Vidya Prasarak Mandal's

B.N. Bandodkar College of Science, Thane

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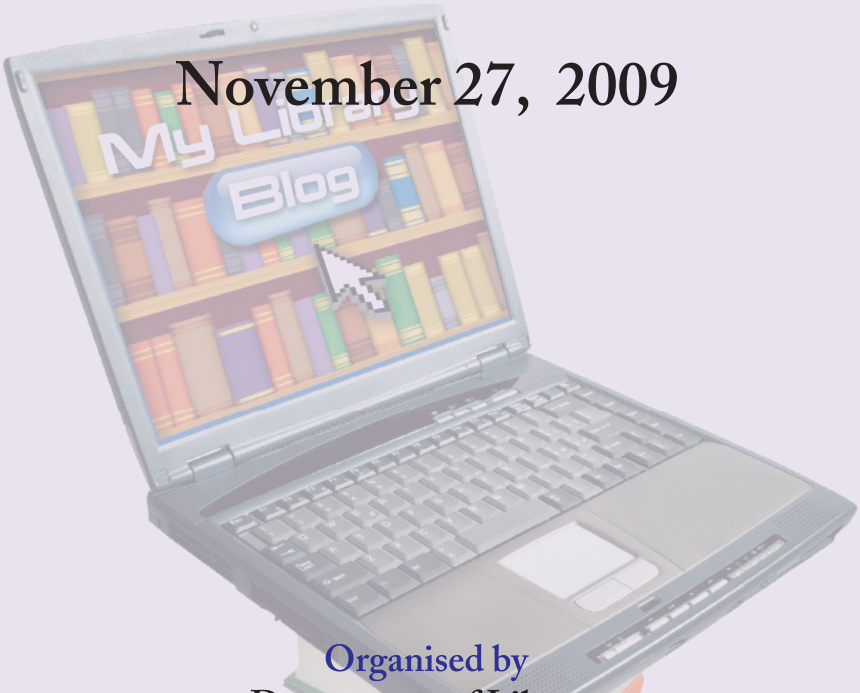
DEPARTMENT OF LIBRARY

One Day State Level Seminar on

Reengineering of Libraries

November 27, 2009



Organised by
Department of Library
Vidya Prasarak Mandal's
B.N. Bandodkar College of Science
'Jnanadweepa', Chendani
Thane (W) 400601, Maharashtra.

In Collaboration with
Institute for Oriental Study, Thane

Our Vision: Imparting Quality Education in Science

One Day State Level Seminar on
Reengineering of Libraries
November 27, 2009

Venue
Patanjali Sabhagriha, Bldg. No. 6,
3rd floor, B.N. Bandodkar College of Science,
Thane (W)

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Foreward

It gives me immence pleasure to give the volume of the proceedings in your hands on the day of seminar.

'Reengineering of Libraries' is a topic which is the need of present era and our campus and libraries which are using highly hitech techniques must take initiatives to discuss these techniques. Hence we thought of taking a state level seminar on the said subject.

Libraries are the backbones of any educational organization and to fulfill the requirements of present youth the libraries must moult themselves. To adapt new techniques the knowledge of these techniques is necessary and willingness to change is needed. And we thought of explaining the new role of libraries and librarian in the present contest of developments in IT fields.

I am really happy to state here that with the experience of conducting six National / State Seminars and five Workshops in the science subjects till date we thought of taking this seminars for librarians.

I appreciate all the efforts taken by our Librarian Ms Kadambari Kardekar and her team from the Department of Library Science. With the help of other Departments they have worked day and night to make the seminar a great success. I also appreciate the invaluable support rendered by our parent body Vidya Prasarak Mandal for the seminar.

As we are talking about the IT field I am also happy to give the CD of proceedings in your hand.

We get ready, set and go to reengineer our libraries suiting for the current era.

Dr (Mrs) M. K. Pejaver
Convener
Principal, B.N. Bandodkar College of Science,
Thane.

Editor's Note

Todays world is the world of Information and Communication Technology. To cope up with this we need to make changes in us and in our profession. Library is the heart of any institution. For the development of our institution, the library of that institution needs to be upgraded and developed. Reengineering is one of the method of doing so.

Reengineering concept in library is most important to meet the patrons requirement. Reengineering in libraries means Redesigning, Reshaping the services. Reengineering means to revamp and revert the old pattern to suit current trends in the world. So, reengineering will give more qualitative services to our pattrons.

