhance the prestige of the organization by attracting the attention of other researchers worldwide. They can be organized in several different manners.

Institutional Repository is a new concept of collecting managing and dissemination, preserving library works created in digital form by faculty and student in individual university or collage. It is born out problems with the current scholarly communication model structures by commercial journals, publishers and vendors. An Institutional Repository is an accessible collection of scholarly work that represents the intellectual capital of the university. Some of the prominent researcher's views regarding the Institutional Repository are:

Crow's (2002) definition discusses the potential of IRs to change the scholarly communication system:

Institutional repositories – used in this paper to mean digital collections capturing and preserving the intellectual output of a single or multi-university community – provide a compelling response to two strategic issues facing academic institutions. Such repositories:

- ✓ Provide a critical component in reforming the system of scholarly communication – a component that expands access to research, reasserts control over scholarship by the academy, increases competition and reduces the monopoly power of journals, and brings economic relief and heightened relevance to the institutions and libraries that support them; and
- ✓ Have the potential to serve as tangible indicators of a university's quality and to demonstrate the scientific, societal, and economic relevance of its research activities, thus increasing the institution's visibility, status, and public value.

Bailey (2005) focuses on the diversity of digital materials that IRs can contain:
An Institutional Repository includes a variety of materials produced by scholars from many units, such as e-prints, technical reports, theses and dissertations, data sets, and teaching materials. Some Institutional

repositories are also being used as electronic presses, publishing e-books and e-journals.

Ware (2004) adds OAI-compliance in his IR definition
An Institutional Repository (IR) is defined to be a web-based database (Repository) of scholarly material which is Institutionally defined (as opposed to a subject-based Repository); cumulative and perpetual (a collection of record); open and interoperable (e.g. using OAI-compliant software); and thus collects, stores and disseminates (is part of the process of scholarly communication). In addition, most would include long-term preservation of digital materials as a key function of IRs.

Last five years, Institutional repositories have sprung up at academic institutions across the world. Like most ideas whose time has come, a number of technical solutions came to prominence at the same time. In addition to DSpace, eprints and open source products like Fedora, addressed the issues of repatriating the university's scholarly work from commercial publishers and providing long term, secure access.

A Repository established by a particular university or other research institution is known as an Institutional Repository. It can be intended to collect and preserve -- in digital form -- the intellectual output of an institution, as PhD theses, EngD theses, preprints, postprints, working papers, or technical reports. It can also contain the institutions digital library, the collection of printed and manuscript documents, public archives, & graphic material, originating from the institution or elsewhere, that the university has converted to digital form for use within the university, and generally available to anyone. It can also contain the administrative output of the institution, as reports, directories, and local archival documentation. A well-developed example is the eScholarship Repository of the University of California Digital Library.

A Repository established for the use of a particular academic department or laboratory is properly called a departmental Repository, though the term Institutional Repository is also used. An example is the Repository for the Indian Institute of science's ePrints@iisc.

A Repository established to collect and preserve material in a particular subject is called a subject Repository; they can be organized by a government, a government department, or by a research institution, or be

autonomous. The two best known are arXiv, for mathematics and physics articles or reports, and PubMed Central for biomedical journal articles.

A Repository for general use by scholars working in a particular country is a national Repository, but such repositories can also be organized on a more local basis. In the UK, the British Library operates a national Repository open to those who have no Institutional Repository. A Repository can also be intended for a particular type of material, such as a thesis Repository or a newspaper Repository. For example etd@IISc is a digital Repository for thesis produced by IISc researchers.

Selected Institutional Repository Initiatives in India
Following is the list of Institutional repositories from India which are currently   active on the Internet.

Institution	Repository URL	Types of Documents	Software Used
Documentation Research & Training Centre (DRTC)	https://drtc.isibang.ac.in/	Research Papers, Articles, Reports, etc.	DSpace
G.B. Pant University of Agriculture & Technology	http://202.141.116.205/ds pac e/	Research Papers, Articles, Reports, Thesis, etc.	DSpace
Indian Institute of Astrophysics	http://prints.iiap.res.in/	Research Papers, Articles, Reports, Thesis, etc.	DSpace
Indian Institute of Information Technology, Allahabad	http://eprints.iiita.ac.in/	Research Papers, Articles, Reports, etc.	EPrints
Indian Institute of Management, Kozhikode (IIMK)	http://dspace.iimk.ac.in/	Research Papers, Articles, Reports, etc.	DSpace
Indian Institute of Management,	http://eprints.iimk.ac.in/	Research Papers, Articles, Reports, etc.	EPrints
Indian Institute of Science (IISC) Kozhikode (IIMK)	http://eprints.iisc.ernet.in/	Research Papers, Articles, Reports, etc.	EPrints
Indian Institute of Science (IISC)	http://etd.ncsi.iisc.ernet.i n/	Theses & Dissertations	DSpace
Indian National Science Academy (INSA)	http://61.16.154.195/dspa ce/	Conference Papers, Articles, Reports, etc.	DSpace
Indian Statistical Institute, Bangalore	http://library.isibang.ac.i n:80 80/dspace/	Research Papers, Articles, Reports, etc.	DSpace

INFLIBNET	http://dspace.inflibnet.ac.in	Research Papers, Articles, Reports, etc.	DSpace
National Aerospace Laboratories (NAL)	http://nal-ir.nal.res.in/	Research Papers, Articles, Reports, etc.	EPrints
National Centre for Radio Astrophysics	http://ncralib.ncra.tifr.res.in/ dspace/	Research Papers, Articles, Reports, Thesis, etc.	DSpace
National Chemical Laboratory (NCL)	http://dspace.ncl.res.in/	Theses, Research Papers, Articles, Reports, etc.	DSpace
National Informatics Centre (NIC)	http://openmed.nic.in/	Research Papers, Articles, Reports, etc.	EPrints
National Institute of Oceanography	http://drs.nio.org/drs/	Journal articles, conference proceeding	DSpace
National Institute of Technology, Rourkela	http://dspace.nitrkl.ac.in/ dsp ace/	Theses, Research Papers, Articles, Reports, etc.	DSpace
Raman Research Institute	http://dspace.rri.res.in/	Research Papers, Articles, Reports, Thesis, etc.	DSpace
University of Mysore	http://www.vidyanidhi.or g.in /	Theses & Dissertations	DSpace
Indian Institute of Technology, Delhi (IITD)	http://eprint.iitd.ac.in/dsp ace	Research Papers, Articles, Reports,	Dspace
Indian Institute of Technology, Kharagpur (IITKGp)	http://10.17.250.202:808 0/dspace/	Research Papers, Articles, Reports, etc.	Dspace
Indian Institute of Technology, Kanpur (IITK)	http://172.28.64.70:8080/ dspace	Theses	Dspace
Indian Institute of Technology, Bombay (IITB)	http://dspace.library.iitb.a c.in/jspui/	full-text of book chapters, conference/proceeding papers etc.	Dspace

If we look in current scenarios of these the Institutional Repository in India, most of the repositories are in testing stage and accessible only within the Local Area Network. The saddest point of these repositories is that they started with an objective of long terms goal to serve the users but once it has implemented, Institutions don't have a mission statement for its proper maintenance and continuous upgradation. Institutes don't have a clear guideline for new resources for these repositories. They don't have full

dedicated staff that can responsible for overall activities of its care and upgradation. As almost all repositories are implemented using open source software, the upgradation is so much important aspect for which most of the institutes don't have guidelines.

Literature Review
Several studies of Institutional Repository have been carried out in the global context but very few in context of India. In India the vast majority of these studies have focused on large research universities (such as Indian Statistical Institute, some CSIR Laboratories, IISc and IIM's etc.)

In India, some institutions, like Indian Institute of Science; Indian Institute of Management, Kozhikode; Indian Statistical Institute, Bangalore; Indian Institute of Technology, Delhi; National Institute of Technology, Rourkela; National Aerospace Laboratories, Bangalore; National Chemical Laboratory, Pune; Information and Library Network (INFLIBNET), Ahmedabad; National Institute of Oceanography, Goa; Raman Research Institute, Bangalore; etc. have established open access Institutional repositories (IRs) that disseminate research outputs of respective institution. Sometimes, these are self-archived. Otherwise, administrator of the repositories collects the research documents from different sources and submits the documents to the IR on behalf of the persons concerned.
Some of the university (such as central University of Hyderabad, university of Delhi, Univesity of Burdwan etc) already started their initiatives in building Institutional Repository. Almost all are experimental in nature (except few such as Librarian's Digital Library at DRTC, Bangalore and eprints at Indian Institute of science etc.). The saddest part of this is that various institutes had created these digital repositories for testing or trial purpose only and could not maintain the pace to streamline those.
It is difficult to review all the literature available in this field; some of the studies are as following:

Westell, Mary (2006): draws on a study of Institutional Repository in Canada, He found that Institutional repositories are growing in Canada and that the Canadian IR community is on the way to the proposed model future – integration with existing university research practices Institutional repositories: proposed indicators of success.

Sutradhar, B (2006): examine the prerequisite to setup a Institutional Repository and provides evidence on how to set up an IR and how to create different communities and, under each community, many collections using

the DSpace software. He found that setting up an IR is very simple but its maintenance is very difficult. One person needs to have the computer knowledge, particularly in the Linux operating system environment and must be dedicated to carry out the IR administrative activities like registration, permission authenticity, submission and grant, installation of the updating version of the software, etc.

Phillips, Holly and Carr, Richard (2005): Gives insight into how Reference librarians are strategically placed to promote and administer Institutional Repository initiatives successfully. The professional challenge rests in reference librarians' readiness to become scholarly publishing change agents.

Barwick, Joanna (2007): Draws on the experience and highlight some of the challenges involved in setting up an Institutional Repository.

Krishnamurthy, M (2008): Suggest that an Open source software and open access to research findings are of great use to scholars in developing nations.

Mittal, Rekha and Mahesh, G (2008): Studies the use of Open source software to build Institutional Repository. They found that use of open source software especially for the creation of Institutional repositories is found to be common. However, major digital library initiatives such as the Digital Library of India use custom-made software. The collection size in most digital libraries and repositories is in a few hundreds.

McClendon, W. (2005): says that the Institutional Repository (IR) concept has gained momentum as universities begin to question the logic of buying back [their] research, as libraries drop journal subscriptions due to publisher fees outstripping resources, and as taxpayers question paying for research twice by funding the research itself followed by purchasing journal subscriptions to discover the research findings. IRs can preserve and provide access to a university's unpublished material, establish alternatives to the high costs of traditional publications, and contribute to a university's prestige. As information and knowledge resources are increasingly digitized and distributed by local and global networks, those facing the above issues are exploring alternatives to the preservation and distribution of information.

Lynch, C. A. (2003). : opines that a university-based Institutional Repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution. While operational responsibility for these services may reasonably be situated in different organizational units at different universities, an effective Institutional Repository of necessity represents collaboration among librarians, information technologists, archives and records mangers, faculty, and university administrators and policymakers. At any given point in time, an Institutional Repository will be supported by a set of information technologies, but a key part of the services that comprise an Institutional Repository is the management of technological changes, and the migration of digital content from one set of technologies to the next as part of the organizational commitment to providing Repository services. An Institutional Repository is not simply a fixed set of software and hardware.

Although the evaluation of IR is gaining importance worldwide there has been no comprehensive evaluative study so far in India, though Sutradhar B(2006) provides an insight into a framework design and development of an Institutional Repository at IITKg, by using an open source software Dspace.

Two other initiatives that can be included in this reference are Gyandoot and e-Seva. Sharma and Yurcik (2001) have discussed Gyandoot (http://gyandoot.nic. in/) as a digital library initiative, however, as stated on the web site it is "an intranet in Dhar district connecting rural cybercafes catering to the everyday needs of the masses" and is more of an e-governance (Government to Citizen, G2C) initiative. This view is strengthened by reports that include Gyandoot under e-Governance products and services (Indian Institute of Technology Bombay, 2006; Indian Institute of Management Ahmedabad, 2003). Similarly, e-Seva is also an e-governance initiative of the Government of Andhra Pradesh (http://esevaonline.com/). There are several such e-governance initiatives in India and these do not come under the scope of digital libraries.

Advantages of IRs
IRs provide opportunities to enhance skills within library staff to provide better information services regarding the publications, office

orders, etc. of their own institutions. It improves resources sharing among the libraries within the globe. Followings are the major advantages of IRs:

- Provide information about the publications of scientists, teachers, students and other members of the concerning institutions.
- For providing e-resources inter and intra network on the behalf of terms and conditions.
- Opening of outputs of the institutions to a worldwide audience.
- Collecting and curetting digital material output.
- Managing and measuring research and teaching activities.
- Maximizing the visibility and impact of digital resources.
- Enriching and promote interdisciplinary approaches to research.
- Facilitating the development and sharing the digital teaching material and aids.
- Supporting students, teacher and user's to provide access to these resources for thesis and dissertations preparations.

Suggestions and Recommendations

While there has been considerable attention dedicated to the development and implementation of Institutional repositories, there has been little done to evaluate them, especially with regards to their use and usability. There is need of more research to evaluate the scholarly use of Institutional Repository in context of India. The evaluation study in this direction would definitely help to developed and implement Institutional Repository as per the user requirements.

Further more research can draw in the direction of semantic organization of the content. This will definitely provide an innovative and better way of visualizing and searching the information content.

Conclusions

While progress shows that Institutional repositories are indeed growing in India and that the IR community is working toward the proposed model future, growth has not been as fast as might have been expected. Librarians have promoted the concept to their university administrations and academic colleagues. Enthusiastic scholars and research groups have begun to deposit their research in repositories. Libraries are investing staff resources into this new service. New models and tools for creating and archiving theses have been developed and cross platform searching of repositories has facilitated an institution-specific distributed model of storage In the absence of mandated deposits to an IR, we need to find a way to integrate the IR into the research practices of our academic colleagues.

Institutional repositories can put libraries right in the middle of research endeavors and provide a true service for both institutions and individual researchers. We need to promote not only the Repository functions, so familiar and obvious to us as information workers, but also the workflow features that will insinuate the Repository into the research process and provide the means to get research "front and centre" for our institutions.

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Cloud Computing for Library Services in India
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Abstract
Today we are living in the age of information technology. Information technology play very vital role in library and information services. Cloud computing is a new technology model for IT services which many businesses and organizations are adopting. It allows them to avoid locally hosting multiple servers and equipment and constantly dealing with hardware failure, software installs, upgrades and compatibility issues. For many organizations, cloud computing can simplify processes and save time and money. This article defines cloud computing and shows how it is different from other types of computing. It also discusses how cloud computing solutions could be beneficial to library services. In this paper, an attempt has been made to give an overview of this technology, applications, benefits and the areas in which libraries can deploy this technology for providing services.

Introduction
Cloud computing can transform the way systems are built and services delivered, providing libraries with an opportunity to extend their impact Cloud computing has become a major topic of discussion and debate for any business or organization which relies on technology. Anyone connected to the Internet is probably using some type of cloud computing on a regular basis. Whether they are using Google's Gmail, organizing photos on Flickr or searching the Web with Bing they are engaged in cloud computing. As Geoffrey Moore points out, the interesting thing about cloud computing is it did not start as a technology for the business enterprise, but was driven by the public with services like Facebook and Flickr. I Over the last few years businesses have started to see the value of cloud computing causing it to become a major technology solution for businesses and organizations around the world. Looking across the information and broader technology landscape, it is not difficult to find success stories of switching to cloud computing, disaster stories, and a great deal of debate about what cloud computing is, or isn't.

Information technology play very vital role in library science. For collection, Storage, organization, processing, analysis of information.

Library filed facing many challenges in the profession due to applications of information technology. New concepts are being added to ease the practices in the libraries is also accepting many new technologies in the profession as they suit the present information handling and they satisfy needs of the knowledge society. With the advent of Information technology, libraries have become automated which is the basic need towards advancement followed by networks and more effort are towards virtual International Journal of Digital Library Services libraries. This article defines cloud computing and shows how it is different from other types of computing. It also discusses how cloud computing solutions could be beneficial to library services.

Figure Cloud Computing Definition (Wikipedia)

Cloud computing system can be divided it into two sections: the front end and the back end. They connect to each other through a network, usually the Internet. The front end is the side the computer user, or client, sees. The back end is the "cloud" section of the system. On the back end there are various computers, servers and data storage systems that create the "cloud" of computing services. A central server administers the system, monitoring traffic and client demands to ensure everything runs smoothly. It follows a set of rules called protocols Servers and remote computers do most of the work and store the data.

Cloud computing is a growing trend and new phase and platform of library services and resource sharing in digital environment. The rapid growth of information technology has led to development of network based services like cloud computing. Cloud computing is working just like an electricity grid. Cloud computing is helpful of storing, accessing, sharing data, applications and computing power in web space. Thus, it is the web based service where the software system designed to support interoperable machine-to-machine interaction over a network. It makes services much easier as one need not be physically present within the one campus. It is a

model of service delivery and access where scalable and virtualized resources are provided as a service over the internet.

Deployment Models of Cloud Computing:

A cloud deployment model (Dustin Amrhein et al., 2010, CSA, 2009) represents a specific type of cloud environment and it is classified on the basis of ownership and size. There are so many models of cloud but the common models of clouds are:-

Public Cloud: In this deployment the cloud infrastructure is accessible to general public and shared in a "pay as you go" model of payment. The cloud resources are accessible via the internet and the provider is responsible for ensuring the economies of scale and the management of the shared infrastructure. It is highly scalable and automated provisioning of commodity computer resource. The Google App Engine, Microsoft windows Azure, IBM Smart Cloud and Amazon EC2 are example of Public Cloud.
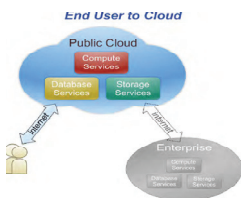
Figure show the structural formation of a public cloud.
(Dustin Amrhein et al., 2010)

In this type of cloud, the organization does not access or use the public cloud which is accessible to the general public.

Private Cloud: In this model, the cloud resources are not shared by unknown third parties. The cloud resources in this model may be located within the client organisation premises or offsite. In this model the clients' security and compliance requirements are not affected though this offering does not bring the benefits associated with reduced capital expenditure in IT infrastructure investments. In this type of cloud neither the general public have an access to the private cloud nor the organisation use the public cloud.
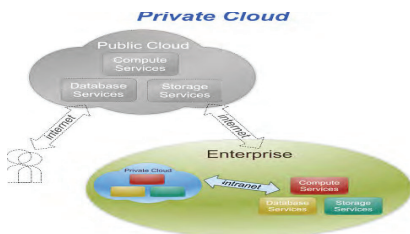
Figure shows the structural formation of a private cloud. (Dustin Amrhein et al., 2010)

Hybrid Cloud: Hybrid cloud as its name implies, is a model of deployment which combines different clouds; for example the private and public clouds. In this model the combined clouds retains their identities but, are bound together "by standardised or proprietary technology" (CSA, 2009).
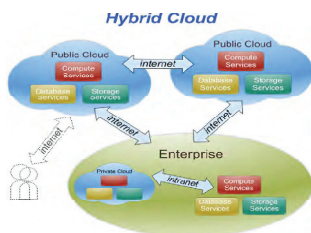
Figure shows the structural formation of hybrid cloud (Dustin Amrhein et al., 2010)

In this type of cloud the general public does not have access to the cloud, but the organisation uses infrastructure in both the public and private cloud.