In this world of information explosion, Reengineering will definitely help the library professionals (mainly for better provision of services). Reengineering is a never ending process, as there is always room on the top.

The objective of this seminar is to spread the information about Reengineering to all the LIS professionals. In this seminar, we have tried to explain to the LIS professionals about Reengineering, the technology that can be used for it and the pivotal role of Librarian in this Reengineering process. This proceeding may not explore all new ideas nor is it a path breaking concept, but with Reengineering, how can we restructure , by utilizing the available resources to the optimum level.

In this proceeding, we have compiled the papers on Reengineering, use of ICT and Role of Librarian in Reengineering, the presentations of Resources persons.

We sincerely hope you'll forgive any lapses and derive what is best from this compilation.

I am grateful and indebted to our management and our Principal for their constant encouragement and support. I also extend my heratful thanks to all those who have given me a helping hand for this Seminar.

Ms Kadambari K Kardekar
Organising Secretary

One Day State Level Seminar on

Reengineering of Libraries

November 27, 2009

Program Details

a)	Registration	:	08.30 a.m. to 09.30 a.m.
b)	Inauguration	:	09.30 a.m. to 10.30 a.m.
			Wellcome and Keynote address by Dr V.N. Patkar
c)	Tea Break	:	10.30 a.m. to 11.00 a.m
d)	Session 1	:	11.00 a.m. to 11.45 a.m.- Speech by Mr Kishor Ingale, TCS
			On Library 2.0 / Web 2.0
e)	Session 2	:	11.45 a.m. to 12.30 p.m.- Speech by Dr Rajendra Kumbhar, Pune University
			On Reengineering : How it helps in problem solving?
f)	Session 3	:	12.30 p.m to 1.15 p.m. (Paper Presentation)
g)	Lunch Break	:	1.15 p.m. to 2.15 p.m.
h)	Session 4	:	2.15 p.m. to 3.00 p.m. - Speech by Mr Dahibhate, NCL
			On Reengineering : A Perspective
i)	Session 5	:	3.00 p.m. to 4.30 p.m. (Paper Presentation)
j)	Tea Break	:	4.30 p.m. to 4.45 p.m.
k)	Session 6	:	4.45 p.m. to 5.30 p.m.(Panel Discussion) Dr S.K. Savnoor, Mr N.S. Barse
l)	Session 7	:	5.30 p.m. to 6.00 p.m - Valedictory function, Dr Pratibha Gokhale

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Reengineering of Libraries

Reengineering of Libraries in 21 Century

Ramesh V. Salve
Sarswati Institute of Management & Research Centre, Navi Mumbai, ramesh_salve123@gmail.com

Abstract: *Designing, redesigning, organizing, reorganizing, inventing, reinventing- theses have become the needs of hour. Change has become the way of life. No one is interested in the dreary past. Customer oriented services are to be provided because of the cultural change. Continuous improvement is required minute by minute. We have to show greater concern for the individual needs and wants.*

Keywords*: Reengineering, Change Management, Digital Libraries, Technical Services*

Introduction

More skill, more efficiency and more vigilance are required out of the present day worker. Lethargy is out of the field. Survival of the fittest as the Romans used to say, has become the order of the day. Electronic resources, CD storage devices, awareness programmes have become synonymous with work. Skill is based on habit formation. You cannot change the habit. It is really a tough task. Skill is proficiency built on innate capacity. Modern man cannot sleep over the changing world order. He has to toil to absorb more. He has to be on his toes. He has to learn all kinds of skills –social, economic administrative. He has to work instantly. Here delay breeds contempt.

Definitions of Reengineering

1. The application of technology and management science to the modification of existing systems, organizations, processes and products in order to make them more effective, efficient, and responsive.[1]
2. Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service and speed.[2]

Hammer and Champy promoted the idea that sometimes radical redesign and reorganization of an enterprise was necessary to lower costs and increase quality of service and that information technology was the key enabler for that radical change. Hammer and Champy felt that the design of workflow in most large corporations was based on assumptions about technology, people and organizational goals that were no longer valid. They suggested seven principles of reengineering to streamline the work process and thereby achieve significant levels of improvement in quality, time management, and cost -

1. Organize around outcomes, not tasks.
2. Identify all the processes in an organization and prioritize them in order of redesign urgency.
3. Integrate information processing work into the real work that produces the information.
4. Treat geographically dispersed resources as though they were centralized.
5. Link parallel activities in the workflow instead of just integrating their results.
6. Put the decision point where the work is performed, and build control into the process.
7. Capture information once and at the source.