Community Cloud: Community Cloud is the fourth deployment model that can be used to deliver cloud computing services. In this model the cloud infrastructure is shared by multiple organisations or institutions that have a shared concern or interest such as compliance considerations, security requirements. This type of cloud may be managed by the organisation or by a third party and may be located on-premises or off-premises.
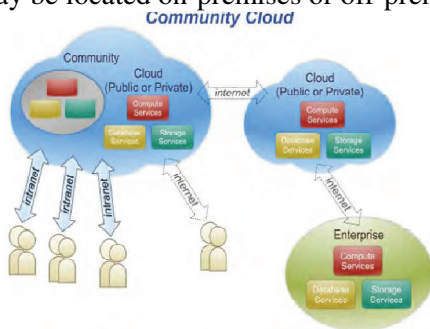
Figure shows the structural formation of community cloud. (Dustin Amrhein et al., 2010)

In this type of cloud both the public and the organizations forming the community cloud have access to the cloud services offered by the community cloud.

Cloud service/ delivery model

All web-based applications or service offered via cloud computing is called a cloud service. Almost all large computing companies today, from Google to Amazon to Microsoft, are developing various types of cloud services. Cloud computing is an umbrella term used to refer to internet based development and services. A cloud client consists of computer hardware and or computer software that relies on cloud computing for application delivery.

Cloud computing services can be broadly classified into three *ass, i.e three layers of cloud stack also known as cloud service models: Saas, Paas, Iaas
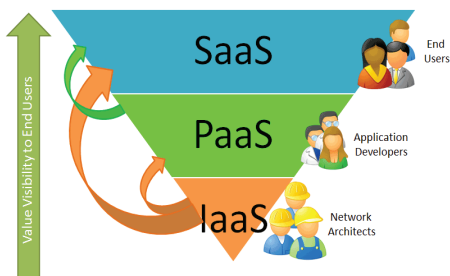
Figure show the architecture of Cloud Services

Software as a Service (SaaS): The capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through a thin client interface such as a web browser (e.g. web-based email). The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.
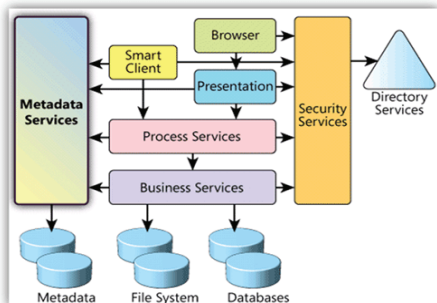
Figure show the Saas architecture

Platform as a Service (PaaS): The capability provided to the consumer is to deploy on the cloud infrastructure consumer-created or acquired applications, created using programming languages, library services and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly application hosting environment configurations. Google App Engine, Microsoft Azure Services, Amazon SimpleDB, CloudFoundry are well known Platform as a Service.
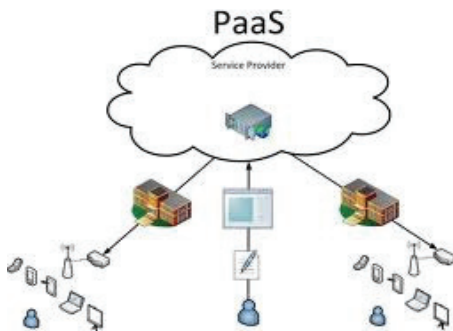
Figure show the PaaS architecture

Infrastructure as a Service (IaaS): The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems; storage, deployed applications, and possibly limited control of select networking components. EducationERP.net, Microsoft Flexiscale, Amazon S3, Cloudstatus, GoGrid, and Oracle Coherence are offering IaaS
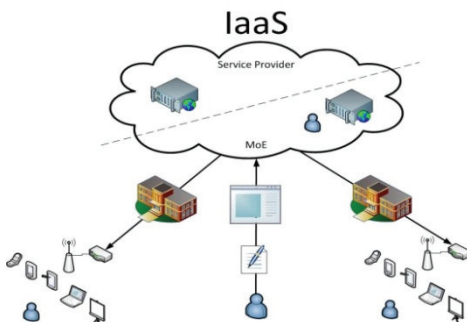
Figure show the IaaS architecture

Use Cloud computing in Library and Information Science:
Cloud computing offers many interesting possibilities for libraries that may help to reduce technology cost and increase capacity reliability, and performance for some type of automation activities. Cloud computing has made strong inroads into other commercial sectors and is now beginning to find more application in library science. The cloud computing pushes hardware to more abstract levels. Most of us are acquainted with fast computing power being delivered from systems that we can see and touch.

Role of Cloud computing in libraries
Cloud computing is a completely new in technology and it is known as 3rd revolution after PC and Internet. Cloud computing is an enhancement of distributed computing, parallel computing, grid computing and distributed databases. Among these, grid and utility computing are known as predecessors of cloud computing.Cloud computing have large potential for libraries.
Libraries may put more and more content into the loud. Using cloud computing user would be able to browse a physical shelf of books, CDs or DVDs or choose to take out an item or scan a bar code into his mobile device. All historical and rare documents would be scanned into a comprehensive, easily searchable database and would be accessible to any researcher. Many libraries already have online catalogues and share bibliographic data with OCLC. More frequent online catalogues are linked to consortium that share resources.International Journal of Digital Library Services, Data storage cloud be a main function of libraries, particularly those with digital collections storing large digital files can stress local server infrastructures. The files need to be backed up, maintained, and reproduced for patrons. This can strain the data integrity as well as hog bandwidth. Moving data to the cloud may be a leap of faith for some library professionals.
Anew technology and on the surface it is believed that library would have some control over this data or collections. However, with faster retrieval times for requests and local server space it could improve storage solutions for libraries. Cloud computing or IT infrastructure that exists remotely , often gives users increased capacity and less need for updates and maintenance , and has gained wider acceptance among librarians

Service providers of Cloud Computing in Library
6.1 Dura Cloud: Dura cloud is associated with the Duraspace those exist after merging of Fedora ad Dspace. Fedora is a good digital repository or just like a digital library with the high class software and hardware solution.

Dura cloud is especially for digital library services. Dura cloud provides open source code and the code needs to be installed on your machine and its cost is nominal.

*Ex Libris***:** It is a very famous service provider in USA. Ex Libris is providing cloud solution in the field of library with all the software and hardware support needed to provide services to the users. It is built on various standard and contains number of features like compatibility with Unicode font, flexibility, migration of data, customization etc.

Polaris Library System: It is the cloud based library automation system available in the open market. Company also provides standard acquisition and processing system. Due to Polaries ILS client License, the library can integrate various PC and print management systems at not another cost. The systems uses number of well know standards like MARC-21, XML, Z39.50 for information retrieval, Unicode etc.

OCLC's Webscale: OCLC has set an example for making use of cloud computing for libraries. OCLC has been functioning as a cloud computing vendor because they provide cataloguing tools over the internet and allow member institutions to draw on their centralised data store. Now, OCLC has geared to implement the plan of library management systems on the cloud in which OCLC has web-scale delivery and circulation, print and electronic acquisitions, cataloguing and license management components. Its world-share management services (WMS) allows libraries to manage entire collection management life cycle in a cloud-based application. The overall purpose of web-scale sharing resources, data, and innovation is supported by a variety of features that work together to save money, promote community development and drive better services for library users.

In other words, one can say OCLC provide cost benefits for libraries and efficiencies not possible when utilizing disparate, specialised systems. The service promises to include privacy, security, scalability and technical support.

Advantages of Cloud computing in libraries

1. Cost saving
2. Flexibility and innovation
3. User centric
4. Openness
5. Transparency
6. Interoperability
7. Representation
8. Availability anytime anywhere
9. Connect and Converse
10. Create and collaborate

Disadvantages of Cloud computing in libraries

1) Risk or data loss
2) Failure in compliance
3) Constant connectivity required
4) Dependency
5) Quality problems with cloud service provider
6) Time and Budget Constraints
7) Since all the development and deployment have been done by Cloud service provider, it is very difficult to get good grip on overall system.

Beyond library discovery services

It is here that libraries can look to gain new efficiencies both internally and among theentire library community. When library software suppliers create the user personas thatwill use their software the focus is generally on external personas but there are also many internal personas that need to take advantage of new technologies and Web capabilities.One such example has been given with reference librarians now able to both better assisttheir patrons online but also to build a large network of librarians globally who can answerspecific questions and be available 24/7. What other personas in the library can benefitfrom cloud solutions?

- Acquisitions librarians managing increasingly diverse collections
- Cataloguing librarians seeking to describe an ever increasing body of information andinformation sources the library is managing
- Serials librarians working to maintain control and access to collections spideredacross the Web
- Electronic resource librarians managing burgeoning collections, and ever-changinglists of vendors
  - o The dramatic change in library collections often blurs the lines between traditional job
- Roles in libraries. An acquisitions librarian probably also needs to manage licenses forelectronic materials as well as manage purchasing for multiple formats, often for the sameitem. They need to access information from suppliers, reviewers, local constituency andother staff in a unified manner. This begs for an open system deployed where it can easilybe accessed by external systems and pull in data and services in from those same systems.Cloud computing solutions can create the new workflows needed by librarians because itoffers the opportunity for a cooperative platform for libraries to build on. There are fourkey principles of a cooperative platform:

- Openness, meaning that services and data are made available to support greaterinteroperability, not only within and between cloud services, but also with library developed
- and third-party applications;
- Extensibility, meaning that the platform can easily accommodate the addition ofnew services and applications, developed either by the service provider or bymembers of the community;
- Data richness, meaning that a library can interact with and expose a wide varietyof information about purchased, licensed, and digital content through thisplatform; and
- Collaboration, meaning that libraries can harness the collective power of thecommunity of libraries to innovate and share solutions.And it is precisely this that the business world and social media have demonstrated can bedone with cloud computing solutions. Through cooperative and community buildinglibraries can have the same possibilities.

What can cloud computing solutions do for libraries?

So turning to cloud computing and libraries, are their real problems that can be solved? The answer is yes. The library community can apply the concept of cloud computing to amplify the power of cooperation and to build a significant, unified presence on the Web.

This approach to computing can help libraries save time and money while simplifying workflows.

A brief list of potential areas of improvement could include:

1. Most library computer systems are built on pre-Web technology Systems distributed across the Net using pre-Web technology are harder and morecostly to integrate
1. Libraries store and maintain much of the same data hundreds and thousands of times
2. With library data scatter across distributed systems the library's Web presence is weakened
3. With libraries running independent systems collaboration between libraries is made difficult and expensive
4. Information seekers work in common Web environments and distributed systems make it difficult to get the library into their workflow
5. Many systems are only used to 10% of their capacity. Combining systems into a cloud environment reduces the carbon footprints, making libraries greener these improvements can be grouped into three basic areas:

technology, data and community. Each offers some general and some unique opportunities for libraries. Looking first at the technology that most current library systems employ several benefits of cloud computing solutions surface.

So turning to cloud computing and libraries, are their real problems that can be solved? The answer is yes. The library community can apply the concept of cloud computing to amplify the power of cooperation and to build a significant, unified presence on the Web. This approach to computing can help libraries save time and money while simplifying workflows.

SWOT Analysis of Cloud Computing with a view to Indian Libraries

Analysis is a strategic planning method usedto evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a projector in any venture. It involves specifying theobjective of the project and identifying the internal and external factors that are favourable andunfavourable to achieve the objective.

Strengths: India has a particularly strong ITindustry that can be an important commercialfactor for the western countries to consider in theirfuture cloud related development. Accordingly, anIndian library does not have the economic strengthto impact on the western countries. The mainstrength and hence advantage of India, however, consists in its consolidated and synergetic efforts to address new technological innovations, trends and governmental issues. As India has strong IT industry now, up-coming Indian companies are offering cloud services for Indian libraries at affordable prices. Moreover in India many institutes are not in condition to purchase high end server and costly software for their library, in this situation the cloud computing will provide grate platform to host their data on cloud to serve their users.

Weakness: However, India is not as fast as US and Europe in the development and considering the timelines of research to reach market-readiness as opposed to the fast movements in the market itself. The time is a critical resource with respect to positioning India in the global cloud development market. Implementation of cloud in the libraries is not easy task as there are many administrative and financial matters involved. Adopting cloud services means we have to be depending on the service provider. Many Indian libraries does not have even internet connection to connect with the cloud, in this case, it is very difficult to implement cloud based services.

Opportunities: India is an emerging market for IT industry and, Indian government is also providing help to Indian university libraries to get high speed internet connection for research purpose, in view of these libraries/institutions/universities can consider cloud based library services to serve their users. Using cloud computing libraries can offer modern information services in user friendly format. With the use of these advanced technology library staff can also get an opportunity to learn new technological changes occurred in the field. As the cloud is athird party service if, any problem occurs, then the experts will provide the quick solution withoutinterrupting library services.

11.4 Threats: These opportunities are obviously counterweighted by some threats that particularly relate to the effort involved in the implementation. The threats namely connectivity problem, hidden cost for add-on services by service provider, compatibility, lock in period etc. The most important is migration of data from one service provider to other is a very difficult task.

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Role of Libraries in Digital Information Society

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Abstract

The concept of digital library has changed the way of accessing data, information and knowledge. Most of the people of the world now use Internet. Changing concepts of publishing of information by the publisher and other agencies make library to rethink about their services. People now use internet for e-mail, social networks, e-shopping, e-billing, e-banking etc. so they want library too be make accessible via internet. Each Library of our country should be digitized. They should be easily accessible not only in urban areas but also in remote areas too. A lot of digital device has now been available in the market to read the e-book, e-journals etc. A library must be available on these devices. If we do so, we can fulfill the demand of users by five laws of library science of Ranganathan according to present digital era.

Key words: Digital Library, Digital Society, Library 2.0, digital divide, ICT

Introduction:

These days are known as digital era. Most of the person of the universe are now using digital devices for fulfill their demands. Among these, some people are using these devices twenty four hours of the week. They perform all their works by using these digital devices. So, for the convenience of the users, it has now become necessary that all the information and knowledge should be available through digital media.

Due to revolution in technology, Libraries and Information Centres have now been rapidly changing its work and services. The hard bound books and journals are now being replaced by electronic media like CD-ROM, DVD and Web etc. Means to say that static text is being changed as interactive electronic media (Web 2.0 concept)

Now-a-days most of the work of our life is done through the use of internet. E-shopping, e-governance, e-filing of form, e-banking, e-billing etc. are some of the examples of present day life. So, publishing of e-books, e-journals has now become necessity of our life. Concept of digital library has now changed the style of reading of books in the library. Cyber library is available for overcome these issues. In recent times, developments in information technology (IT) have made it possible to overcome many of the

above mentioned problems. Application of IT in libraries and information centres **(L&ICs)** raises the efficiency of information acquisition, processing, storage, and retrieval. [1&2]

There are emergent roles for libraries in a digital context that are extrapolations of existing functions. Here, the challenge may be to ensure awareness of these now-virtual services and the library's responsibility for them. A more complex undertaking is establishing roles that do not easily build on existing library functions. While marketing is no less an issue, a fundamental hurdle is the demonstration of library expertise through sufficient investment to make visible its role in innovation. While the nature of library facilities will change, the notion of library as place remains important in both physical and virtual contexts. Increasingly, this sense of place serves strategically to further the development of new roles. [3]

Information and Knowledge Society

India is moving fast towards becoming an information society as the Government of India is paying due attention to the use of information technology (IT). The Prime Minister of India constituted a National Task Force on IT and Software Development in May 1998 with the purpose of formulating a long-term National IT Policy to convert India into an IT software superpower. These steps are helping India to shift from an "economy of goods" to a "knowledge economy" or "knowledge driven economy". The beginning of the knowledge society has been made through creation of parks and corridors, and the Prime Minister has given a mission of converting India into a "knowledge society" by the year 2008. Today, India is one of the largest exporters of knowledge workers. [4]

The information society has passed through four transformational stages of development, the most radical stage starting at the tail end of the 20th century. This stage has brought a never-ending revolution, particularly with the introduction of information and communication technologies [5]. During this period, there have been unprecedented developments, profoundly affecting the social structure – the decline of manufacturing sector as compared to the prospering information-rich service sector is one example of such developments. [6]

Information and Communication Technology

The growth of Information and communication technology (ICT) has significantly increased the world's capacity for creation of raw data and the speed at which it is produced. The advent of the internet delivered unheard of quantities of information to people. The evolution of the internet from Web 1.0 to Web 2.0 offered individuals tools to connect with each other

worldwide as well as become content users and producers. Innovation in digital technologies and mobile devices offers individuals a means to connect anywhere anytime where digital technologies are accessible. Tools of ICT have the potential to transform education, training, employment and access to life-sustaining resources for all members of society. However, this capacity for individuals to produce and use data on a global scale does not necessarily result in knowledge creation. Contemporary media delivers seemingly endless amounts of information and yet, the information alone does not create knowledge. For knowledge creation to take place, reflection is required to create awareness, meaning and understanding. The improvement of human circumstances requires critical analysis of information to develop the knowledge that assists humankind. Absent reflection and critical thinking, information can actually become "non-knowledge", that which is false or inaccurate. The anticipated Semantic Web 3.0 and Ubiquitous Web 4.0 will move both information and knowledge creation forward in their capacities to use intelligence to digitally create meaning independent of user-driven ICT. [7]

Digital India

Digital India is an initiative of Government of India to integrate the government departments and the people of India and to ensure effective governance. It also aims at ensuring the government services made available to citizens electronically by reducing paperwork. The initiative also includes plan to connect **rural** areas under **high-speed internet** networks. The project is stated to be completed by **2019**. The scheme will be monitored and controlled by the **Digital India Advisory group** which will be chaired by the Ministry of Communications and Information Technology (India). It will be an inter-ministerial initiative where all ministries and departments shall offer their own services to the public Healthcare, Education, Judicial services etc. The Public-private-partnership model shall be adopted selectively. The scheme has plans also to restructure the National Informatics Centre. [8]

Digital Divide

Digital divide is an economic and social inequality according to categories of persons in a given population in their access to, use of, or knowledge of information and communication technologies (ICT). The divide within countries may refer to inequalities between individuals, households, businesses, or geographic areas, usually at different socioeconomic levels or other demographic categories. The divide between differing countries or regions of the world is referred to as the global digital divide.

Digital and Virtual Library

A digital library is a library in which collections are stored in digital format and accessible only thorough computers. The digital content may be stored locally or access remotely via computer networks. Nearly all libraries can be called digital libraries or hybrid libraries nowadays, as they all offer collections stored in digital formats which are accessible via computers and bibliographic databases that index thousands of peer-reviewed scientific journals, many of which offer access to full text articles. So, Hybrid libraries are the new norm in most public and academic libraries.