Why Reengineering of Libraries?

Reengineering is needed when -

- Dramatic improvements are desired
- The market and /or customer demands have shifted dramatically
- The firm has been making incremental changes, but competitive conditions demand more

Continuous improvement is appropriate when

- The basic design is good but the firm wants to continue to increase performance
- The market and / or customer demands are shifting gradually

In reaping benefits of the modern ICTs, the library and information centers in India are far behind as compared to those in the developed nations. Inadequate fund, infrastructure, manpower training, unscientific rules and management policies, etc., are the reasons for this situation. Uneven distribution of the available resources causes wide disparity in information availability, access and use. Gaur indicated the need for proper management models suitable for the modern ICT environment as follows.

"It is important to find out why Indian Libraries and Information Centers have not been able to benefit to the

extent expected by the computer revolution in spite of huge investments, and with so much of hue and cry. … But, in reality much of these effort have gone as waste.

- Why is it so?
- Are these efforts not in proper direction? Or
- is there something wrong in our planning?

In this process there will be a need for models and frameworks that help us to understand and identify specific problems." The advent of electronic journals and online databases coupled with high speed data communication facilities have paved the way for the present form of library consortia. The model of a single library consortia, proposed for the whole country, can bring an ideal situation of information availability and use, which provide maximum economy and service efficiency.

Consortia based information acquisition, processing and servicing warrant a total re-structuring of the entire processes of the libraries. The principles of centralized and co-operative operations as advocated by Dr. S.R. Ranganathan can be effectively implemented in the consortia mode. Maximum benefits of such a system can be reaped in a single consortium for country wide access of information resources.

Areas for Reengineering

The modern ICTs warrant total changes in the processes of acquisition, technical processing, user education, services, human resource development, financial management, etc. of the library. It is visualized that, the consortia based operations and electronic document delivery services of the library will enhance this need for thorough re-structuring.

a. Reengineering the Acquisition

The activities of document selection, approval, suggestion, order placing, passing of bills, releasing payment, etc. can be done through the LAN or Internet. The work of accessioning can be done using computers. Due to some audit regulations, it may not be possible initially to replace the paper form of Accession Register by electronic form. So, till the audit regulations are get revised, the libraries can prepare Accession Register by printing the document details from the OPAC on Loose Sheaf. This will avoid a lot of duplication and unnecessary work of accessioning. Moreover, multiple copies of accession registers, if required, can also be printed easily.

b. Reengineering the Classification and Cataloguing –

It is ideal to centralize globally the work of classification and cataloguing. The Library of Congress is already doing such work efficiently. A few libraries in India are availing the service of LC for downloading the classification and catalogue data. The ILC can either subscribe the service of the LC or the ILC itself can start such service for all libraries in India. It is ideal to collaborate with the National Library, Calcutta in this venture. Here, the work of preparation of Indian National Bibliography also will be automatically supplemented.

c. Reengineering the User Services -

The work of user services has to be thoroughly re-engineered on the lines of consortium and electronic document delivery system. The procedures for all user services such as compilation of bibliographies, current awareness service, selective dissemination of information, photocopying, other documentation services, CD based and online database services have to be re-defined and need total revision.

d. Reengineering the User Education -

The user education programmes need to be more technology oriented. Such programmes should be able to impart minimum theoretical and practical knowledge about computers, printers, scanners, network based systems, search software of different database vendors, Internet search engines and services, web browsing, downloading, e-mail, data copying to CDs and DVDs, multimedia applications, computer viruses, etc. The orientation and training should be designed in such a way to provide confidence in locating and using the required and authentic information easily.

e. Reengineering the Human Resource Development

The aspect of Reengineering with regard to the human resource development is mainly concerned with the areas of staff selection, orientation, training, technology adoption, work study, change management and motivation. The technologies, methods and procedures, used in the library and information systems are more dynamic and changing as compared to many of the other professions. But, on the contrary, it is experienced that a large number of library and information professionals are reluctant to change. This also contributes to the low performance in the profession. This situation stresses the need for a total revision of the HRD policies of the LIS.