An electronic library which can be accessed throughout the world without any restriction via Internet, called Virtual Library. VL is physical site and/or website that provide 24-hour online access to digitized audio, video, and written material. [10]

Library 2.0

Library 2.0 (L2) is a transformation in the way library services are delivered to library users. It provides new tools to make the library space (both virtual and physical) more interactive, collaborative and driven by community needs. It encourages collaborative two-way social interactions between library staff and library customers. L2 requires user participation and feedback in the development and maintenance of library services. With Library 2.0, library services are constantly updated and reevaluated to the best serve library users. [11]

Social Networking Services

Social networking is web-based services that allow individuals to create a public profile, to create a list of users with whom to share connection, and view and cross the connections within the system. Most social network services are web-based and provide means for users to interact over the Internet, such as e-mail and instant messaging. Social network sites are varied and they incorporate new information and communication tools such as, mobile connectivity, photo/video/sharing and blogging. Online community services are sometimes considered as a social network service, though in a broader sense, social network service usually means an individual-centered service whereas online community services are group-centered. Social networking sites allow users to share ideas, pictures, posts, activities, events, and interests with people in their network.

Library Services through Social Networking Sites

- ➢ **Facebook:** Most popular now because it is librarian- friendly, with many applications like JSTOR search, World Cat, and much more. Librarians can interact with users to know their information need. Libraries try to link some of these specialized library applications to Facebook.

- ➢ **MySpace:** In Academic institutions where the students are; libraries have taken advantage of this site o post, calendar, custom catalog search tools, and blog features to improve their presence.

- ➢ **Blogs:** Here, librarians can periodically post messages; share information on a particular subject or issue, and allow users to contribute to content. They can write articles, news on topical issues and expect an instant reaction from their users.

- ➢ **Wikis:** Is a free online encyclopedia that gives a background knowledge and definition of concepts. It offers a platform for users to access, edit and contribute to content. This is a collaborative web page for developing web content.

- ➢ **LinkedIn:** Librarians can get patrons connected with specialists in their particular field of interest via LinkedIn. Librarians can use this platform to render specialized services such as Strategic Dissemination of Information (SDI).

- ➢ **Twitter:** A micro blogging application, to keep staff and patrons updated on daily activities, like frequently updated collections. Users can utilize this platform to type in short messages or status update. Librarians can use this platform to give users firsthand information on the on-going national elections. Users can send Instant Messages (IM) on complaints or ask questions on a particular issue and get a feedback on the spot using twitter.

- ➢ **YouTube:** In institutions in India, events such as important highlights of inaugural lectures, conferences and workshops are disseminated via the YouTube.

- ➢ **Flickr:** Librarians can use this tool to share and distribute new images of library collections. Cover page of new arrivals of both books and journals can be disseminated to users via Flickr.

- ➢ **Library Thing:** A tool that enriches the library OPAC. Once an account is created, a list of books with ISBNs is sent to Library Thing which sends back a piece of code which is pasted into the footer of the Library OPAC.

Librarians can utilize this to send a list of current publications to users. The Changing Library Environment Today, libraries are using the latest technologies and trends to make their services popular and user friendly.

The concept of a library as physical place where one can visit to get information is rapidly changing to a social cyberspace where users access, communicate and contribute to existing knowledge. This is because the modern library of the 21st century is characterized with collective knowledge creation and enabling technologies; and also a movement away from the old stereotype, conventional and one directional library services to users to a more dynamic, two-way communicational network environment. **(12)**

Public library engagement in urban, suburban, and rural communities

Our library engagement typology found that Americans fall into four broad levels of engagement with public libraries, which can further be divided into nine total groups. But how common are these groups in urban, suburban, and rural areas?

Library engagement groups among different community types

The proportion of Americans ages 16 and older living in each community type who fall into each group, based on their engagement with public libraries.

Legend:
- Library Lovers
- Information Omnivores
- Solid Center
- Print Traditionalists
- Not for Me
- Young & Restless
- Rooted & Roadblocked
- Distant Admirers
- Off the Grid

Group	Urban	Suburban	Rural
Library Lovers	11%	10%	8%
Information Omnivores	24%	21%	12%
Solid Center	30%	32%	27%
Print Traditionalists	4%	8%	21%
Not for Me	4%	4%	5%
Young & Restless	9%	6%	4%
Rooted & Roadblocked	5%	7%	7%
Distant Admirers	5%	10%	12%
Off the Grid	10%	3%	6%

Print Traditionalists, a medium-engagement group, are far more likely to live in rural areas than any other group, and account for one in five

rural residents. Meanwhile, the low-engagement Young and Restless group, along with the highly-engaged Information Omnivores, are more likely than most others to live in urban areas, and are relatively scarce in rural communities. Finally, looking at our two non-engagement groups (comprised of people who have never used a public library), we see that suburban and rural areas also contain higher proportions of Distant Admirers, while urban areas contain higher proportions of those Off the Grid.

Library engagement groups among different community types by overall engagement level

The proportion of Americans ages 16 and older living in each community type who fall into each group, based on their engagement with public libraries.

	Urban	Suburban	Rural
High Engagement	11%	10%	8%
	24%	21%	12%
Medium Engagement	30%	32%	27%
			21%
	4%	8%	5%
Low Engagement	4%	4%	4%
	9%	6%	7%
	5%	7%	12%
No personal library use	5%	10%	6%
	10%	3%	

Level of engagement with public libraries:
- High Engagement
- Medium Engagement
- Low Engagement
- No personal library use
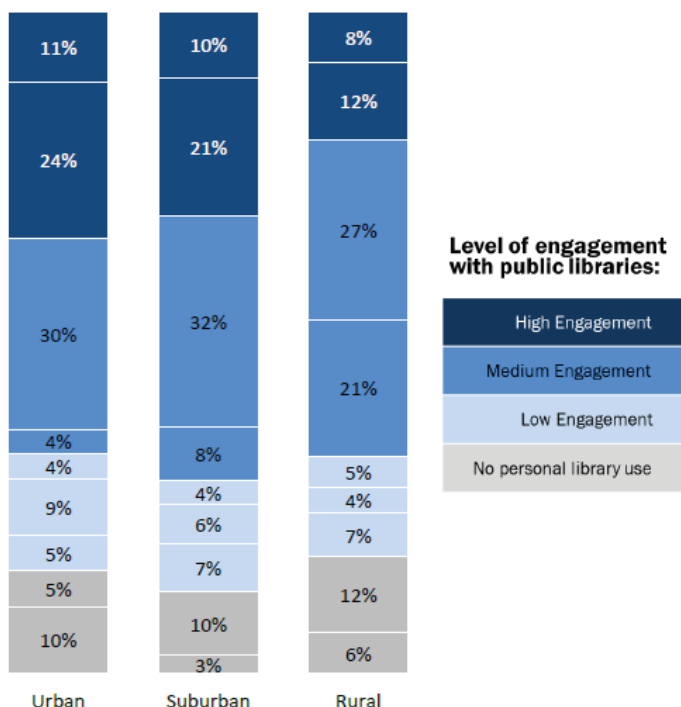
Source: Pew Research Center's Library Services Survey of 6,224 Americans ages 16 and older conducted July 18-September 30, 2013.

PEW RESEARCH CENTER

So what's going on here? A lot of it boils down to demographics. We know, for instance, that people living in rural areas tend to have lower levels of education and are more likely to be older than those who live in urban or suburban areas—all factors that are associated with lower levels of library engagement.

Similarly, people living in urban areas are more likely to be in younger age groups than those in other community types, and those living in suburban areas are more likely to have higher levels of household income-both features that are associated with higher levels of library engagement. [13]

Present status of Libraries in India

India has made a lot of efforts towards the upliftment of Library services in this Digital Era. Library and Information Services (LIS) sector has got remarkable achievements to fulfill the demand of users. Efforts had been made to set up networks at local, regional and national level to deploy information and communication technologies and to build electronic information sources. Besides INFLIBNET at the national level to support university and college libraries , a number of other national networks and various library networks have also been developed including **NICNET** (National Informatics Centers Network), **ERNET** (Education and Research Network), **CALIBNET** (Calcutta Library Network), **DELNET** (Developing Library Network), etc. A number of educational institutions are members of such networks. These networks, especially INFLIBNET and DELNET, are engaged in compiling union catalogs, creating various databases of experts, providing training to library staff, ILL, online facilities, reference service, assistance in retrospective conversion, etc.[14]

To overcome the problem of financial crunch and the rising costs of journals, librarians have formed consortia to subscribe all the required journals and databases. Some special libraries and research organizations have established consortia known as **FORSA** (Forum for Resource Sharing in Astronomy) to share electronic access to journal literature. **NISCAIR** (National Institutes of Science Communication & Information Resources), one of **CSIR labs**, has formed a consortium for CSIR labs for accessing e-journals and databases. In order to solve the problem of universities and college libraries, UGC launched a major initiative called **UGC-INFONET** that provides high speed Internet connections so as to have electronic access to professional literature including research journals, abstracts, review publications, and databases from all areas in science and technology, as well as in social sciences and humanities. The Ministry of Human Resource Development (MHRD) has set up the "Indian National Digital Library in Science and Technology (**INDEST**) Consortium" for the subscription to electronic resources for 38 academic institutions, including the Indian Institute of Sciences, Indian Institute of Technology, Regional Engineering Colleges, Indian Institute of Managements, and about 60 centrally-funded/aided government institutions through the consortium.

Recently libraries and research organizations realize the importance of digital libraries and they started the work of digitization of important documents. NISCAIR and the Department of Indian Systems of Medicine and Homoeopathy (**ISM&H**) have entered into an agreement for establishing a Traditional Knowledge Digital Library (**TKDL**) on Ayurveda. TKDL will be available in English, German, French, Spanish and Japanese since these languages account for more than 98% of the international patent applications.

The Indian Institute of Science (IISc), Carnegie Mellon University (CMU), the International Institute of Information Technology, Hyderabad (IIITH) and many other academic, religious and government organizations, totaling about 21 "Content Creation Centers", have become partners in the **Digital Library of India** (DLI) initiative for the digitization and preservation of Indian heritage present in the form of books, manuscripts, art and music. Each centre brings its own unique collection of literature into the digital library. DLI has a vision to build a universal digital library of world knowledge. One million books have already been available through this project.

India perhaps has one of the oldest and largest collections of Manuscripts in the world. These manuscripts are in different languages and scripts; written on different materials such as birch bark, palm leaf, cloth, paper etc. They are in the custody of libraries, museums, monasteries, mutts and individuals. A significant proportion is not preserved scientifically. Experts estimate that almost all palm leaf manuscripts may perish due to wear and tear over next 50 to 100 years. In this regard the **National Mission for Manuscripts** has taken a step to save the most valuable, intellectual property of our cultural inheritance. The missions has started a pilot project for digitizing the manuscripts in five states across India covering five caches of manuscripts and for the same four digitizing agencies have been selected.

Importance of open access archives, institutional repositories and open access journals has been realized by the library and information professionals in India. This movement has been accelerated by the availability of open source software namely **DSpace, EPrints, Greenstone**, etc. Indian Institute of Science, Bangalore, **INFLIBNET** Centre, Ahmedabad and Documentation Research and Training Centre (**DRTC**), Bangalore are the leading institutions who made this movement a great success.

Among the top 25 publishing countries, India ranks 12th for the overall number of journals, but drops to 18th for journals with online content. At present there are more than 150 open access journals in India. The open

access journals in India are mainly initiated by six journal publishers, namely, Indian Academy of Sciences, Indian National Science Academy, Indian Medlars Centre of National Informatics Centre, Medknow Publications, indianjournals.com and Kamla-Raj Enterprises. The Indian Institute of Science was the first in the country to set up and interoperable institutional archive (**ePrints@IIScr**. The archive now has more than 7000 records, with over 90 percent having full text. Presently there are 25 institutional archives in India which are registered in the Registry of Open Access Repositories (**ROAR**).

The CSIR also has a plan to setup a national digital repository of research literature. NISCAIR has already started to work on the project known as National Science Digital Library. National knowledge Commission is also formulating similar open access policies and guidelines for the higher education and R & D sectors to improve access to research literature and disseminate research literature to the global communities. **The National Knowledge Commission** has submitted its report to the government on how to redefine the information services sector. The report of Knowledge Commission on library sector suggests that "Every state should establish a registry and archives of knowledge based digital resources which should be made accessible to all." [22]

Conclusion

The traditional service of library has now been taken another way of service. The whole world make an efforts towards become digital. The accessing or retrieving system of knowledge or information has changed. Most of the people of the world use digital equipments and most of the work of daily routine performed by these devices. So, people don't want to go within the wall of library. They want to access all related information by these devices. So library has to have changed his services according to the user requirement. The role of library has now been changed. They should be made accessible to all by 24*7.

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Re-Engineering of Library Services and Knowledge Management in Context of Digital Environment

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Abstract

Libraries have been played important role in supporting academic activities and research in all subjects within their intellectual human resources. But the last ten years has brought a major change among academic community due to technological changes and the availability of information resources. Information explosion and availability of information resources online through open access resources have changed the tool and techniques how to complete research projects and also its related services. It has also changed the Libraries working methodology towards their research community. In spite of this both academic community and Library Professionals have enjoy the advantages of these changes and adapting to them and working to explore maximum their potential to achieve their objectives In the knowledge economy era, as a sub-discipline of the knowledge economy, knowledge management is absolutely new idea, concept & method of management. It also works for converting tacit knowledge of professionals & staff members in the organizations into explicit knowledge & higher motivation forces; competition power and value added commitment. In the "E- Revolution "age through growth of the global networks, knowledge management is increasingly becoming a crucial tool in providing a multidimensional dynamic and effective service with maximum exploitation of resources and with maximum efficiency rate to Library patrons.

Keywords- *Knowledge Management, Knowledge Management software, Tacit Knowledge, Explicit Knowledge, Library Resources*

Introduction

Knowledge management assists for transforming intellectual commodity of research workers and staff members in the institution into higher productive forces-competition, power and new value. Knowledge management requires linkage of information with activities and information with man-so as to realize the sharing of knowledge. Knowledge management in libraries should be focused on effective research and development of knowledge, creation of knowledge base, exchange and sharing of knowledge between library staffs (including its users)training of Library staff, speeding of

explicit processing of the implicit knowledge and realizing of its sharing. Knowledge management is only a perspective for implementing organizational change; which it gets people to record knowledge and then share it. According to P. Drucker, "Information that changes something or somebody–either by becoming grounds, for actions or by making an individual or institution capable of different or more effective action." Libraries deal with the knowledge and the mission of the library is the Knowledge management. It deals with both categories of knowledge, tacit knowledge for library personnel and the explicit knowledge for the end users. Library personnel must know the 'Know–how'information sources, management, retrieval and dissemination as well as global access to information. This tacit knowledge helps the end users to gain explicit knowledge and any individual's requirement. They must be guided to the gateway of knowledge.

Knowledge management is a relatively new discipline in the information and library environment, which originated in the early 1990's in the private sector to help companies survive in and even faster moving and competitive environment. The advent of the so called "E-revolution", through the growth of global networks has accelerated the use of the use of Knowledge management in many organizations including these in library and informational environment. In the 21st century Knowledge management is increasingly becoming a crucial tool in providing a dynamic and effective service to library users. The application of Knowledge management systems, methods and strategies for searching in libraries and information centers can build better bridges between the user's informational needs and the material in a collection.

According Jennifer Rowley," Knowledge management is concerned with the exploitation and development of the knowledge assets of an organization with a view to furthering the organization objectives. The knowledge to be managed includes both explicit documented knowledge and tacit subjective knowledge. Management entails all of those processes associated with the identification, sharing and creation of knowledge .This requires systems for the creation and maintenance of knowledge repositories and to cultivate and facilitate the sharing of knowledge and organizational learning .Organization that succeeded in Knowledge management or likely to view knowledge as an asset and to develop organizational values which support the creation and sharing of knowledge."

Davenport et al were able to categorize them in to four broad types of perspectives

To create knowledge repositories	Competitive intelligence Research reports, techniques & methods Know-how, discussion database
To improve knowledge access &transfer	Video conferencing systems Document scanning Sharing tools & telecommunication networks
To enhance the Knowledge environment	Environment is conductive, to more effective knowledge creation ,transfer and use increase awareness on sharing knowledge

There are mainly two types of knowledge

Explicit knowledge	Tacit knowledge
Formal Knowledge	Informal Knowledge
Which can be articulated in language	Personal Knowledge rooted in individual experience
Transmitting among individuals	Involving personal belief, perspective & values
Deals with more objective, rational, and technical knowledge	Cumulative store of the experiences, mental maps, insights, accumulated expertise, know-how, trade secrets, skills and learning
Leaky Knowledge	Sticky Knowledge
Tangible	Intangible, insights, intuitions, hunches, gut feelings, values, images, metaphors

Brief History of Knowledge Management

Mid 1970s	Leonard-Barton's well known case study of Chaparral Steel a Company which has had an effective knowledge management strategy, inspired the research documented in her Wellsprings of knowledge –building and sustaining sources of Innovations(Harvard Business School Press 1995)
Mid 1990s	Dough Engelbast's Augment (for "augmenting human intelligence") which was introduced in 1978
1989	Knowledge management related articles began appearing in Journals like "Sloan management Review; Organizational Science, Harward Business Review
1991	Tom Stewart Published" Brainpower in fortune magazine." Ikujiro Nonaka's raised the concept of "Tacit knowledge" and "Explicit knowledge" as well as the theme of " Spiral of knowledge " in the Harvard Business Review.

| 1994 | The International knowledge management network (IKMN) begun in Europe. IKMN begun offering funding for Knowledge management related projects through the ESPRIT programme in1995 |
| 1995 | Ikujiro Nonaka's and Hirotaka Takeuchi's " The knowledge-creating company: How Japanese Companies created the Dynamics of Innovation |

Characteristics of knowledge management

Human Resource Management	It is the core of knowledge management in library It promotes knowledge innovation
Information technology	It is a tool for knowledge management in a libraries, Knowledge acquisition Rise knowledge acquisition speed Reduces knowledge acquisition cost Single point informatization
Knowledge sharing	e-mail intranets knowledge bases
Management of information	*Management of people*

Knowledge management cross disciplines domain
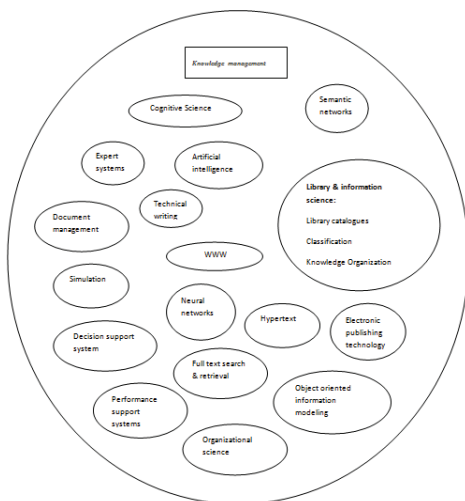
Knowledge management cycle

A functioning knowledge management system follows six steps in a cycle
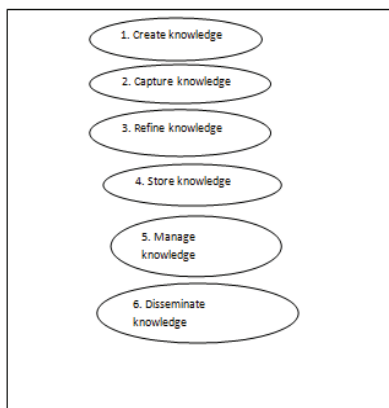
Knowledge management process

- Generating new knowledge
- Accessing knowledge for external sources
- Representing knowledge in document, databases software
- Embedding knowledge in process, or products or services
- Transferring existing knowledge around the organization
- Using accessible knowledge in decision making
- Facilitating knowledge growth through culture and incentives
- Measuring the value of knowledge assets and the impact of knowledge management

Knowledge management pros & cons

KNOWLEDGE MANAGEMENT PROS	KNOWLEDGE MANAGEMENT CONS
Better decision in working level	Decision quality is inconsistent
Increase relevant information access	Institutional knowledge is lost
Facilitate collaborations and knowledge sharing	All library process are not fully documented
Retain institutional knowledge	Hard to captured knowledge and managed within a large, diverse organizations such as special and academic libraries
Knowledge benefits, intermediate benefits, organizational benefits	Financial constraints for knowledge sharing incentives
Greater understanding of organizational goals	Lack of commitment
Help establish knowledge profile of individuals and groups	Lack of management involvement
Provide a natural language or voice	Over ambitious scope for the knowledge

| command –driven user inter | management efforts |

Knowledge mangement software and tools in global libraries

Technology tools that support knowledge management is called know ware. Most knowledge management software packages include one or more of the following seven tools.