In order to prepare professionals and other staff in the libraries, Continues Education Programmes should be conducted regularly. The course contents and training should be evaluated and reviewed frequently. The compulsory orientation and refresher courses conducted by the UGC for the library professionals / teachers in the UGC Cadre have helped to improve the situation. But, it is evaluated that the conduct of the UGC refresher courses in many of the universities is downgraded to that of a routine process. Lack of infrastructure and latest technology systems, non-

availability of competent and experienced faculty and inadequate interest in participants are some reasons for this situation.

The Continuas Education Programmes (CEP) has also to be provided for the professionals below the UGC cadre, that is, semiprofessionals and the non-professionals, because, every staff in a library has important role in winning performance.

f. Reengineering the Financial Process

In modern libraries, the stress is more on electronic resources. So, more money has to be set apart for purchase and maintenance of hardware and software system and Internet connectivity than the conventional pattern of spending for large buildings, furniture, books, journals and binding. Moreover, in consortia system, lot of work of acquisition, processing and services will be centralized. Hence, a substantial portion of the fund will have to be either deviated or pooled for consortium. This will need revision in budget process and financial management.

Conclusion

Library is a social institution. For the proper growth and development of library, Reengineering is essential. In the 21st century, Digital Information, Electronic Document Delivery, Library Consortia and Web based operations have helped to provide better services to the users of Library.

References :

1. http://www.answers.com/topic/reengineering
2. http://www.c-net.com.au/extras/pdf/business_process_reengineering.pdf

Bibliography :

1. Baheti Satyanarayana and Khatri Meghraj B. 2008 " Pranali Aarakhadyamadhe Granthpalachi Bhumika, Dhyangangotri, YCMOU, Nashi, Varsh 9 ve Ank 1, June, July, August.
2. Brodie, M. 1995 - Process Reengineering in Academic Libraries: Shifting to Client-Centered Resource Provision"CAUSE/EFFECT, accessed at 30.09.2009 at: http://www.educause.edu/pub/ce/cem95/cem952.html.
3. Buwa, G. A 2007 "Granthalaya va mahitishartra vyavashapanche nave pravah" Sawantwadi, Shree Sai Prakashan.
4. Gaur, Ramesh C "Reengineering library and information services: process, people and technology" Mumbai: Allied Publishers.
5. Ghumre Shivshankar - "Granthalaya gunatamak vikasasathi parivartanche vyavasthapan" Dhyangangotri, YCMOU, Nashi, Varsh 2 re Ank 3, December 2001- January- February 2002.
6. Hedau Murlidhar, 2003 "Re engineering: Granthalaya va mahitishartra vyavashapanatil upayukt tantre, Loksatta newspaper – Mumbai Suppliment carrier counselor 30th October 2008.
7. Kulkarni Vishnu Vasant 1996. "Library Administration" Nagpur: Suvichar Prakashan, 1974.
8. Kumar Krishnan, "Library administration and management" New Delhi: Vikas Publishing House
9. Pattnayak Biswajeet and Mishra P.K. 2000 "Reengineering organizational behavior, New Delhi: Wheeler Publication.
10. http://ir.inflibnet.ac.in:8080/jspui/handle/123456789/867 (Accessed on 26 .09.2009)
11. http://inform.nu/Articles/Vol4/v4n1p025-034.pdf (Accessed on 30.09.2009)
12. http://ir.inflibnet.ac.in:8080/jspui/bitstream/1944/323/1/04cali_15.pdf (Accessed on 30.09.2009)

Need of Reengineering in LIS Education.

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Abstract : *The digital age has changed the face of libraries forever and libraries must continue to change if they are to remain viable and respected institutions. 'Reengineering' concept in library is most important to meet the consumer changing desire/ Market demand of library professionals of Information officer, cyberians, Archivist etc. from traditional record keeper. Coverage of Reengineering is not only limited to functional area of library but also the core area of Library & Information Science education. To keep pace with changing competencies and raising enrollment ratio for such courses Reengineering of LIS Education is unavoidable.*

Keywords. : *Reengineering, LIS education, Librarian, Library Automation, Mumbai University.*

Introduction :

The first library school was started by Melvil Dewey in USA in 1887. W. A. Warden, a disciple of Dewey initiated training in librarianship in India in 1911 at Baroda which was limited plain only upto 'Library Science' and not Information Science. In the year 1937 on a request of university librarian of Madras University Dr. S. R. Ranganathan one year post graduate diploma course of three months was started. The journey from 1887 till the date has changed lots of things in the discipline. 'Library Science' expands its limits and scope. Now it is known as'Library & Information Science'. Most of the university library departments are offering post graduation courses in LIS. & day by day enrollment of the students for such courses is growing.