1.Collaboration computing tools	It is used to enhance tacit knowledge transfer within an organization
2.Knowledge server	It contains the main knowledge management software including the knowledge repository and provide accesses to other knowledge information and data For example : Hummingbird knowledge server The Introspect software knowledge server The hyper wave information server The server provides: Knowledge repositories A central location for searching and accessing information from many sources such as the internet, corporate intranets, databases and file systems
3.Enterprise knowledge portals	It is the gateways into many knowledge management systems It supports web browsers, database management systems for examples: Ciscos Employee Connection
4. Electronic document management	It focuses on the document in electronic form as the collaborative focus of work It is a new form called content management system
5.Knowledge harvesting tools	It is for capturing knowledge unobtrusively are helpful to knowledge contribution For examples – Tacit knowledge systems knowledge mail is an expertise location software package that analyzes users out going e-mail to parse subject expertise. It maintains a directory of expertise and offers ways to content experts
6. Search engines	It performs one of the essentials functions of knowledge management. Locating and retrieving necessary documents from vast collective accumulated in repositories. Companies like Google, verity, Inktomi, Nervana are offering a wide selection of search engines.
7.Knowledge management suits	They integrate the communication, collaborations and storage technologies into a single convenient packages Its are powerful approaches to developing a knowledge management systems because they offer one user interfaces, one data repositories and one vendor for example: Data ware knowledge management suite, SAP & ORACLE

Success factor of knowledge management

- Communication

- Trust
- Networking
- Collaboration
- Support from top management
- Security of knowledge
- Knowledge friendly culture
- Opportunities
- Motivation
- Concrete shared
- Objectives
- Knowledge base
- Technical infrastructure
- Effectiveness Governance for the knowledge management
- Result oriented
- Activity oriented
- External relationship
- Capital:
- Structural capital - Competitive news
- Human capital - Knowledge skills
- Social capital - The quality & value of relationships
- Environmental capital – The value of relationship with the environment.

Causes of knowledge management failure

- Two much information that is not easily searchable
- Inadequate or incomplete information.
- An inability to capture and categories knowledge
- Lack of commitment
- Not providing incentive for people
- Lack of clear understanding of knowledge management benefits.
- Lack of adequate staff & resources

Library automation software for knowledge management in Global Libraries

	Name of Software	Special Features
1	Acumen & scope E-Library	Web based Z39.50 compliant, RFID enabled
2	ADLIB Information System	Library management system, archives, record management system, image database application.
3	ALICE Library Automation System	ALICE is known as in Europe's & Australia, ANNIE in America, EMBLA in Iceland, OASIS elsewhere. It is for school Libraries.
4	Aurora Library System	System support to internet, Web Tools, Z39.50
5	Autolib Library &	Web enabled, based on XML technology, intranet support.

	Information Management System	
6	Biblio Tech Review	E-Journals, text retrieval, e-publishing, digital Libraries.
7.	Book Systems, Inc	Library cataloguing system, data conversion, MARC record support, Z39.50.
8	CDS/ISIS Database Software	Micro CDS/ISIS, non-numerical information storage, retrieval software
9	Data Research Associates, Inc	Provides Library Automation System, E-networking services.
10	Elvis Digital Library (ElvisDL)	Open source e-Library with semantics based on a J2EE platforms and XML databases.
11	Emilda	Open source ILS, Opace, Circulation, Administration functions, Z39.50, MARC capatible.
12	Epixtech	Ipac, include product information & support
13	Fedora	Flexible Extensible Digital Object & Repository Architecture General purpose, open source, digital object repository system
14	Green stone	Open source software building & distributing digital Library collection.
15	Hyper Journal	Open source software, applications enable on-line as well as printed publishing.
16	Innovative Internet Applications in Libraries	Effective use of the internet, Virtual reference desks, innovative internet librarians, Library-e-journals, Image maps in Public Library sites, e-mail subscriptions, news letter in Public Libraries catalogues.
17	KOHA	Open source software, Catalog search, Member organizing
18	Libertoy	Manage user, Collection, Loans, Renewals, Fines, Accounting, Statistics, Barcode support.
19	Lib Smart	Automation software
20	Mandarin Library Automation, Inc	Software developer, Authority control, Web gateway, Z39.50 modules, Serial & Acquisition, Barcodes, Web hosting, Union catalog, Data conversion.
21	Open Dlib	Digital Library, Harvesting the content
22	Open ILS (Evergreen)	Open source ILS, Weblog, Links to mailing links
23	Resource Mate	Library catalogue, Searching, Circulation software.
24	Sage Brush Corporation	Library automation software, Library catalogue, Union Catalogue, Data conversion, MARC record, Scanners, Web manager.
25	Virtual Data Center	Open source, Digital Library system, Dissemination, Exchange, Citation of virtual collection of quantitative data

Conclusion

Libraries and Information centers are knowledge intensive centre and as such it could benefit from the ideas of knowledge management. This article focuses in knowledge management in libraries and its benefits. It presents the development in knowledge management general and for Library science in particular and discusses its definition, core elements, characteristics features, a cross disciplinary domain, KM process, approaches & software's & tools for knowledge management. This article also presents resources that can provide help, inspiration and information to organization that want

to better manage their knowledge. For any library to succeed in implementing knowledge management will require strong leadership and vision from the top level management which can influence the organizations. The best knowledge creators are scientists, research scholars, academics. Knowledge creation is best performance by research and development centers.

As a learning and knowledge organization those should empowered their libraries to developed campus-wide knowledge management systems. It is now time for libraries to repositories them self central stage and pivotal role in knowledge management.

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Library 2.0 Application in Library Services: A Comparative Study of Central Universities and Indian Institutes of Technology of India

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Abstract
The paper described briefly the concept and characteristics of library 2.0 applications followed by brief descriptions of its tools and techniques. Status of library 2.0 applications has been listed based on survey conducted for Central Universities and IITs libraries separately. It discusses the current status of Central University library websites and IITs library websites in terms of library 2.0 applications. Further role of librarians have been discussed to implement the library 2.0 tools and techniques followed by conclusion.

Key Words: *Library 2.0; Web 2.0; Blogs; Wikis; RSS Feeds; Social Networks*

Introduction
Information is one of the basic needs of library users. Library plays a very vital role to satisfy information need of their users. Information and Communication Technologies have played a significant role in the dissemination of information to the user community. Through the World Wide Web libraries provides essential services to the user's community like online databases, online journals, e-books, online reference, WebOPAC etc. Technologies are upgraded day by day and due to this up gradation, new technologies are invented that change the way of service. Web 2.0 is new technique which changes the services of Web. RSS feeds, blogs, wikis, audio and video streaming media, social networks, mashups and tags etc. are the new technological innovations which are the part of Web 2.0. Libraries are adopting these techniques to serve their user's community through which users can share and participate with the library and librarian.

Library 2.0
Library 2.0 is evolved from the Web 2.0 concepts and applications in library and information services. Web 2.0 applications are combined with library services and known as Library 2.0 as the application of interactive,

collaborative and multimedia based technology for library services and collection. In September 2005, Michael Casey used the term "Library 2.0" in his personal blog LibraryCrunch (http://www.librarycrunch.com/). Library 2.0 can be defined as "a model for a modernized form of library service that reflects a transition within the library world in the way services are delivered to users" (Wikipedia, 2011). In Library 2.0, library services are constantly updated and re-evaluated to best serve library users. It also attempts to harness the library user in the design and implementation of library services by encouraging feedback and participation. (Wikipedia, 2011).

Library 2.0: Application Tools

Library 2.0 is independent of technology given the fact that every library activity designed with active participation and feedback of its user community. However, Web 2.0 technologies can help libraries to create collaborative and participative environment that is necessary to deliver user-centric library services and to create new resources and build-upon existing ones using collective intelligence of users.

Following are the important and most prevalent tools & techniques used for Library 2.0 environment as described below:

a) **Synchronous Communication or Instant Messaging (IM):** IM is a real-time communication between two or more people based on typed text, images etc. Libraries have started it as "chat reference" services where user can chat with librarian. Libraries can benefit greatly by adopting it for CAS/SDI services as well as virtual reference services.

b) **RSS Feeds:** It informs users of updates to blogs or websites. Libraries are creating RSS feeds for users including updates on new content in subject database. Library may announce the availability of new books and other resources in a given subject area; can promote events organized in the library for library users through it.

c) **Streaming Media:** It is a sequential delivery of multimedia content over computer network that is played back to the end-user as it is being delivered by the provider.

d) **Podcasting:** A podcast is a series of audio or video digital-media files distributed over the Internet and can be downloaded through Web feeds to portable media players and personal computers.

Libraries may podcasts promotional recordings about its services, programs and highlights.

e) **Vodcasting:** It is nothing but video-on-demand and similar to podcasting, used for delivering video content.

f) **SMS Enquiry Service:** The SMS enquiry services in a library allow patrons to use their mobile phones to SMS their inquiries to the library.

g) **Blogs:** A blog is a website maintained by an individual with regular entries of commentary, descriptions of events, or other materials. Blog posts are displayed in reverse chronological order. Library can publish a blog posts and any reader can place a comment on a blog post. The libraries can use it as a tool for promotion, publicity and for outreach services.

h) **Wikis:** These are open web pages where any registered person can publish, amend, and change it. These are creating a collaborative platform via creating collaborative websites and community websites. Such an instance is Wikipedia. Libraries can also use a wiki as a communication tool to enable social interaction among librarians and its patrons.

i) **Social Networks:** Social network services are web-based interfaces that facilitate community of users to interact with each other deploying tools such as chat, messaging, email, video, voice chat, file sharing, blogging, discussion groups, etc. MySpace, Facebook, Del.icio.us, Frappr, Twitter and Flickr are some popular social networking services. Social networking services could enable librarians and patrons not only to interact, but to share and exchange resources dynamically in electronic environment.

j) **Social Bookmarking Services:** Social bookmarking is a method of storing, organizing, searching and managing bookmarks of websites using descriptive metadata. Blinklist, Clip2, ClickMarks, HotLinks, del.icio.us, Furl, Citeulike, Blue Dot etc. are some popular bookmarking services. Libraries can make use of social bookmarking sites using RSS feeds for subject disciplines or in areas of specialization relevant to them.

k) **Mashups:** Mashup is a web application that combines data from more than one source into a single integrated tool (Wikipedia, 2011). Mashup in Library 2.0 environment allows the user to edit OPAC data and metadata, saves the user's tags, IM conversations with librarians, wiki entries with other users, users can see what other users have similar items checked-out, borrow and lend tags. There are a number of mashup platforms that can be used to create

mashups, e.g. Intel Mash Maker, Google Mashup Editor, LiquidApps, Yahoo pipes etc.

l) **Ajax:** Asynchronous JavaScript and XML (AJAX) is a tool for creating interactive pages with easily changeable components. Google maps are a classic example of Ajax. This increases the interactivity, speed, functionality and usability of webpages. Library webpages can be updated frequently with the help of Ajax.

m) **Library Tool Bars:** Toolbars are used in common applications such as Microsoft Word, and as add-ons for Web browsers such as Internet Explorer and Mozilla Firefox. Some examples for such kind of toolbars are INFLIBNET Centre Toolbar, NTU Library Community Toolbar, and Cambridge University Library Toolbar.

1. Status of Library Websites in Library 2.0 Environment
1.1 Central Universities

The list of Central Universities is taken from the University Grants Commission (UGC), New Delhi website. As per the UGC, there are 43 Central Universities in India. Following table 1 display the library 2.0 tools and techniques applied in library websites of Central Universities of India.

Table 1: Application of Library 2.0 in Central Universities Libraries Websites
(Library websites accessed on 24.09.2014)

SN	Central University	Library 2.0 Tools Applied
1	Aligarh Muslim University	Google Map
2	Assam University	Library Blog, Facebook
3	Babasaheb Bhimrao Ambedkar University	No Library Webpage
4	Banaras Hindu University	Mobile Library
5	Central Agricultural University, Imphal	No Library Webpage
6	Central University of Bihar	Nil
7	Central University of Gujarat	No Library Webpage
8	Central University of Haryana	Nil
9	Central University of Himachal Pradesh	Nil
10	Central University of Jammu	Nil
11	Central University of Jharkhand	Nil
12	Central University of Karnataka	Nil
13	Central University of Kashmir	Nil
14	Central University of Kerala	Library Blog
15	Central University of Orissa	Nil
16	Central University of Punjab	Nil
17	Central University of Rajasthan	No Library Webpage
18	Central University of Tamil Nadu	Nil
19	Dr. Harisingh Gour University	Nil

20	Guru Ghasidas Vishwavidyalaya	Nil
21	Hemwati Nandan Bahuguna Garhwal University	Nil
22	Indian Maritime University	No Library Webpage
23	Indira Gandhi National Open University	Library Toolbar, NODLINET Blog, Vodcasting through Youtube
24	Jamia Millia Islamia	Nil
25	Jawaharlal Nehru University	Nil
26	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya	Nil
27	Manipur University	Nil
28	Maulana Azad National Urdu University	Nil
29	Mizoram University	Nil
30	Nalanda University	Nil
31	North Eastern Hill University	Nil
32	Pondicherry University	Nil
33	Rajiv Gandhi University	Nil
34	Sikkim University	Nil
35	South Asian University	Google+, Vodcasting through Youtube, Facebook, Twitter
36	Tezpur University	Nil
37	The English & Foreign Languages University	Nil
38	The Indira Gandhi National Tribal University	Nil
39	Tripura University	Nil
40	University of Allahabad	Nil
41	University of Delhi	Nil
42	University of Hyderabad	RSS Feeds on WebOPAC
43	Visva Bharati University	Nil

1.2 Indian Institutes of Technology

The list of Indian Institutes of Technology (IITs) is taken from the Ministry of Human Resource Development (MHRD), Govt. of India website. As per the MHRD website, there are 16 IITs in India. Following table 2 display the library 2.0 tools and techniques applied in library websites of IITs of India.

Table 2: Application of Library 2.0 in IITs Libraries Websites
(Library websites accessed on 24.09.2014)

SN	Indian Institutes of Technology	Library 2.0 Tools Applied
1	IIT Bhubaneshwar	Nil
2	IIT Bombay	Facebook, Twitter, You Tube, RSS Feed

3	IIT Delhi	RSS Feed, YouTube
4	IIT Gandhinagar	Nil
5	IIT Guwahati	Nil
6	IIT Hyderabad	No Library Webpage
7	IIT Indore	Library website not working
8	IIT Jodhpur	Library on Mobile, Library Blog "LIBLOG", Tagging
9	IIT Kanpur	Library website not working
10	IIT Kharagpur	Android Apps
11	IIT Madras	Nil
12	IIT Mandi	Nil
13	IIT Patna	Nil
14	IIT Roorkee	Facebook, Twitter, Blogger, LinkedIn, Google+
15	IIT Ropar	Nil
16	IIT BHU Varanasi	Nil

1.3 Comparative Status of Library 2.0 Applications in Libraries Websites

The following table 3 represents the comparative status of library 2.0 applications in libraries websites of Central Universities and Indian Institutes of Technology of India.

Table 3: Present Status of Library 2.0 Applications in Libraries Websites

Status of Library 2.0 Tools & Techniques	Central Universities		Indian Institutes of Technology	
	No. of Libraries	Percentage	No. of Libraries	Percentage
Yes	07	16.28%	05	31.25%
No	31	72.09%	10	62.50%
No Library Webpage	05	11.63%	01	06.25%
Total	43	---	16	---

Fig. 1: Status of Library 2.0 Applications in Libraries Websites

Discussion of Survey Result

Library 2.0 applications are free of cost and are simple to use with the library websites. From the survey, it has been observed that majority (72%) of the library websites of central universities of India have not used application of library 2.0 in their websites. There are about 11.63% central

universities that don't have a library webpage and only 16% library websites have used library 2.0 applications in their websites for the users. Social Networking Sites like Facebook, Twitter, and Google + have been used by few libraries websites like South Asian University Library and Assam University Library. Blogging services have been used by only three libraries websites namely Assam University Library, IGNOU Library and Central University of Kerala library website. RSS Feeds have been deployed by only University of Hyderabad library website. Mobile Library and Library Toolbar applications have been used by Banaras Hindu University Library and IGNOU library respectively. Vodcasts through YouTube has been used by IGNOU Library and South Asian University Library. Aligarh Muslim University Library has applied Google Map for their users.

Similarly, from the survey, it has been observed that majority (62.5%) of the library websites of Indian Institutes of Technology of India have not used library 2.0 applications in their library websites. There are about 6.25% IITs that don't have a library webpage and only 31.25% library websites have used library 2.0 applications in their websites for the users. Social Networking Sites like Facebook, Twitter, LinkedIn and Google + have been used by IIT Bombay and IIT Roorkee library websites. IIT Jodhpur and IIT Roorkee library websites have used blogging services whereas RSS Feeds have been deployed only by IIT Bombay and IIT Delhi library websites. Mobile Library and Tagging applications have been used by IIT Jodhpur library website only. Vodcasts through YouTube have been used by IIT Bombay & IIT Delhi library websites. IIT Kharagpur library has initiated the facility of Android Apps for library services on mobile.

From the figure 1, it has been inference that central university libraries (72%) have shown less interest to apply library 2.0 applications than IITs

Status of Lib 2.0 Applications in Libraries Websites

■ Central Universities ■ Indian Institutes of Technology
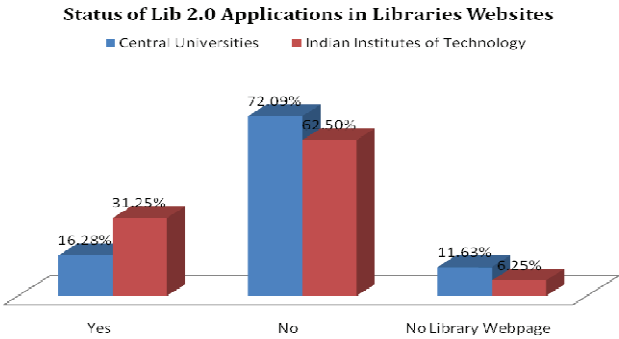
library websites (62.5%). In case of central universities, only 16% library administrators have shown interest to serve their users by applying new technological innovations in libraries websites whereas it is approximately two times in case of IITs library administrators (31.25%).

The present scenario of library 2.0 applications in libraries websites is not very much satisfactory for both the Central Universities and IITs library websites. This is the high time to re-think and motivate to deploy the library 2.0 applications in library websites for serving the users at their doorstep in better and faster way.