The digital age has changed the face of libraries forever and libraries must continue to change if they are to remain viable and respected institutions. Therefore, LIS education focuses on developing manpower suitable to the demands of the contemporary information environment.

Education and training are both valuable facets of the knowledge needed by librarians. But there is need to have balance between the education of theoretical knowledge and practical skills in library education. A librarian is more of an information counselor than a mere holder of information. Therefore, the emphasis must be on education, the understanding of issues, concepts and the development of skills and tools with which to deal with the specific problems that arise in libraries and that nobody can fully predict and anticipate.

Now a days there are the posts at corporate level for library professionals such as Documentation Officers & Controllers, Record Keepers, Information Manager and Archivist, etc. Therefore, it is clear that the Librarian's role of record keeper changes into disseminators of information as a Cyberians. Therefore, to meet the changing demand Reengineering is essential. Basically the term Reengineering is a way of thinking, which is philosophical. But, application of it to library resulted in improvement of performance. That can be measurable in terms of cost, quality service and speed, etc. which is a need of time.

Definition :

Reengineering has been defined by Michael Hammer and James Champy in his book *REENGINEERING THE CORPORATION* as, "Fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical measures of performance such as cost, service, and Speed."

In Reengineering the term 'Radical Redesign' means to make change to the extend, or to make advancement in all existing structures, procedures and inventing completely new ways of accomplishing work. The primary objective of Reengineering is achieving quantum leaps in performance.

Concept of Reengineering: It involves;

a) Reenameling all basic assumptions.

b) Redesign the work, process based on new assumptions.

c) To overcome the earlier limitations of the specific work.

Purpose/Need of Reengineering:

1) Meeting consumer needs/ Market demand.

2) Eliminating defects or errors.

3) Enhancing employee's performance.

4) Reducing response time.

5) Creating new Standard for measurement and evaluation.

6) Reengineering brings radical changes in the library functions: It changes LIS Centers policies and control

the systems, technology and organizational relationships.

7) It helps to minimize the library paperwork

8) Reengineering concept helps to renovate the existing procedure like adopting electronic environment in a traditional library structure.

9) Reengineering necessitates in eight areas of library structure.

i. Physical Plan of Library: Like Networking, setting up of computers as per the furniture sets, machines, cable wires etc.

ii. Integrated system: Cataloguing + Acquisition, Acquisition + Budget, Cataloguing + Stock Verification, etc.

iii. OPAC:

iv. Collection Development: Reengineering helps to transform

v) Staff pattern: Transforming the labon oriented work pattern into automated.

vi) Cataloguing: From physical form of catalogue into OPAC.

vii) User Education

viii) Library Services

Reference service: Telephonic enquiry transforms into E-mail or web conference.

Document Delivery service transform into E-Documentary Delivery service etc.

All the above points are reflecting the thought that due to application of ICT to the library routines, there is big transformation from printed books into the E-books, personal document delivery into E-document delivery, museums into digital libraries, and as such general library staff transform into professional staff. (Possessing theoretical + Practical IT skills) Therefore, it is clear that Reengineering not only brings a change into functional performance in a library routines but also among the learners of Library and Information Science where those are going to becoming a Librarian's or Information officer or Archivist as per the changing demand of Library professional in the current market.

As such when we apply Reengineering concept to LIS education that would be give the result of improvement of performance of LIS student to handle system equipment, websites efficiently and confidently compare to the students of earlier batches. Re- engineering is very important in LIS education because of the following reasons.

Significance of Reengineering LIS Education

- ***To meet the consumer or market demand:***

A] Demand from the job market for the library professionals is shifting from the post of 'Librarian's, Assistant Librarian, Cataloguer, classifier into Information officer or Archivist, Documentation Officer, Cyberian etc.

B] Therefore, there is a big responsibility upon the lecturers or trainers to train the students in such a way. In short, they should be able to fulfill the company or organization's profile.

- ***Re engineering Involves Reenameling all basic assumptions: Demand of users for a document is shifting to specific Information. Automatically, the basic terminology of five laws of library science are re-enamel like;***

1st Law : Books are for use ! Information are for user.

2nd Law: Every Reader his/her book ! Every Reader his/her information.

3rd Law : Every book hits Reader ! Every information hits Reader. etc.

Similarly name of a paper gets changed in the University of Mumbai. Syllabus for BLISc.from 2009 i.e.

(Library Development ! Foundation of Library & Information Science.). Further there are many new topics have been incorporated in other papers.

- ***Re- Designing the work process based on new assumptions:***

Prominently LIS education is for the professional development. Due to Library Automation, earlier procedure of libraries like circulation control or acquisition transformed into standard applications. Therefore, teaching pattern of such library activities can be better understood if classroom (theoretical) assignments are transformed into web assignment (practical) etc.

Major Observation of Reengineering in LIS education

Syllabus of University of Mumbai at BLISc. & MLISc. – Syllabus format is listed from objectives of a subject & to fulfill those objectives syllabus structure. References for each subject covered not only conventional & latest printed sources but also websites.

Name of Courses	Before 2000	After 2000
Bachelor's in Library & Information Science (BLISc.)	Classroom presentation	Power Point Presentations included
	Compilation of bibliographic Database with CDS ISIS	Compilation of bibliographic Database with WINISIS
	—	Drafting Term paper with computer aid limitation of 2000 words on any general topic.
	Library visits	Library visits + Internship Programme
	Library Cataloguing Standards: AACRII, MARC Covering Printed sources of information.	Library Cataloguing Standards: AACRII, ISBD, MARC Covering Printed sources of information.
	Paper 1- Library Development	Paper 1- Foundations of Library & Information Science.
	Compilation of bibliographies.	Compilation of annoted bibliographies.
Master in Library & Information Science (MLISc.)	Internet Searching	Internet searching + Web Page Designing
	—	Drafting Term paper with computer aid, 3000 words on Library & Information Science topic + preparation of abstract + 5 keywords.

Other Observations:

Instead of understanding just the structure of DDC theoretically, of Journal submission consisting practical study of DDC covering practical number building by using Seven tables of DDC 21st Edition + Abstracting & Indexing [Five Articles Each are added].

- ***Eliminating Defects or Errors :***

a. Classroom notes dictation pattern transformed into Library reference, assignment- presentation pattern.

b. It helps to establish one to one Relationship, between lecturer and student which was earlier one to many in classroom lecture environment. Term paper & MLISc.– term paper + Dissertation. The new component helps the student in one man librarianship and working in team. It teaches how to handle the situation individually.

c. Educating the students to overcome the space problem by way of transforming conventional storage devices into compact form like library racks into computer storage through introduction of digital and e-librarianship.

Conclusion

Reengineering is an important concept which comes in every walk of life. Directly it covers the functional area of library & Information Centers whereas indirectly the core area of LIS education. Libraries contain the wealth of knowledge capable of educating and bettering the lives of citizens. This position of power demands that librarians be viewed as valued professionals, capable of organizing and presenting information to foster the intellectual growth of society. In the face of growing technological capabilities, the need remains for librarians to keep their professional values intact. Librarians would then be best prepared to handle the

technological and financial uncertainties ahead, and demonstrate the competencies needed to improve their image.

Bibliography:

1) Abbott, A. 1998. Professionalism and the future of librarianship. Library Trends, 46(3), 430-443.

2) Das, S.R. (Ed.). 2008. Library Automation and Information Technology ; 166-198

3) Harter, S. 1997. Scholarly communication and the digital library: Problems and issues. Journal of Digital Information. http://jodi.ecs.soton.ac.uk

4) Lal, C (Ed.). 2008. Information Literacy in the Digital Age: articles in Memory of Late Dr.S. M. Tripathi, 44-49, 72-89

5) Sahu, Ashok Kumar (Ed.).2008. Information Management in New Millennium: opportunities and Challenges for Library Professionals, 43-80, 125-132.