Librarian's Responsibility in Library 2.0 Environment
In Library 2.0 environment, librarians will have to understand users in terms of their goals and aspirations, workflows, social and content needs, and more. Librarians have to do constructive task at ground level for providing the library services efficiently in such scenario. There are some indicative tasks that librarians have to follow for the betterment of library services:

a) To learn the major tools of Web 2.0 and Library 2.0.
b) To connect users and technology and information in context.
c) To maximize the use of tagging, tag clouds, folksonomies, and user-driven content descriptions and classifications where appropriate.
d) To maximize the use of non-textual information i.e. pictures, moving images, and sound.
e) To see the potential in Open Content Alliance, Google Print, and Open WorldCat.
f) To connect users to expert discussions, conversations, and communities of practice and participates there as well.
g) To use the latest tools of communication to connect content, expertise, information coaching, and users.
h) To connect with everyone using their communication mode of choice - telephone, Skype, IM, SMS, texting, email, virtual reference, etc.
i) To understand the wisdom of crowds and the emerging roles and impacts of the blogosphere, Web syndicasphere and wikisphere.

Conclusion

Library 2.0 has deployed the tools and techniques of Web 2.0, based on Web which is very much useful for libraries & information centers in providing new services in interesting way. These new services and ongoing changes are likely to make libraries more interesting, more relevant, and better acceptable place. In library 2.0 environment, fantastic change has been observed in library services at conceptual, cultural, and physical level. Library 2.0 applications will change library services in terms of collection, services and methods of delivery of services. The library's collection will be more interactive and fully accessible; services will be focusing more on the facilitation of information transfer and information literacy. Librarians will have to take part in development of such techniques for libraries and show their expertise on simple and handy technology as well as keep themselves up to date.

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Browsing of Open Access e-Resources: A Case Study of OAJSE

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Abstract

The internet is the most convenient and most efficient information sharing platform while the open access is the interface which allows writers to publish freely and reader to download freely for reading. Due to enormous growth in the open access writings and ever increasing the volume of the open access e-contents it is the time to manage the resources in a proper way, so that the desired and required information can be retrieve successfully. A dedicated search may capable to provide the solution of the actual problem. The purpose of the study is to evaluate the e-contents through Open Access Journal Search Engine (OAJSE). The aim of this study is to examine the usefulness of the OAJSE search engine and the content provided by it.

Keyword: Open Access, OAJSE, e-Resources, Search Engine

Introduction

For the free flow of information, it becomes necessary to remove this financial barrier. The open access publishing model overcomes this problem by making research works freely available to institutions and individuals. Open access, by providing free, quick and current research literature to others accelerates the growth of research in the world. In this model, interested users can access information free of cost from anywhere in the world through the internet (Sahu and Arya, 2013). Open Access (OA) is a medium for publishing scholarly peer reviewed journals available freely on Internet. The full text of OA journals and articles can be freely read, as the publishing is funded through means other than subscriptions. The internet is the most convenient and most efficient information sharing platform while the open access is the interface which allows writers to publish freely and reader to download freely for reading.

Open Access e-Resources

An original OA website provides a network interface which allows writers to publish freely and readers to download freely. Both "good" and "bad" papers appear because quality control is lacking (e.g. a peer-reviewed system); as a result these OA websites are not influential. Anyone can submit a paper as long as the format (for example, HTML or PDF) is standard, is in accordance with scientific criteria, and does not disseminate illegal information. Writers keep responsibility for their own papers and

have the right to publish in any way with any other carrier. Most of these OA websites do not have copyright protection (Fang and Zhu, 2006).

Open Access e-Journals Open access journals are those journals which provide access to full-text articles published in that journal to the reader without any financial charges. The open access journal may be "author paid", financed by external grants, or use voluntary work (Sahu and Arya, 2013). According to Bailey, Open access journals have the following characteristics:

(1) Scholarly,

(2) Utilize quality control mechanisms like those of conventional journals

(3) Digital;

(4) Freely available,

(5) Allow authors to retain their copyrights, and

(6) Use Creative Commons or similar licenses

Due to open access nature, the OA journal articles are easily searchable and downloadable for further reading. It increases the popularity of the scholarly and learned articles due to easy access and cited more and more than other subscription articles. It is the key factor which attracts the authors to publish in open access journal to provided access to a wide range of readers.

Open Access Institutional Repositories

Institutional repositories can be defined as online archives set up and managed by research institutions to house articles published by authors at those institutions. An open access repository is an online database on the Internet which makes the full text of items (or complete files) it contains freely and immediately available without any access restrictions (Pinfield, 2005). Thus, IR is the online archive database of full text articles published by the authors of the institution which is used for further reading to do the successive research without any duplicate work. It can also be used as the measure of the standard output of research work of an institution.

Open Access Journal Search Engine (OAJSE)

Open Access Journal Search Engine (OAJSE) is a customized search engine which provides a unique search and browse facility for open access e-resources worldwide. OAJSE is maintained by Dr. Badan Burman. It is functional as Open Access E-Journal Portal since March 2008 and funded by Krishna Kanta Handiqui State Open University (KKHSOU) since Jan 2011. This portal provides facilities of searching, browsing and retrieving of the open access journals worldwide including the open access institutional repositories of India (see fig.). The Open Access Journals Search Engine (OAJSE) service covers free, full text, quality controlled

journals in all subjects that are published in English language. There are now 4,775 journals in the directory which are searchable at article level. The aim of this project is to increase the visibility and ease of use of open access journals thereby promoting their increased usage and impact.
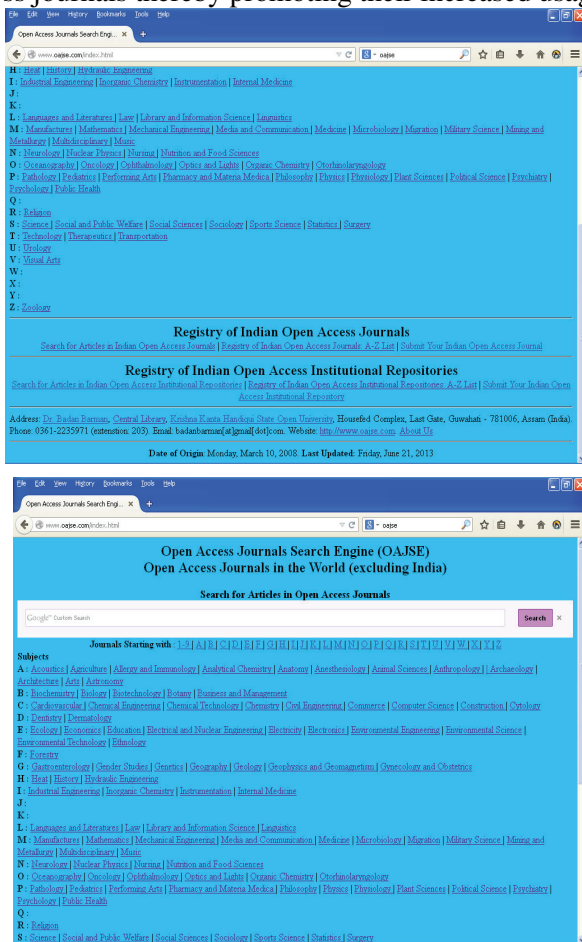
Fig1. Index page of OAJSE

The data collection of this web portal is made earlier from the Directory of Open Access Journals (DOAJ) then used to collect data both from DOAJ and as well as individually from the editors of the journals through online submission after manual verification. OAJSE excludes journals with subscription fee, journals portal not available in full text, journals with fee based full text access, journals with embargo period, journals published in other than English language, journals without ISSN, journals with improper quality control processes.

Structure:

The OAJSE web page divided into two parts. The first part includes the **Open Access Journals in the World (excluding India)** and the second part includes **Registry of Indian Open Access Journals** and **Registry of Indian Open Access Institutional Repositories.** The index page of the portals provides the links for all the categories and subcategories which is quite useful to the users (fig 1.).

Open Access Journals In The World (Excluding India)

This part covers open access journals worldwide excluding Indian journals divided into 104 subject categories. The table 1 illustrated the subject categories and the number of journals included in each categories. The subject categories are arranged in the alpha numeric order which is quite useful to search open access journals in a particular subject. Total 5482 international open access journals under 104 subject categories are listed in OAJSE portal since September, 2014. OJASE provides more than 100 open access journals in the following subjects: Medicine, Education, Internal Medicine, Computer Science, Mathematics, Biology, Business and Management, Languages and Literatures, Public Health, Multidisciplinary, Social Sciences, Civil Engineering, Economics. Medicine is the subject which have more than three hundred open access journals while Hydraulic Engineering is the subject which has only 3 open access journals.

Table1. Open Access Journals in the World (excluding India) listed since Sept 2014.

S. No.	Subjects	No. of Journals	S. No.	Subjects	No. of Journals
1.	Acoustics	05	53.	Internal Medicine	238
2.	Agriculture	93	54.	Languages and Literatures	149
3.	Allergy and Immunology	32			
4.	Analytical Chemistry	15	55.	Law	68
			56.	Library and Information Sc.	56
5.	Anatomy	08			
6.	Anesthesiology	11	57.	Linguistics	63
7.	Animal Sciences	80	58.	Manufactures	06
			59.	Mathematics	189
8.	Anthropology	39	60.	Mechanical Engineering	36
9.	Archaeology	12			
10.	Architecture	21	61.	Media and Communication	41
11.	Arts	26			
12.	Astronomy	15	62.	Medicine	327
13.	Biochemistry	34	63.	Microbiology	46
14.	Biology	184	64.	Migration	04
15.	Biotechnology	29	65.	Military Science	05
16.	Botany	52	66.	Mining and Metallurgy	12
17.	Business and Management	163			
			67.	Multidisciplinary	122
18.	Cardiovascular	58			

No.	Subject	Count	No.	Subject	Count
19.	Chemical Engineering	12	68.	Music	27
20.	Chemical Technology	29	69.	Neurology	88
21.	Chemistry	76	70.	Nuclear Physics	04
22.	Civil Engineering	110	71.	Nursing	18
23.	Commerce	19	72.	Nutrition and Food Sciences	20
24.	Computer Science	224	73.	Oceanography	15
25.	Construction	15	74.	Oncology	72
26.	Cytology	12	75.	Ophthalmology	26
27.	Dentistry	41	76.	Optics and Lights	19
28.	Dermatology	19	77.	Organic Chemistry	12
29.	Ecology	30	78.	Otorhinolaryngology	14
30.	Economics	109	79.	Pathology	31
31.	Education	286	80.	Pediatrics	31
32.	Electrical and Nuclear Engg.	54	81.	Performing Arts	15
33.	Electricity	08	82.	Pharmacy and Materia Medica	33
34.	Electronics	41	83.	Philosophy	82
35.	Environmental Engineering	08	84.	Physics	66
36.	Environmental Science	67	85.	Physiology	32
37.	Environmental Technology	08	86.	Plant Sciences	32
38.	Ethnology	06	87.	Political Science	97
39.	Forestry	20	88.	Psychiatry	33
40.	Gastroenterology	32	89.	Psychology	68
41.	Gender Studies	16	90.	Public Health	141
42.	Genetics	50	91.	Religion	46
43.	Geography	40	92.	Science	90
44.	Geology	72	93.	Social and Public Welfare	20
45.	Geophysics and Geomagnetism	12	94.	Social Sciences	112
46.	Gynecology and Obstetrics	31	95.	Sociology	54
47.	Heat	06	96.	Sports Science	28
48.	History	61	97.	Statistics	34
49.	Hydraulic Engineering	03	98.	Surgery	67
50.	Industrial Engineering	14	99.	Technology	60
			100.	Therapeutics	64
51.	Inorganic Chemistry	05	101.	Transportation	26
52.	Instrumentation	07	102.	Urology	22
			103.	Visual Arts	08
			104.	Zoology	93

Registry of Indian Open Access Journals

Total 563 Indian open access journals are registered in OAJSE on different subjects. The numeric list of the journals arranged in the alphabetical order is provided in the portal with the search facility with alphabets and numerals. In his section, the provision for Hindi and Tamil open access journals has made but the records are not maintained yet.

Registry of Indian Open Access Institutional Repositories

In this section, total 34 Indian open access institutional repositories, developed by eminent and renowned institutions, are registered. The numeric list of the open access institutional repositories arranged in the alphabetical order is provided in the portal with the search facility with alphabets and numerals.

S. No.	Institutional Repositories	Major Subject
1.	Bhagirathi	Multidisciplinary
2.	Digital Knowledge Repository of Central Drug Research Institute, Lucknow	Drug
3.	Digital Repository of National Centre for Radio Astrophysics	Astrophysics
4.	Digital Repository of the Raman Research Institute	Physics
5.	Digital Repository Service of National Institute of Oceanography	Oceanography
6.	DSpace at Guru Gobind Singh Indraprastha University (GGSIPU)	Multidisciplinary
7.	DSpace at Indian Institute of Management Kozhikode	Management
8.	DSpace at Institute of Mathematical Sciences (IMSC)	Mathematics
9.	DSpace at Inter-University Centre for Astronomy and Astrophysics (IUCAA)	Astronomy and Astrophysics
10.	DSpace at Sri Dharmasthala Manjunatheshwara College of Engineering and Technology (SDMCET)	Engineering and Technology
11.	Dyuthi Digital Repository of Cochin University of Science and Technology	Science and Technology
12.	Electronic Theses and Dissertations of University of Agricultural Sciences (UAS) Dharwad	Agriculture
13.	ePrints at Central Marine Fisheries Research Institute (CMFRI)	Fisheries
14.	ePrints at Dr. Mohan's Diabetes Specialities Centre (MDRF)	Diabetes
15.	ePrints at Indian Institute of Technology Delhi (IIT) Delhi	Engineering and Technology
16.	ePrints at School of Biotechnology Madurai Kamaraj University	Biotechnology
17.	Etheses - A Saurashtra University Library Service	Multidisciplinary
18.	Ethesis at National Institute of Technology Rourkela (NITR)	Engineering and Technology
19.	Indian Institute of Petroleum Institutional Repository	Petroleum
20.	Information and Library Network Centre's Institutional Repository	Library & Info. Sc.
21.	International Crops Research Institute for the Semi-Arid Tropics Open Access Repository	Agriculture
22.	Knowledge Repository Open Network	Multidisciplinary
23.	KR at Central Institute of Medicinal and Aromatic Plants (CIMAP)	Medicinal and Aromatic Plants

24.	Librarian's Digital Library	Multidisciplinary
25.	Mahatma Gandhi University Open Theses Library	Multidisciplinary
26.	National Center for Antarctic Research	Antarctic Research
27.	National Institute of Technology Rourkela Digital Archive	Engineering and Technology
28.	National Science Digital Library	Science and Technology
29.	NISCAIR Online Periodicals Repository	Science and Technology
30.	North-Eastern Hill University Digital Library	Multidisciplinary
31.	Open Access Digital Repository of Indian Institute of Astrophysics	Astrophysics
32.	OpenMED at National Informatics Centre (NIC)	Medicine
33.	Shodhganga at Information and Library Network (INFLIBNET) Centre	Multidisciplinary
34.	Vidya Prasarak Mandal	Multidisciplinary

Search in OAJSE

OAJSE provide facility of searching from its site, browsing and downloading from the journals' site by redirecting. Google custom search is used to provide a search engine to search articles into the open access journal. The Google custom search is quite useful and functional at its optimum level to search articles into the open access journal and institutional repositories.

Ranking of OAJSE

According to URLmetrics website (**http://urlm.co/www.oajse.com**), OAJSE is ranked 3,764,383 in the United States, 1,602,075 in the United Kingdom, 5,299,545 in the world wide ranking while the site has viewed by 66 users daily, viewing on average 2.10 pages each till January 2014. According to StatsCrop (http://www.statscrop.com/www/oajse.com), Oajse.com has 3 years old, it is ranked #1,384,477 in the world, a low rank means that this website gets lots of visitors. This site has a very good Page rank (5/10), Its seo score is 75%. IP address is 203.124.115.1, and its server is hosted at Singapore, Singapore till August 2013. At present, according to the rankohlic.com, the google page rank of OAJSE is 6/10.

Conclusion

As Ranganathan stated in reference of five laws of library science that the "Books Are for Use". At the present scenario the It can be demonstrated that the "Information Is for Use". It is important that the knowledge acquired through research be disseminated as soon as possible and open access (OA) online publishing is a good method for doing so (Fang and Zhu, 2006). Due to vast growth in population of the open access journals, institutional repositories, open access learned publications, article, reports, preprints, post-prints, etc., it is tough for the ordinary search engine to search and list all the outputs in its search results. While in general, internet users tries to scan first and second page of the search result. At this

situation, OAJSE found suitable by providing a customized search facility dedicated to only to the wide range of the open access journals. In spite of these, OAJSE should include Open access journals other than English Language, Institutional repositories at world level, improved search for Indian journals etc.

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Development of Digital Libraries

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Abstract

The article gives a brief account of digital libraries, defines digital libraries, its growth and development. The emergence of computerization and information technology in the development of digital libraries and information services are discussed. Stresses the need for digitization in libraries, concludes with highlighting the advantages in providing efficient library and information services in the present era of networked society.

Introduction

A digital library is defined as a library which has all the information in electronic form and having electronic devices to have access to digitized information. The digital library is a collection of services, a collection of information objects, which supports users with information objects. Access to digital resources is made directly or indirectly and ensures electronic digital availability. The American Digital Library Federation has defined digital library as an "organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities."

The important characteristics of a digital library are:

(i)   Digital collection – the digital collection is the main resources of a digital library. It may include both digital collection as well as traditional collection.

(ii)   Digital libraries also include digital material that exists outside the physical and administrative bounds of any one digital library.

There are many definitions of a "digital library." Terms such as "electronic library" and "virtual library" are often used synonymously. The elements that have been identified as common to these definitions are:

• The digital library is not a single entity;

• The digital library requires technology to link the resources of many;

• The linkages between the many digital libraries and information services are transparent to the end users;

• Universal access to digital libraries and information services is a goal of many digital libraries;

- Digital library collections are not limited to document surrogates: they extend to digital artifacts that cannot be represented or distributed in printed formats.

The function of digital library is to create, maintain, manage, access to and preservation of digital content. The information repositories are created by producing the information content in digital form or converting the print to digital form, stored in multimedia repositories, and made available through intranet or internet or from any server to the workstations.

Functional Components of a digital library

To understand the digital library in an ideal way, let us discuss the major functional components of a digital library. They are-

- Conversion of print to digital and acquisition of digital media;
- Metadata creation, processing and description;
- Storing of digital resource in appropriate repository in a networked environment for hosting in intranet, extranet and internet;
- Creating a single user interface and gateway for the digital resources;
- Patron access through a browser or dedicated client.

It is however true that the above components are mandatory for all digital delivery system nor these alone do not constitute a well-designed digital library.

An ideal digital library has to work in conjunction with or without creating a parallel information delivery mechanism. What one requires is the interoperability and interface with the existing collection. This is a much complex process and there is no consistent and uniform way is evolved for doing it.

With digital libraries, an individual can:-

- Gain access to the holdings of libraries worldwide through automated catalogues.
- Locate both physical and digitized versions of scholarly articles and books.
- Optimize searches, simultaneously search the Internet, commercial databases, and library collections.
- Save search results and conduct additional processing to narrow or qualify results.
- From search results, click through to access the digitized content or locate additional items of interest.

Digital libraries are distinguished from information retrieval systems because they include more types of media, provide additional functionality and services, and include other stages of the information life cycle, from creation through use. Digital libraries can be viewed as a new

form of information institution or as an extension of the services libraries currently provide.

Growth in web-accessible resources and development in related technologies such as digital libraries have opened up exciting new possibilities for document access. Parallel advances in computing power and steep reduction in computing cost have spurred renewed interest in application of artificial intelligence techniques in document access. These factors are changing document searching in significant ways.

It is a well-known fact that as the universe of documents has enlarged from those available via the online catalogue to a larger cluster of databases and web-accessible resources for which interfaces are being created that can search multiple document collections simultaneously. Also, searching for document surrogates is losing favour as more documents are digitized and distributed in full-text form. Availability of full-text makes it possible for document components such as tables, illustrations, citations, and references as components. Additionally, due to the popularity of web-hyperlinking, users expect linking of documents across different collections based on common semantic or non-semantic attributes.

Increased research activity on artificial intelligence techniques for document access is leading to more fundamental changes in document searching. It is now possible to delegate 100% of the search effort to online search agents. Agents have been also created for performing tasks such as selecting appropriate collections, refining queries, and sorting results to assist with searches conducted in distributed environments.

One issue that has not attracted much attention, but is essential to digital library development, is the management of digital library contents. Because a typical digital library contains a large quantity of documents, the conventional practice used to maintain the contents of web sites will not work for digital libraries. In particular, the hyperlink that is widely incorporated in conventional web sites to structure the web pages poses a major challenge. For a digital library with a large quantity of materials, attempting to manually maintain the hyperlinks among web pages will become a cumbersome task.

The Future

Integrated virtual libraries of the 21st century will provide integrated access to an increasing number of resources including existing library collections, archives, collections, scientific databases, and multimedia presentations. The impact of digital libraries will perhaps be greatest in areas that lack the infrastructure of the developed world. Access to the world's knowledge will soon be available to anyone with a phone

line, eliminating the need for expensive and incomplete local collections. As a few institutions suggest solutions to the questions of format, content, and preservation of the information, digital libraries will become unbounded resources in the universe. he research in digital library is continued to attract the digital information researchers that could lead us to a highly structured collections.

The exponential growth of information generation, advancement in information communication technology and its advantages in library and Information centers has led to the emergence of digital library. Digital libraries can adopt innovations in technology providing users with improved methods to access latest information. The digital Information is changing our ways of access to information and learning. However, as digital libraries do not have any physical presence users will be deprived of getting a better view of the collection thus may find it difficult to formulate a query or to get access to the needed relevant information. Despite the problems and challenges, it is high time for the libraries to go for digitization to ensure better and quick retrieval of information as it keeps in providing efficient library and information services in the present 21"1 century of information society, knowledge society and in the era of networked society.

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Digitization of Libraries Issues and Challenges

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Abstract

A library may procure contents in various sources and forms to service their clients. In the predominantly paper based erstwhile environment all these contents were put to similar types of use, and copyright restrictions were imposed based on the quantum of pages copied etc. In the electronic and digital perspective, owners of information are resorting to punitive measures regarding the use and contents in digital form. Some of the constraints faced by our libraries to engage in serious digital initiatives are three fold - that of money, manpower and contents. Most of our libraries, particularly in the higher education and research institutes solely depend on the information providers and publishers in the developed world to satisfy their urge for vital contents that inspire indigenous research. Since contents are a major ingredient in digital library development, the pragmatic and viable way out for libraries is to judiciously judge them as available in electronic forms in optical media or on Web and procure at least some of them for hosting locally. This paper presents some of the major issues involved in such a critical activity with some illustrative examples available like IEE/IEEE Electronic Library, Indian Standards on CD-ROM, Science Direct and Web access of Indian Academy of Sciences journals. The justification for selecting external contents has also been mentioned. A detailed checklist for evaluating contents is presented from various angles, like authenticity of content, user interface, search and display capabilities, documentation and technical support, and Media dependent features.

Introduction

We understand a digital library to be an electronic collection of real or virtual resources, which may also be available elsewhere. These resources must be whole works, with which humans can have a complete cognitive or affective engagement. A digital library may allow either online or offline access to the elements it organizes and houses, and may include multimedia as well as multilingual data. Although

accessible online, a digital library is not identical to website or a portal. However, while portals, specialized websites and search engines cover a wide range of subject areas, digital Libraries are more narrowly focused around one or a specific group of disciplines. Digital libraries, moreover, attach content-specific and highly descriptive metadata such as, descriptors or keywords to describe each item in the collection. Therefore, searches in a digital library can produce more useful results, save time and effort in searching, and in the best of cases browsers may directly access the text or multimedia content for which they executed their search. There are several advantages of a digital library over a conventional library. These include minimizing storage space and cutting down costs of library maintenance and resource distribution. A digital library is also not merely an automated conventional library, where the resources are electronically catalogued and are available only for browsing purposes. Although conventional libraries do preserve socio-cultural ambiences within their spaces, a digital library can provide more equitable and widely distributed access at lower costs. Moreover, it may be most appropriate means of organizing intellectual artefacts that cannot be represented or distributed in printed formats, such as audio/video multimedia content. Thus a digital library may evolve into a complex system that makes information available in hard copy, on magnetic tape and discs, CD-ROMs and videodiscs, including those from online sources.

Digital Library
The US Association of Research Libraries (ARL) identified five elements common to all definitions of the digital library, in October 23, 1995 [2]:

- ✎ The digital library is not a single entity
- ✎ The digital library requires technology to link the resources
- ✎ Linkages between digital libraries and information services are transparent to users

- ✎ Universal access to digital libraries must be a goal
- ✎ Digital library collections are not restricted to document surrogates but include digital artifacts that ha ve no printed equivalent

In a broader sense, we can define Digital libraries as organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that, they are readily and economically available for use by a defined community or set of communities. Digital Libraries offer such benefits as equitable

access, reduced barriers of distance, timeliness, shared resources and content delivery. Digital libraries have been the prerogative of the developed world, and due to the advancements and affordability in computer and communication technology, they are, though slowly, getting importance in other countries.

National Status

With the increasing applications of web technology for library work, several libraries in the country are involved in development efforts on disseminating information through local Intranet as well as Internet. But significant efforts on digital library development were meagre in the country due to several constraints.

Infrastructure constraints: Not only the weak computer infrastructure in libraries and affiliating institutions is creating the major hurdle, but also the lack of high capacity bandwidth for network and Internet access. Hope that situation will soon improve due to the concerted efforts on various fronts as VSNL and BSNL are engaged in a massive action plan to enhance the communication infrastructure in the country

Lack of Professional Expertise: Expertise can be generated through either retraining the existing staff members with the help of continuing education programmes or by including digital library components in the professional courses to give the desired exposure to budding professionals. In a professional service stream like information science, strong compartmentalism would not yield any satisfactory results, and it is high time that we should involve computer and communication professionals to assist us in access provision of whatever contents we are so good at collecting, ordering and servicing.

Absence of High Quality Contents: The overall impact of India's research output on the growth of disciplines like Science and Technology is a matter of introspection.. In these disciplines, where considerable progress has been made on digital access provision, most of the publishers, authors, and information providers are based in the developing world. Most of the best research papers from the country are getting disseminated through foreign publications due to various reasons. In such a premise, even contents, where our country has a stronghold like arts, folklore, spirituality, traditional knowledge etc. are getting sidelined. As the usage and reach of contents in digital form are far more wide reaching than the printed text, and the process of

digitization involves cost in terms of contents, systems, expert man power, care should be exercised on what sort of contents need to be digitized.

Technical Issues

Meta-data Standards and Protocols

Metadata, or "data about data," is a critical element for searching information through a database especially, when the information available in an invisible space like the Internet, unlike a conventional library. Metadata are also types of descriptive information applied to a digital spatial file. The function of metadata is to standardize the structure and content of indexing or cataloguing information. Conventional libraries practise Meta data standardizations in the form of non-automated taxonomical systems. Nevertheless, with the advent of digital libraries in western countries, efforts to create better information management systems and improve existing ones have resulted in multiple standards. However, among the diverse standards that have been tested and tried and at present, there are a few universally recognized standards of classification that are being used around the world for digital resource management purposes.

A brief summary of existing worldwide meta-data standards is as follows. The International Standards Organization's (ISO) Metadata Working Group has a related standard, ISO 11179, Specification and Standardization of Data Elements. It may also be made available to private sectors, civil societies and citizens. The American National Standards Institute (ANSI) has established the NCITS L8 (formerly X3L8), the National Committee on Information Technology Standards.Thecommittee covers naming, identification, definitions, Classification and registration of metadata: The World Wide Web Consortium (W3C), a major governing body of the Web has developed fact standards including RDF (Resource Description Framework) and the Platform for Internet Content Selection (PICS) specifications.PICS was originally intended to aid adults in controlling children's access to the Internet. However, its standards are usually at a very general level over which meta-standards can be improvised.

The National Spatial Data Infrastructure (NSDI) has developed an NSDImetadata standard for spatial data. A software utility has also been developed by ISRO that allows agencies to populate their own metadata in the NSDI Metadata Standard format and then link it with

the overall metadata server. Maps and satellite images made available through this facility will be used for decisions at the local, regional, state and central level planning, implementation of action plans, infrastructure development, disaster management support, and business development. While metadata standards are protocols per se, metadata systems are those that describe a set of metadata elements such as Title, Author, Rights, Date and so forth for a given digitizablematerial. For example, Dublin Core, MARC, DESIRE, SHOE, XML are metadata systems, of which Dublin Core is more widely adopted around the world. The Dublin Core Metadata Initiative (DCMI) began in 1995 with an invitational workshop in Dublin, Ohio that brought together librarians, digital library researchers, content providers, and text-mark-up experts to improve discovery standards for information resources. The original Dublin Core emerged as a small set of descriptors that quickly drew global interest from a wide variety of information providers in the arts, sciences, and education, business, and government sectors. It also has official standing within theWWW Consortium and the Z39.50 standard. Dublin Core metadata is endorsed formally by governments in three countries for promoting discovery of government information in electronic form, and Dublin Core is under consideration as national information standard in at least five others.

At present, digital library initiatives in India make use of Dublin Core for web-based publications, Encoded Archival Description (EAD) for archiving and Visual Resources Association (VRA) for visual data. Consortia such as the INFLIBNET and INDEST are involved in developing Indian metadata standards and software applications as part of the Open Archives Initiative Protocol for Metadata Harvesting (OAI_PMH). This would be used to automatically extract metadata information from digital libraries and enhance interoperability between systems. This would also enable users to access all information repositories of participating institutions of the OAI. eprints@iisc, the reprint archive of Indian Institute of Science, is probably the first OAI compliant institutional repository initiative in India.

Software Issues

➢ Greenstone is digital library software used for building and distributing digital library collections, organizing information and publishing it on the Internet or on CD-ROM. Produced by the New Zealand Digital Library Project, it integrates functions such as metadata,

➢ Full text search and retrieval, multilingual support, support for multiple

document formats and administration. Greenstone is open- source software, issued under the terms of the GNU General Public License. The aim of the software is to empower users, particularly in universities, Libraries, and other public service institutions, to build their own digital libraries. The Indian Labour Archives was one of the first Indian digital library initiatives to use Greenstone.

➢ In India, at present, Information Library Network (INFLIBNET), a consortium incubated under the rubric of UGC, is actively involved in Library Automation, Database Creation, Software Development, Human Resources Development, Information Services and Networking. They have developed a software SOUL based on relational database management language, which is used for cataloguing, archiving as well as enabling online public access of resources. The Indian Institute of Science in Bangalore is closely involved with the INFLIBNET for developing and standardizing protocols of information management for digital library as well as information repository initiatives. The National Informatics Centre (NIC) of India has also developed digital library software – DelSis – that issued by the Developing Library Network (DelNet), which is also an effort to network libraries and for resource sharing.

Digital Rights Management

Given the vulnerability of materials accessible over the public access networks like the Internet, issues of IPR of material over the digital domain have become a serious concern. Digital Rights Management involves ways in which the digital library operators manage issues of IPR, those of ownership of material made available on the digital library, how one controls access to as well as dissemination of copyrighted material. Several methods of managing digital rights do exist nowadays from which one could choose to adopt the more convenient one for their purposes. Examples include, (i) charging a fee for the use of material as part of copyright fee if that is mandatory, (ii) act as a middleman for other libraries so as not to get involved in these issues and to let the source organization deal with its IPR. For example, the TIFR online catalo provides access to the ACM Digital Library, Springer-Verlag list of publications and IEEE subscriptions. The NIT Calicut Digital Library –Nalanda also acts as an intermediary in providing access to standard international publications and journals (iii) holding restricted access to resources using user authentification method for those paid/registered users. This can be enabled using magnetic swipe cards, biometric methods or simple online security software that

pops a username/password dialog box (iv) withholding original material and sending photocopies to the addresses. Of course, this works only at a local level and also for only an automated library that provides access to its catalogue online and allows requests for materials to be sent. (v) Using logos, logotypes as watermarks to protect source ownership of the materials.

Content in India

The first step towards creating a digital library is to digitize existing printed /media material into digital formats. For example, the CSCS Media Archive has digitized its archival collection on media-based articles such as newspaper clippings. Common procedures adopted in this process were scanning and storing the clippings as either image or document formats tube readable over the internet. Also, the archive is stored in offline formats such as CD-ROMs. This project was originally intended to be an income-generating model, however, issues of IPR over media-related information posed major constraints to make it available for free access. Also, meta-data standards adopted do not seem to reveal a sophisticated organization of data. In contrast, eprints@iisc is a project that seeks to provide a user with a full complement of features ideal for advanced searching as well as web publishing. This initiative seeks to address bottlenecks from both the user-end as well as the provider-end. IISc seeks to provide a wider arena for research scholars to increase their publication skills as well as access more relevant content from other resources. Some of the other initiatives that will also contribute to this effort in the future include the Vidyanidhi Library of Theses and Dissertations and the Digital Library of India. Although the user groups that these initiatives primarily target are the research students community in India, it is still a worthwhile effort to look into their operational strategies to enhance institutional resources in an economic way.

Interactive educational, informational, and even leisure content is not readily available in many India's regional languages. Even if developmental funds are specially directed towards the creation of such content in the initial stages of this digital library project, these are likely to be consumed quickly, and there will be a drop off in the interest and value of the library, unless user groups continue to encounter novel content on each visit. This has-been the experience of the AzimPremji Foundation's CLCs, for instance, where students soon mastered specially commissioned educational games in the local language, and began to prefer pirate-copies of violent and ribald computer games.

Special programming and training efforts can be directed towards enabling segments of the local community to create their own digital media. The JIVA foundation in Faridabad, for instance, ran a highly successful project, which taught local teenagers how to make their own digital-movies, from storyboarding and scripting to direction and post-production editing. The example of the Hole-in-the-Wall project reveals the extent to which unsupervised interaction among students around an interactive medium can induce learning, dialogue, and even basic computer literacy. Of course, one effective solution to the problem of content can emerge from the communities using the digital resources themselves. A TV-tuner card costs under USD 35, and allows a computer to display satellite cable- TV programming. Graphic, visual, aural, and musical data can now be grabbed from the airwaves, sampled, mixed, recontextualized, and in other ways reassembled to create local reinterpretations of broadcast media. A local newspaper, for instance, can condense global and national news for local understandings. Student projects can be illustrated using digital images captured through a webcam. Teachers can use printers to create a wealth of visually-rich teaching aids. Digital libraries can be used to organize such content or to gain access to resources that can spur the creation of local content.

Multiple Access Possibilities

One of the greatest challenges in the establishment of a digital library network in a country like India is Internet connectivity. The lack of networked infrastructure and inappropriate pricing patterns can also prove significant hurdles for a fledgling ICT initiative. Several connectivity options now exist and it is helpful to understand their relative costs and benefits. Dial Up access, using regular telephone lines emerges as an immediate connectivity solution as existing network infrastructure can be tapped. Due to limited bandwidth and slower speeds, Dial Up is suitable only for basic emailing and browsing. Moreover, it ends up being exorbitantly expensive for longer durations of use.

The India Gandhi National Centre of Arts digital library for example, primarily supports a variety of multimedia formats including audio and video files of archaeological or cultural significance. Interactivity to a very limited degree is also embedded. However, even for such minimal activity broadband connection is preferable. Broadband connectivity, including ISDN (integrated services digital network), an older technology, and DSL (Digital Subscriber Line), offers high speeds with high costs, but may not be available in most rural areas. While this low maintenance technology is appropriate for bandwidth hungry

applications like multimedia, bulk data transfers or teleconferencing, it is usually only accessible to those living near the telephone company central offices. It often proves too expensive unless cable infrastructure already exists in the area of deployment. Wireless-in-Local- Loop (WLL) systems afford subscribers wireless access through a base-station, which is then connected to broadband backbone. The n-Logue customized version of this configuration called 'correct' WLL system provides both voice and data transmissions simultaneously. Wi-Fi or 802.11 networks allow high speed wireless data or voice transfer within extremely local areas, usually under 300 meters. It is ideal for networking multiple classrooms as their locations do not change over time. VSATs (Very Small Aperture Terminals) connect up to diverse kinds of satellites using the C and Ku bands. Even though VSAT costs have reduced considerably over the last several years, operating costs are still higher for than that of other means of connectivity. VSATs are suitable for usage patterns characterized by bursts of traffic or applications. It is ideal for downloading media files, applications and freeware that children can find use for in their curriculum.

Initiatives such as the Centre for Education and Documentation (CED)that maintain historical manuscripts and archives of media combine digital and offline modes of content delivery. CED provides access to searchable database of catalogues and indexes. Users can register themselves as members for a subsidize fee and request selected material to be sent to them via post or email depending on what format the resources are available. Recently, CED has also started making its resources available in digital formats that can be emailed to users as this would aid in cutting cost for the users as well as increase geographic reach. Therefore, a digital library initiative in a country like India has the flexibility of making use of a combination of existing networks of communications and distribution including print, CD-ROM, postal, email, and online.

Mixed Media approaches to connectivity may employ radio and data-transfer using mobile phone networks in combination with some form of Internet access. Data transmission over cellular networks is a possibility for one-way broadcast and streaming of appropriate media content that can be relayed on a closed group network. They may be used for peer-to-peer communication to exchange information on a mesh network. Combining mobile phones with GPStechnology and audio/camera functionalities may find a lot of use for interactive and project-based learning programs.

Combined with desktop facilities of editing and processing and transferring insights to peers may also contribute towards creative learn experiences? In the future it could become much more sought-after, in terms of high bandwidth and low equipment and operating costs. The existing conditions in a deployment area, alongside the proposed content-and-service applications must be taken into consideration while choosing a mode of connectivity.

Insights on India from Related Digital Library Events

The following is a brief summary of on-going efforts in the field of digital libraries in India, which came out of the conferences that CKS personnel participated in. Several papers and discussions were presented on a range of themes including digital library concepts, the digital divide, digital library policies, and a number of case studies of digital library initiatives.