6) dspace.fsktm.um.edu.my/.../1812/.../45IND_Jain_Harvin_Babbar.pdf

7) www.mumbai-university.in/

8) www.dget.nic.in/lisdapp/Trade/syllabus/pdf/TTLIS.pdf

Reengineering in Relation to Library Services

Vaishali A. Dawar
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The modern economic rationalism and developments demands that libraries become more accountable for both the services they provide and the funds they expend. Such accountability requires libraries to analyze themselves and, where necessary, change the processes they are traditionally doing by justifying their very existence to funding bodies. How we meet these challenges in the next decade and beyond will determine the future viability of the library. The advancements in technologies and users familiarity with those technologies force us to take advantage of it, and hence force to survive with the effects of the digital age.

Change, is an essential factor for development. The key to change is balance. Among many possible solutions to survive the change one is the reengineering of library services. Reengineering is about changing to the way we do things. Change is the basic need of reengineering. The reengineering means starting over. It does not mean tinkering with what already exists or making incremental changes that leave basic structures intact. It is also not about making patchwork fixes. It does mean abounding long established procedures and looking afresh at the work required to deliver value to the customer. We need something entirely different and there we think of reengineering. Reengineering a library means tossing aside old systems and starting over. It involves going back to the beginning and inventing a better way of doing work.

Reengineering and total quality management are complementary to each other. Reengineering is not the same as quality improvement. The difference between the two is quality programs work within the framework of an institution's existing process and seeks to enhance the performance. Reengineering seeks breakthroughs, not by enhancing existing process but by discarding them completely and replacing them with entirely new ones. Reengineering is about beginning again with a clean sheet of paper. Reengineering is about inventing new approaches into process structure that bear little or no resemblance to those of previous eras. Fundamentally reengineering is revolution. It is the search for new models of organizing work. Reengineering is a new beginning.

If we want to reengineer a library we should start from the basic thing. What is the purpose of reengineering? Why you want to reengineer a library? What do you expect from it? What are its requirements in terms of infrastructure? How we want it to look like? Where you can start? What should be your plan? What should be the time frame? And so on.

The digital age provides us with information, which has three facets: the abundance of information; the currency of information and the accessibility of information. Today the main reason for reengineering a library is development in technologies and its rapid implementation in the library. This is so rapid that it forces us to think that automation is the answer to all our problems. True that the computers can speed up work, but fundamentally the same jobs are being done and that means no fundamental improvements in performance. Hence simply automation does not mean reengineering. Reengineering is much more than automation. It is changing over entirely. Automation simply provides more efficient ways of doing the right or wrong kind of things. Reengineering is not restructuring or downsizing, i.e. doing less with less. The reengineering means doing more with less. Reengineering offers a systematic approach – knowledge and techniques – that can help the library professionals survive today's turbulence and to make the library more cost-effective.

An organization's success starts with the identification of it's core competencies, which in turn guide management behavior. This guided management behavior then affects the attitudes and values of all employees toward the realization that competencies, internal process and effective people management are strongly linked. The reengineering process is only one method to gain a competitive advantage. What makes the reengineering process so powerful is this blending of the various components into a synergistic whole.

The reengineering demands new ways of working and Internet is the tool that can create them. Internet enabled reengineering is breaking down the walls that separate institutions from each other. Internet facilitates the reengineering of the process by allowing information sharing across the boundaries. For example, while reengineering reference service web 2.0 sources such as blogs, podcasts, RSS, wikis, instant messaging, etc. are of great help. It requires training to be given to the library staff including the Librarian about how to use these resources for giving effective reference service to the users.

A user centered library has three important components – collection, staff and services. All three are dependent on each other. This makes the whole process of getting the jobs done more complicated. It involves so many steps and so many people. While reengineering, we have to keep in mind all those steps and people and this has some advantages. Every person involved in the process has certain specific responsibilities for performing one simple task. Secondly everyone in the process is accountable in the chain of command. In library many services are interrelated, and change in one service affects other services. For reengineering we have to consider the whole process required for the task along with the people involved.

The reengineering is defined as "the fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed." This definition has four keywords

1. Fundamental – Why do we do what we do? Why do we do it the way we do? These questions give answers to fundamental purpose of our work. Reengineering begins with no assumptions and no givens. Reengineering takes nothing for granted. Reengineering first determines what a library must do, then how to do it. It ignores what is and concentrates on what should be.

2. Radical – Radical redesign means getting to the root of things. In reengineering radical means disregarding all existing structures and procedures and inventing completely new ways of accomplishing work. It is reinvention and not improvement or enhancement or modification.