Digital Library concepts sought to educate audiences on the basic features, aspects and workings of a digital library. Issues such as tools, techniques and standards that are or can be used for digitization were mentioned. A vast majority of projects seemed to build their searchable databases on Dublin Core, with a base of Z39.50 earlier identified in this report. The most popularly used software to build the digital libraries themselves was Greenstone Digital Library as this was open source and free to download. However, several implementers had some problems with specific elements of the software that it is not able to support certain multimedia formats of files. This software supports metadata standards such as XML and Dublin Core to name a few. Therefore, one can see a GSDL Software-Dublin Core combination in most of the initiatives. Indian software includes SOUL developed by UGC-INFLIBNET consortium, LibSys and LIBSuite that follow GSDL.

The areas of greater challenge in building a digital library seemed to lie in the actual process of digitizing existing resource material on print as the cost factors involved were not sufficiently supported due to lack of dedicated funding for digital library efforts in academic institutions. Other technical concerns that were highlighted were those of access and storing. Interesting solutions to address technical issues of digitizing content include using digital cameras to capture print material as images as opposed to scanners. Providing broadband access was an impending factor to make large filesor audio-visual data or streaming data available over the digital libraries. One of the associated reasons for such impedance cited was also lack of trained professionals in maintaining the smooth technical running of the process.

However, a majority of institutions have taken a step forward in automating their libraries and making Online Public Access Catalogue facilities available at their premises. Under the consortium efforts of INFLIBNET several state universities have received funding for digital library initiatives.

Some key applications identified for digital libraries included (i) archival preservation such as manuscripts, ancient literary works, cultural artefacts, community identities, (ii) legal documentation such as government documentation of plans and policies, history of legal cases, census and statistical data, spatial data and other relevant information that can be brought into the public domain, and (iii) educational and research purposes such as scholarly publishing, theses, research work, hosting reference material. With particular reference educational and research applications a number of initiatives in India seem to focus on advanced research and scholarly publishing. One of the reasons for this concentration around research is the availability of a comparatively larger resource base in both universities as well as public libraries. The paucity of digital library resources for school education is due to lack of documentation of practices and limited use of extra-curricular content for school learning purposes. However, there is a great need for such resources in order to address goals of lifelong learning, which includes stronger foundation for education. A handful of initiatives work on e-learning in Tamil Nadu state in India. One of the other crucial issues was that of multilinguality, which is based on the argument that several resources for child audiences are available, but only predominantly in English. Suggested solutions to develop multilingual interfaces for digital libraries included the use of Unicode in programming the interface.

While many such initiatives are in progress, one of the biggest challenges cited was converging experiences and efforts towards common goals such as lifelong learning, facilities for citizens to participate in the society, community history and identity, training and employment, as well as business and economy. These were also indeed some important visions that came out from the President of India, Dr. A.P.J. Abdul Kalam's inaugural speech at the International Digital Library Conference. There were strong optimistic feelings about the potential of digital libraries in their ability to springboard India towards an information economy. It was suggested by a large participant community at the conferences that constituting national policies that would enable smoother and successful transition from traditional to digital libraries was the need of the hour. Policy intervention required in

strategic issues of implementation included legal issues and bibliographic control, infrastructure, collection development and preservation, capacity building and funding, and partnerships and collaboration. In spite of technical impediments, divergence in initiatives and managerial issues, at present India is witnessing an era of transformation that seeks to make digital content available for public access to the largest extent possible by 2010.

The existing opinions seem to voice that there is no one single model of operation that alone can provide better results, but alternate models of digital libraries could be evolved or adapted to borrowing from other countries' experiences also. However, it was also felt that it is critical to have a national vision or plan that manifests itself as a sound policy that would direct all initiatives towards interoperability. This is especially crucial as the world of metadata standards or software applications is also constantly evolving and is subject to obsolescence. In this regard, the role of consortia and collaboration in the country is perceived to be very influential in terms of converging nation-wide efforts to build interoperable as well as cost-effective systems.

Directory of Digital Library Resources
E-Prints at IISc: www.ncsi.iisc.ernet.inThe National Centre for Science Information in Bangalore hostse-library facilities and provides full-fledged comprehensive set of e- publishing tools set up as part of the Open Archives Initiative Protocol for Metadata Harvesting. This is one of the very first initiatives to provide online publishing facilities for research scholars and academia. Metadata used include a combination of Dublin Core, EAD and VRA to support a variety of media formats of information to download and upload.

TIFR Digital Library Initiative:www.tifr.res.in/~library/The TIFR online public access catalogue provides access to several standard international publications and journals such as IEEE and Springer. This resource is also involved in the process of providing digital access to materials, e-books. It uses Dublin Core metadata for this purpose.

Centre for Education and Documentation: www.ced.orgThe Centre for Education and Documentation hosts a variety of resources including books, journals and newspaper clippings on contemporary history and video documentaries on social change and development in its premises in Bangalore and Mumbai. CED has also come up with online reference facilities such as Doc Post and Doc Email, where one could selectively request photocopies or softcopies of material to be sent via post or email with subsidized charges.

IGNCA Digital Library: www.ignca.nic.in/dgt_0001.htm this digital library created in 1999 by the Indira Gandhi National Centre for the Arts (IGNCA) affords a varied documentation of resources such as digital images, audio and video recordings, animations, electronic books and so forth related Indian arts and culture. The main objective behind establishing this online tool is to encourage preservation of art and culture through digital documentation of works.

CSCS Media and Culture Archive: http://www.cscsban.org/html/media_archive.htm this component of the CSCS Media Project assembles what could be the definitive media archive of post-Independence India. Material will include press clippings and reviews; pamphlets, reports and papers by government agencies, independent organisations, and individual work; visual images, advertising and publicity leaflets; market research reports;

It will also facilitate video archiving through the Internet.

INFLIBNET: Information and Library Network Centre Developed by the UGC in collaboration with NISSAT, this digital library network is probably one of the more full-fledged steps towards digital libraries in India. Major Activities of this association include Library Automation, Database Creation, Software Development, Human Resources Development, Information Services and Networking. They have created a software SOUL that is based on a relational database management language, which is used for cataloguing, archiving as well as online public access of resources.

Digital South Asia Library: The Digital South Asia Library is a global collaborative effort to make important and rare resources available to the international Community. DSAL includes resources from many disciplines as well as a variety of data types. The component parts of the project include maps, statistics, bibliographies, union lists, indexes, photographs, books and journals, as well as a reference collection that is strong in pedagogical tools for South Asian language learning.

Identifying Possible Stakeholders
This section identifies practitioners, experts and other relevant personal identified also based on feedback on earlier draft of report. For this purpose, CKS officers met with digital library practitioners at conferences to identify key people. The personnel are identified under various sectors in order to understand what advisory or other role they may play in the future.

Information Management System Experts

The following personnel are involved in digital library initiatives in India and also are part of national consortia that conduct workshops and discussions on the design of digital libraries and adopting meta-data standards and otherrelevant protocols.

Dr.ShaliniUrs

Head, Department of Library and Information Science University of Mysore, Mysore, INDIA Shalini Urs is a member of the Asian Digital Library Steering Committee. Dr Urs is involved with the Vidyanidhi digital library along with other such efforts and agencies in India. She is on the governing board of INFLIBNET.She has organized many a workshops and conferences in India

T. B. Rajashekar

Associate Chairman, National Centre for Science Information Indian Institute of Science Bangalore, INDIA Dr.Rajashekar is currently involved with the eprints@iisc digital library project. His other activities include development and management of variety of network-based e-information services for the IISc research community.

T. A. V. Murthy

Former Director Information & Library Network Centre (INFLIBNET) Ahmadabad, INDIA Some of his noticeable contributions are setting up KALANIDHI Reference Library and Manuscript Information System, Multimedia Digital Project at IGNCA and Digital Laboratory at CIEFL. He was an elected member of IFLA-from Asia on Art Libraries and served the same for 5 years.

IPR Experts

7.2.1 Sunil Abraham Open Source Software Consultant Mahiti InfoTech Bangalore, INDIA Mr. Sunil Abraham is an expert at open source software platforms and is well-informed of IPR issues / digital rights management. Mahiti InfoTech provides IT services for NGOs in India.

Relevant ICT Players

Shri N. V. Sathyanarayana Software Applications Development Chairman & Managing Director Informatics India Limited Bangalore, INDIA Dr.Sathyanarayana is involved in informatics solutions for digital libraries in India, and would be a useful resource to identify some alternative software solutions to create a digital library.

Development Practitioners

Mr.Pradeep T. Samuha Bangalore, India runs a very large network of NGOs - Samuha that seeks to integrate different ICT components into their developmental projects. Samuha is also involved in educational projects in North Karnataka. Mr.PRadeepmay provides several field insights from a developmental perspective on the possible use of digital libraries.

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Opportunities and Challenges of Institutional Library and Information Centre in Rural Area of India: A Study

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Abstract

This paper discusses the growth of the India rural Generation the fluctuations in India rural woker the rural asset base of land, labour, and recreation; and the prospects of rural development in the India. The current Indian institutional library has been viewed by some as follows: the institutional library management in India is condemned to remain peripheral to the actual information needs. That it is in a depressed state, and serves as little more than a warehouse of recreational reading materials, a majority of which are in regional languages. opportunities and challenges for library professionals in a rural environment This paper suggests possible remedies on how to transform the situation, and details new technological developments which are already showing the potential to change institutional libraries in rural India for the best.

KEYWORDS: Institutional Library, Opportunities, challenges, History, Information

Introduction

India is the most populous in nation. The India has achieved impressive progress in the field of science and technology. Institutional library is popularly view the digital version of a institutional library. Storage in digital form, direct communication to obtain material, and copying from a master version. These differences in turn lead to a plethora of further differences, so that eventually the digital library no longer mimics the traditional library. Furthermore, a institutional library is only element in the process of creating, storing, accessing, selecting, and distributing information to users. While the technical focus of digital library research is on the central functions of storage and access, major changes will occur in the interaction within the new systems. It is also true that the use of new automation technology in the India has not only improved people's day–to–day life but it has also divided the country into information rich and information poor.

It is an opportunity to work in the nation's oldest cultural institution with programs that provide one-of-a-kind national resources and services to the Congress and the Indian people. Most of the respondents, regardless of profession or specialization, felt that they encountered questions in their

practice that could be answered by ready access to library science literature; if they did encounter such questions, they indicated that they frequently used books or journal articles to find the answers. They also felt that practice guidelines had relevance to their library professionals. When looking at obstacles, the majority of the respondents identified lack of both time and ready access to resources as primary problems. Potential costs associated with timely access to needed information were more significant to library professionals.

Definition of Library

"A place, as a building or set of rooms, containing books, recordings, or other reading, viewing, or listening materials arranged and catalogued in a fixed way."

In the most popular side the professionals use of the Internet, most of the respondents did not use email, did not use a browser to search the Web, and had never found useful, patient-related information on the Web. Support Education at the grassroots level by adopting institutional in rural villages and provide guidance and educational resources. Also provide support for after institutional programs and higher education through counselling and scholarships concomitantly, the majority indicated that their patients never or seldom researched their own diagnoses. The findings from the Internet questions on the 1997 survey would probably differ today with the growing access to Internet technology in this rural area.

Limitations

It is difficult to get an overall view of this topic: opportunities and challenges of institutional library and information centre in rural area of India: a study for various reasons, never disclose such information on a national scale.

New techology use

The Researcher details new technological developments, the practical outcome of which would in particular facilities the establish of automation library services in rural India.

Originality

This article provides a useful overview of a institutional library scenario on which aggregated data analysis is find the result. and, from this abstract of the present situation, goes on to new suggestion possible rules the "automation divide" into "automation opportunities".

Methodology

Use the linker five point research scale, and result finding use method account of the contemporary situation in rural India with regard to institutional libraries, digital technologies and new technology using Research data analysis and data collection.

Findings

The challenges that face institutional libraries in India are listed and a see for their future based on the concept of rural areas new resource technology data result development.

Results

Impact of the institutional library showed a strong correlation with the impact of information provided by rural areas libraries. Both interventions resulted in avoidance of adverse rural areas institutional library. Data collected from the structured interviews confirmed the perceived value of the institutional library.

Conclusion

While research continue to hold a strong position in supporting information access for rural areas institutional library, their roles in the information age must begin to move away from providing information toward selecting and organizing *knowledge* resources and new digital area library environment in their use.

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Digital Library and its Future

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Abstract

Digital libraries are need of the day. Digital libraries provide easy access to digital collections of documents where user can search and retrieve the document of users interest in networked environment. Digital libraries are being created today for diverse communication and in different area e.g. education, science, culture, development heath, governance and so on. Digital library has go lot of changes not only in the library and information services but also in the roles and the expectation of the libraries and information professional. This paper is focusing on objective, purposes components and future needs the role of librarians.

Key Words- *Digital library, librarian, information professionals, information service.*

Introduction

We are living in the information society, where information is considered as valuable item for any life. The advent of information technology has paved the way of reducing the size of the libraries from biggest to the very small. In fact, modern libraries are moving towards smaller but with rich potential of information. This smallness of the libraries is due to the digitization of information, which has outcome a number of problems faced by the traditional libraries since long. The digital libraries are based an digitized data of information which has gradually replaced paper based records. Because the visual information system are getting more popular these days in compression to text based information system, therefore digital libraries, today are becoming more and more popular and more graphical in nature. Digital libraries have reduced space problems in them.

There are number of terms which are used by authors to represent the concept of digital libraries. These terms are polyglot library, electronic library, dis eight top library, without walls etc. By these terms digital library, is commonly using by the majority of the population. Digital libraries are heterogeneous in nature. This include work related to

information and how to digitize, store, find, link, visualize use publish manage and share information.

A digital library is a global virtual library and its can be defined as library with all the information available in the digital form. Digital libraries are being created today for diverse communities and in different fields they atr basically stock piles of materials in electronics format and maneaver huge collection of those materials efficiently.

However the vital technical concern is how search and display the desired selected information from and across e-collections.

Definitions of Digital Library

The American digital library federation has defined the digital library as "Digital libraries are organizations that provide the recourse, including the specialized staff to selected structure, offer intellectual access to, interpret, distribute, preserve the integrity of and ensure the persistence over time are readily and comically available for use by a defamed community or set of communities."

According to the Larson "Digital libraries as not single standalone and repositories of digital data instead they are a heterogeneous collection of product for users interaction data encoding and transmission.

According to the Brekeley "The Digital library will be a collection of distributed information source. Producers of information will mark it available and consumers will find it perhaps through the help of automated agents.

According to Lesk, "Digital library as a collection of information that is both digitized and organized and which offers capabilities beyond those of the traclitional library.

According to E.A. Fox "The digital library may be defamed as the "New way of carrying out the functions of libraries concern assign new types of information resource new approaches to classification and cataloguing intensive use of electronic system and networks, dramatic shifts in intellectual organizational and electronic practices."

Meaning of Digital Library

A digital library is a library consisting of digital materials and services. Digital materials and items are stored, processed and transferred via digital device and networks. Digital services are services that are delivered digitally over the computer networks. It maintains all or substantial part of its collection in computer accessible from as alternative, supplement of complement to the conventional printed and microform materials that currently anominicites library collections.

As there are many definitions of A "Digital library" terms such as "electronic library," Web library" and virtual library" are often used synonymously. A digital library is nothing but a large database for the people who are working on hypertext environment. It is an, which supports the full life cycle of creation storage, preservation land dissemination use of data information and knowledge.

According to Arms a digital library is managed collection of information with associated services where the information is stored in digital format and accessible over the network. According to Digital Library Federation in the (US) "Digital libraries are organizations that provide the resources including the specialized staff to select, structure offer intellectual access to interpret, distribute preserve the integrity of and ensure the persistence over time of collections of digital works so that they are communities." A digital library is an organized collection of digitized material or its holding in the digital form which can be accessible by a computer on the network by using other protocol.

Objectives of Digital Library

The main objective of digital libraries are defined as follows-

1. To gather mass systematize and access information in digital form via communication channels and possess larges digitized database.
2. To save time of library staff by avoiding routine jobs and reduce cost involved in various library activities.
3. To provides coherent view of all information with in a library in any format.
4. To meet the requirements of clients by offering superior services and provide custom-made and retrospective services in efficient way.
5. To serve widely dispersed communities throughout the network.
6. To minimize massive storage and space problem of large libraries.

Functions of Digital Library

Functions of a digital library are defines as-

1. Network accessibility on Internet.
2. Hypertext links of navigation.
3. Client-server architecture.
4. Support multimedia content along with text.
5. User-friendly interface.
6. Access to primary information sources.
7. Access to large amount of information to user whenever and wherever they need
8. Advanced search and retrieval.
9. Integration with other digital libraries

Components of Digital Library

The digital libraries need well established and proven information technologies by accessing the database or servers through networks. Following components are very essentials to create digital library.

Hardware requirement

The requirement of digital library are mentioned here under-

a)   High power UPS
b)   24 hours Internet connectivity
c)   Networks
d)   Multimedia interfaces
e)   Computer servers
f)   LAN or WAN

Need for Digital Library

Some days ago the information explosion has increased in all subjects like as science, humanities and social science. Libraries are facing problem to maintain their services, which are very important for users. The present scenario digital libraries are spreading in every part of the world. It is very easy to control the huge data in a single computer. Some important needs are mentioned below-

1. To collect, store, organize and access information in digital form.
2. To promote the resource sharing.
3. To save the library staff and time by avoiding routine work.
4. To encourage the economical and efficiently delivery of information.
5. Accessable on www
6. To fulfill the requirement of users by providing better service.
7. To support search and retrieval.
8. To provide users friendly interface.
9. To support formal and informal learing.

Feature of digital library

We are in the midst of information explosion and information technology revolution leading to the emergence of electronics information on era. Rapid advances in information processing, storage and communication technologies have revolutionzed the role of libraries worldwide in disseminating information services to the their users. So the various features indentified for digital library are-

1. Provide access to very large information collection.
2. Focus on providing access to primary (or complete) information not merely surrogates or indexes.
3. Support multi-media content.

4. Provide user friendly interface to access the information.
5. Enable link representation to local eternal objects (hypertext)
6. Provide client server architecture.
7. Support advanced search and retrieval of information linkage with other national and international digital library system.

Advantages of Digital Library

Digital library has no limitation of location but is distributed all over the world and information can be found internet. Actually it is a network of multimedia system, which provides fingertip access.

1. Provide faster access to the holdings of libraries world wide through automated catalogues.
2. Preserve the valuable document, rare and special collection of libraries, archives and museums.
3. Help to locate both physical and digitized version of scholarly articles and book through single interface.
4. Search optimization, simultaneous searches of the internet make possible preparing commercial databases and library collections.
5. Offering online learning environment.
6. Making short the chain from author to user.
7. Save preparation/conservation, cost, space and more user from a single original which are not possible for materials stored in any other forms.

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Abstracts

Distance Education and Role of E-Library in Facilitating Higher Education in India"

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Abstract

The application of ICT in the libraries and education has brought a paradigm shift in the structure of the library and education system today. The traditional library has now changed to the automated, digital, electronic, hybrid and at present to the borderless library and the conventional education too is been replaced by e-learning. The borderless library has a huge collection of information resources in electronic form which are accessible through the Internet, intranet and extranet. It reduces the geographical restrictions and makes the process of obtaining education and training easy at a reduced cost and time enabling a vibrant user even from a remote area to obtain education and training in his field of specialization or as to the requirement of his profession from the online institutions and universities available in his own country or outside thus paving a significant way towards the global information network.

When libraries automate their activities, digitize their resources and provide remote access to information resources for users via the internet, they are making use of ICT. The technologies that were used in the past to deliver distance education courses were the printing press and the post office. At the time higher institutions of learning did not, provide distance-learning courses. Now, for very good reasons, many universities throughout the world offering distance education courses (Stuart James, 2003). They are doing that with ICT; the most appropriate technology of the day.

From the literature, ICT appears to be term that includes communication devices like television, radio, cellular phone, computers and satellite systems. ICT is a tool that any sector can use to deliver its services. In distance education, ICT can be used in preparing and presenting lectures. A distance education provider can create and use a portal to provide technical and methodological help for academic staff for developing ICT-based courses and provide video conferencing facility for the distance learners.

Keywords- E-library, E-resources, Distance Education, ICT, Higher education.

Library a Source of Knowledge

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Abstract

A library is a collection of sources, resources, services, and the structure in which it is housed; it is organized and maintained by a public body, an institution, or a private individual. The term 'library 'has itself acquired a secondary meaning: "a collection of useful material for common use.", in the fields such as computer science, mathematics, statistics, electronics and biology. It can also be used by publishers in naming series of related books. Libraries are defined as organized collection of published and unpublished books and audiovisual materials with the aid of services of staff who are able to provide and interpret such material as required, to meet the informative research, educational and recreational needs of its users. They are regarded as agencies through which sources of information of accumulated knowledge and experiences are selected, acquired, organized, preserved and disseminated to those who need them and are essential tools in learning at any level. It is the intellectual centre of the society containing records not only the intellectual but also of cultural, economic and social inclination with the provision of wide variety of information sources, users of libraries are exposed to different information with their respective values. They also give users the opportunity to learn and continue learning throughout their lives. By preserving the documents in a library this knowledge can be made available to others so that they can benefit from it. The mission of a library is to collect, organize, preserve, and provide access to knowledge and information. In fulfilling this mission, libraries preserve a valuable record of culture that can be passed down to succeeding generations. Libraries are an essential link in this communication between the past, present, and future. Whether the cultural record is contained in books or in electronic formats, libraries ensure that the record is preserved and made available for later use. Libraries provide people with access to the information they need to work, play, learn, and govern. People in many professions use library resources to assist them in their work. People also use library resources to gain information about personal interests or to obtain recreational materials such as films and novels. Students use libraries to supplement and enhance their classroom experiences, to learn skills in locating sources of information, and to develop good reading and study habits. Public officials use libraries to

research legislation and public policy issues. One of the most valued of all cultural institutions, the library provides information and services that are essential to learning and progress. Library has been identified as one of the key elements for open access to information, which is crucial to educational development. Public and institutional collections and services may be intended for use by people who choose not to or cannot afford to purchase an expensive collection themselves. Library often provide a place of silence for studying.

Role of Library in better education
Dr.N.M.Saxena, Rohit Kumar Verma, Dr.Sangeeta Verma

Abstract
The role a library plays in providing non-formal and life long education to one and all is understandable. The library also plays a significant role in academic institutions. Educationists and scholars hold that it is a better proof of education to know how to use library than to possess an University degree. The UGC (UK) maintained in 1921,The character and efficiency of a University may be gauged by its treatment of its central organ, the library, an adequate library is not only the basis of all teaching and study, it the essential condition of research without which additions cannot be made to the sum of human knowledge. The library has become still more important in academic set up due to change in the nature of education during the past normal education was based on dictation, the teachers used to dictate, speak and the students used to listen to. This system has been done away with in western countries and in India also we are adopting it with appreciable speed and success. The present day education is no more an one way system is which the student has passive participation. In the change system the student is expected to actively participate. The teacher mainly kindles the curiosity of students, makes them aware of basic facts, teaches them methodology and refers them to books to find detailed information for themselves which is discussed later in tutorials etc. Education of today is becoming more and more library oriented which is evident from the fact that academic libraries of today are always full of students, researchers and teachers alike . It has rightly been said, a university is as good as its library.

The library is therefore indispensable for the society for meetings its educational needs. The progress of a country largely depends on the education.

Now the time of Digital library use

Digital libraries which can also termed as virtual libraries in a Internet age can be define as a collection of information (not just books)using digital format. These digital format may vary from e-books, e-publishing, e-journals, reports, online data bases software's, discussion boards, mailers and archives either stored in a personal computer, CD-ROMs or connected through networks across the world. Despite many problems and challenges, there has been a lot of development especially on the digitization of libraries.

The major function of digital libraries is to facilitate systematic and efficient access to and sharing of information on matters, considered important by users. Promote the concept of free flow of information in a portable format and help in resource sharing among knowledge societies and public in general.

Application of ICTs through Institutional Libraries for Rural Development

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Abstract

With the emergence of new Information and Communication Technologies (ICTs) our society is changing very fast. The rate of creation and production of knowledge is increasing rapidly day by day with the help of these new Information Technologies. The use of ICTs in knowledge management has been widely accepted in libraries of urban areas and people living in urban areas are getting benefitted in large scale using Information and Communication Technologies, in regard to improving their knowledge and skills for their self development as well as for socio economic development of our society. The rural mass is not aware about the benefits of libraries and Information Technology. The requirements and demands of rural people are different from people of urban areas. To disseminate knowledge required by and useful to the rural people, the institutional libraries can play an important role by making the knowledge resource available to rural people through Information and Communication Technologies like searching on net, use of email, retrieving information from various websites especially mend for rural people requirement, audio-video films, video conferencing etc .. Institutional libraries may help the rural people in economic development, improving literacy, adult and women education, strengthening community and in crop production and protection, by educating them through institution libraries using ICTs.

This paper gives an overview on what may be the information demands of rural people(RP), How to cater the specific demands of RP, Uses and benefits of ICTs, Role and contribution of Institutional libraries in developing rural areas using ICTs and strategy how to attract rural people to use ICTs to improve their knowledge for their socio-economic development.

STATUS OF INSTITUTIONAL REPOSITORY IN UNIVERSITY LIBRARIES IN KERALA

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Abstract

The core idea of an institutional repository is to enhance the accessibility and visibility of the intellectual works of the faculty members and research scholars of the Institute. The main aim of the paper is to analyse the status of institutional repositories in university Libraries in Kerala and to find out the infrastructure facilities, human or non-human resources, and institutional accountability issues of university Libraries in Kerala. The paper intends to find out the problems of maintenance of institutional repositories, related aspects, and the significant relationship between institutional repositories and student participation. Here lies the significance of institutional repository. University-based institutional repository is a set of services and all kind of knowledge contributions that a university offers to the members of its community for the management and dissemination of knowledge in digital materials created by the institution and its community members.

Keywords: Institutional Repository, University Libraries, Modern Scientific Techniques

Need of application of modern Scientific Technique in Libraries.

Babita Singh, *Research Scholar*

Abstract

'Management' as a distinct field of study has emerged out of years of experience acquired in business and industry. Large scale inputs necessary to manufacture various kinds of products and selling them in national and international markets demand a complex variety of intellectual and organizational knowledge and skills. This empirical knowledge has been distilled and organized to formulate a coherent body of theories, concepts, principles and precepts. With the increasing institutionalization of almost all human activities, this body of knowledge, known as 'management science' has been applied with advantage, to organize and manage all types of institutions. Thus management science today has grown as a major

discipline. Management has become a highly specialized professional activity, ensuring efficiency and a high rate of productivity.

In the last several decades, libraries have grown not only in size and type buy also in their complexity of services. Modern management theories, principles and practices have been increasingly applied, with good results to planning and operating libraries. We shall get some exposure to some of these general theories, principles and practices of management and also learn their applications to libraries.

Challenges of the Institutional Library in Rural Areas

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Abstract

A healthy reading habit can transform a person and access to books and reading material relevant to the target group can transform a community. DLF Mobile Rural Libraries is our endeavor to overcome the lack of access to schools or libraries, especially in the rural areas. We reach the reading material the people need to their doorsteps. We believe if India is to progress, every constituent, every citizen must have the opportunity to keep themselves well informed.

Through these Rural Mobile Libraries rural folks are keeping themselves abreast of latest news, happenings around the world, information's regarding modern agricultural techniques and government programmer which directly benefit them. Our Rural Mobile Libraries cater to all age groups and the initiative has received a very encouraging response. The adults have taken to reading with great enthusiasm while adolescents and children too have shown encouraging participation.

Development of Digital Libraries and its impact on academic libraries situated in rural area of UP

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Abstract

This paper discussed about the various aspects of digital libraries and their impact on the libraries, which are situated in the remote area. This paper reviews researches completed in Indian scenario to concerning areas.

Suggestions and recommendations are given for enhance service of digital library. Technical problems and copyright issues are also discussed.

PROVIDING LIBRARY AND INFORMATION SERVICES TO RURAL AREAS

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Abstract

Enough assessment studies and needs analysis on library and information Service in the rural areas, Have to be conducted. There is definitely a need. To come up with innovative ways of providing library and Information Services to rural areas. Do we really invest enough resources and time to ask ourselves if the same Models that work vary well in other parts of the world and in urban areas in India are the most appropriate for rural India. Fatehpur & Kanpur Dehat (both Districts with community radios) used to be among the last districts in immunization of children, which is no longer the case due to immunization compaigns through the radio after many year of getting food Aid Fatehpur district did not get food Aid last year agricultural Extension offices have been using the radio to Promote farming of drought resistant crops.

Library science: challenges and functions in rural areas

Veresh Vishwakarma

Abstract

Library science is an interdisciplinary field or multidisciplinary field that applies the practices, perspectives and tools of management, information technology, education and other areas to libraries, the collection, organization, preservation and dissemination of information resources and the political economy of information. The first American school for library science was founded by Melvil Dewey at Columbia University in 1887.
Library science is also known as Library Studies or Library and Information science.

Historically, library science has also included archival science. This includes how information resources are organized to serve the needs of select user group, how people interact with classification systems and technology, how information is acquired, evaluated and applied by people in and outside of libraries as well as cross-culturally, how people are trained and educated for careers in libraries, the ethics that

guide library service and organization, the legal status of libraries and information resources, and the applied science of computer technology used in documentation and records management.

Role of Libraries in Rural Academic Institution: Special reference to Kanpur Region.

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Mrs. Dipti Srivastava, Rsearch Scholar, Bndelkhand University, Janshi

Abstract

Libraries are regarded as the soul of academic institutions. Libraries located in the remote areas are not in good conditions. They are Providing limited number of services to their users due to Lack of infrastructure. This paper discussed about the improvement of library services particularly located in rural areas of India. Facilities provided by the UGC and other National bodies for enhance library services are discussed.

Role of Digital Libraries to improve learning Skills

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Rachna Gupta, Department of Education, CSJMU, Kanpur

Abstract

Rapidly growing use of Information and communication Technology provided a milestone to the library services. Digital Library is an example of the development of Information and communication Technology. Digital library concern with the information sources which are available on electronic media. It provides various form of information available in digital medium, i.e. text, images, videos, audios and so on. This paper discussed about the role of digital library, Need of digital library in current scenario.

पुस्तकालय विज्ञान में पुस्तकों का महत्त्व

जितेन्द्र मोहन, डी० ए–वी० कॉलेज,कानपुर
राम प्रकाश कटियार, प्रधानाचार्य, अ.ग.में. इन्टर कॉलेज,ताहपुर, कन्नौजय
श्याम नारायण, प.वि. डिग्री कॉलेज, बरोरे कानपुर
मनीष सक्सेना, फिरोज गाँधी इंस्टिट्यूट ऑ. इंजीनियरिंग एंड टेक्नोलॉजी, रायबरेली
एवं नरेन्द्र मोहन, प्राचार्य, श्री.शक्ति डिग्री कॉलेज शंखाहारी, घाटमपुर, कानपुर

सार

इस सृष्टि में कुछ भी शाश्वत नहीं है, परन्तु प्राचीन काल की महान परम्पराओं को सहेज कर रखने वाली पुस्तकें आने वाले समय के लिये एक शाश्वत ज्ञान का साधन अवश्य बन सकती हैं । आज भी इनमे संस्कृति, सभ्यता, धर्म एवम आध्यात्मिकता जैसे न जाने कितने गूढ़ विषयों से सम्बंधित ज्ञान सहज ही उपलब्ध है। यह समय, टी.वी. ,इन्टरनेट, गेजेस्ट्स की दुनिया का है, परन्तु पुस्तको का स्थान कोई नहीं ले सकता ।

प्राचीन समय में पुस्तकें नहीं, बल्कि ताम्रपत्र होते थे, जिन पर लिखा जाता था और उन पर वे ही लिख पाते थे, जिन्हें उच्चकोटि का अनुभव एवम ज्ञान होता था। आज स्थिति बदल गई है, पहले की तुलना में विभिन्न बिषयों पर बहुत सारी पुस्तकें बाजार में उपलब्ध हैं । आज पुस्तकें तो बहुत हैं, लेकिन उन्हें कोई पढ़ना नहीं चाहता । आज कम ही लोग होते है जो पढ़ने में रूचि रखते है और विभिन्न बिषयो से सम्बन्धित किताबों को पढ़ना चाहते हैं। पुस्तकें न केवल हमें दुनिया से जोड़ती हैं, बल्कि हमारे व्यक्तित्व को भी निखारती हैं । पुस्तकों को पढ़ने से हम बहुत कुछ पाते है और यह हमें मानसिक रूप से पोषण भी देती हैं। मस्तिष्क में किसी भी विषय व घटना से सम्बन्धित नये–नये तरह के विचार आते हैं, जो हमारे विकास में सहायक होते हैं ।

यू०एस०ए० टुडे में प्रकाशित एक लेख में डॉ. रोबर्ट फ्राइडलैंड के अनुसार– "मस्तिस्क को शरीर के अन्य अंगो के तरह ही स्वस्थ रहने के लिये व्यायाम की आवश्यकता होती है, जो इसे अध्ययन से भरपूर मात्र में मिल जाती है और जिन्हें नियमित रूप से पठने की आदत होती है, वे ज्यादा संतुलित और सक्रिय होते है" ।

साहित्यकार इमर्सन कहा करते थे– "यदि पुस्तकें नहीं होती तो मेरे जीवन को दिशा दे पाना संभव नहीं हो पाता, जीवन में मैंने जब–जब, जहाँ–जहाँ स्वयं को संघर्षों से घिरा पाया है, तब–तब मैंने पुस्तकों का सहारा लिया है, और महापुरुष की किसी न किसी बात ने मुझे एक नई सोच और एक नई दिशा दी है ।

आज इन्टरनेट, टी.वी, मोबाइल फोन जैसी तरह–तरह की सूचना सम्बन्धी तकनीकों के बीच में एकाग्र रह पाना एक बड़ी चुनौती बन गयी है । लेकिन जब व्यक्ति विभिन्न पुस्तकों का अध्ययन करता है तो वह सहज ही एकाग्र हो जाता है । निरंतर अध्ययन करने की क्षमता मानसिक एकाग्रता को विकसित करती है तथा विभिन्न पुस्तकों से प्राप्त सत्यप्रेरणाएं मनुष्य के अंतर्मन को सहज ही श्रेष्ठता की ओर प्रेरित कर देती हैं द्द इसलिए अध्ययन का अर्थ मात्र कहीं से कुछ भी पढ़ लेना नहीं है, विभिन्न स्त्रोतों से सदभावनाओं एवं सद्विचारों को एकत्र करना भी है । ताकि मिली हुई प्रेरणाएं हमारे व्यक्तित्व का रूपांतरण करने में सक्षम हो सकें ।

आधुनिक समाज में पुस्तकालय का महत्व

डॉ० आशा वर्मा, एसोसिएट प्रोफेसर, हिन्दी
डॉ० विशाल सक्सेना, एसिसटेंट प्रोफेसर, वनस्पति विज्ञान
डॉ० भानु प्रताप सिंह, एसोसिएट प्रोफेसर, अर्थशास्त्र
डी०बी०एस० कॉलेज, कानपुर

★ ★ ★

सार

आधुनिक समाज में मानव के सर्वांगीण विकास के लिए ज्ञान एवं सूचना प्रदान करना बहुत आवश्यक हैं। पुस्तकालय का कार्य ज्ञान एवं सूचना संग्रहित करना, उनकों सुरक्षित रखना और फिर उनकों तकनीकी विधि द्वारा संगठित करना है और अन्त में इन ज्ञान के भण्डारों को पाठको के उपयोग के लिए उनकें समक्ष प्रस्तुत करना है। अतः पुस्तकालय का महत्व अमूल्य है। एक कहावत है – "Man does not live by bread alone" अर्थात मनुष्य केवल रोटी के लिए ही नहीं जीता है। मानव के मस्तिष्क में आध्यात्मिक, सांस्कृतिक , सौन्दर्य एवं आदर्शो को पाने की नैसर्गिक प्रवत्ति होती है जिसके द्वारा वह अपने जीवन को एक ऊँचे शिखर की ओर ले जाना चाहता है पुस्तकालय समाज की सम्पूर्ण आवश्यकताओं की पूर्ति करने में मदद करती है। स्कूल के विद्यार्थियों का मुख्य उद्देश्य ज्ञान प्राप्त करना है जो कि अध्यापक द्वारा पढाया गया पाठ तथा कुछ पाठ्य – पुस्तकों तक ही सीमित होता है, लेकिन पुस्तकालय में तो कई प्रकार की, विभिन्न विषयों पर सामग्री उपलब्ध होती है जो कि ज्ञान प्राप्त कराती है, मनुष्य के अन्दर ही सृजनात्मक शक्ति को बढाती है तथा मनुष्य के अन्दर एक शक्ति उत्पन्न करती है ताकि वह सही और गलत का पता लगाकर उचित निर्णय लेने में सक्षम हो सकें। पुस्तकालय स्वस्थ मनोरजंन भी प्रदान करते हैं। इसलिए समाज द्वारा स्थापित सभी संस्थाओं में से पुस्तकालय सबसे शक्तिशाली संस्था है जो मानव को ज्ञान की सम्पूर्ण आवश्यकताओं की पूर्ति करती है।

ग्रन्थालय में रेडियो फ्रीकेवन्सी आइडेन्टीफिकेशन

गौरव दुबे, पुस्तकालयाध्यक्ष, अकबरपुर महाविद्यालय
रंजन कृष्ण शुक्ला, उपपुस्तकालयाध्यक्ष, अकबरपुर महाविद्यालय

★ ★ ★

सार

आर० एफ० आई० डी० का अर्थः– रेडियो फ्रीक्वेंसी आइडेन्टी फिकेशन है। यह रेडियो आवृन्ति और माइक्रोचिप प्रौद्योगिकी का संयोजित रूप है। यह डाटा को संग्रहित एवं पुनः प्राप्त करने के लिये रेडियो आवृन्ति संप्रेषण का उपयोग करती है। आर एफ आई डी तकनीक के उपयोग के लिए टेग, रीडर, एन्टीना तथा सर्वर स्टेशन की आवश्यकता होती है। ग्रन्थालयों के लिए यह एक महत्वपूर्ण प्रौद्योगिकी है जिसकी मदद से आदान–प्रदान आसानी से एवं कम से कम समय में सुगमता से किया जा सकता है।