3. Dramatic- Reengineering should be brought only when a need exists for heavy blasting. Dramatic improvements demands blowing up the old and replacing it with something new.

4. Process – This is the most important word in the definition, it is also the one that gives the greatest difficulty. As we are not process-oriented, we are focused on tasks, on jobs, on people, on structures, everything but process. The definition of business process is "a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer. The individual tasks within the process are important, but none of them matters even one bit to the users if the overall process doesn't deliver the required document.

A working definition of organizational reengineering given by Jeffrey N. Lowenthal is – "The fundamental rethinking and redesign of operating process and organizational structure, focused on the organization's core competencies, to achieve dramatic improvements in organizational performance".

You can undertake reengineering as great many ancillary processes and achieve hardly any effect on the bottom line. Or you can select one or two of the core processes that are critical to your business objectives and make a huge difference. The newly reengineered processes have to be managed to achieve the performance levels of which they are capable.

Organizational reengineering is based upon two interacting factors – 1) total customer satisfaction and 2) effective and efficient internal process. The past holds valuable lessons concerning the reengineering process. These lessons from the past can help prevent future problems. Reengineering creates an organizational work environment in which functional hierarchies are break up into cross-functional teams, workers are more skilled, and structures are more flexible. Reengineering examines the processes that are cross-functional. E.g. Accessioning - Cataloguing and indexing - Reference Service are all cross functional services. Hence process orientations, ambitions, rule-breaking and creative use of information technology are the basic requirements for reengineering a library. Reengineering strongly emphasizes the preparation of employees for change.

For reengineering we need to trace out internal factors and external factors of a service as they are independent. External factors are the most intense and visible, and they receive the most immediate response from management. Internal factors are not as readily visible as external factors because internal factors do not manifest within structured fashion, they are molded as and when required and so emerge as problems.

A common example of reengineering in the libraries is OPAC i.e. online public Access Catalogue. Previously we were all preparing manual added catalogue entries and storing in the cataloguing cabinets, which was occupying space of the library. Now with library software, we are making data entry only once in the computer, which gives us the catalogue entry at a click away. Previously we were having only author, title or classified catalogues. Now on computer software we can search by author, title or class number as previous as well as by publisher, by accession number, by keywords, etc. also. With the same data entry we can also get various kinds of lists, bibliographies, reports, etc. which saves our lot of time and workload.

In summary, Library's reengineering rethinks the way work is done inside a library; it does not simply try to improve existing processes. A library reengineering change processes completely, so that they are logical and efficient and driven by library's core competencies.

Bibliography

1 Gordon, Rachel Singer –ed.2009: Information tomorrow: reflections on technology and the future of public and academic libraries. New Jersey, Information Today, Inc.

2 Hammer, Michael & Champy, James 2001: Reengineering the corporation: a manifesto for business revolution. London, Nicholas Brealey Publishing.

3 Lowenthal, Jeffrey N. 1994: Reengineering the organization. New Delhi, Tata McGraw-Hill Publishing Co. Ltd.

4 Muthu, Subramanian 1999: Business Process Reengineering: A consolidated methodology. http://www.ijii99muthu.pdf (Accesseed on 26/10/2009)

5 Robinson, Charles Shane: Reengineering library services for the digital age. http://www.thefreelibrary.com/Reengineering+library+services+for+the+digital+age.-a020206519 (Accesseed on 26/10/2009)

Is Reengineering Necessary in Libraries?

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Abstract : *The paper highlights the need of the Reengineering of libraries and discusses the various aspects like why, how and objectives behind the Reengineering of libraries. The benefits of Reengineering and how to successfully reengineer the libraries is discussed in detail.*

Keywords : *Reengineering, restructuring, redesigning libraries*

Introduction

Every professional in the library is experiencing the change in the profession and its impact on the library activities, functions and services . Due to this change the librarian's jobs are shifting from traditional to modern. This is possible by reengineering the libraries for the better use of the libraries by the client community.

Reengineering, the term which had been very popular in the business world during the 1990's, which means reinventing the way one does business. It involves the redesigning key processes, while keeping the customer at the center of the process. Librarians are also facing the challenges in the profession due to application of technology, Internet and management techniques. Librarians are now giving priority to resource sharing and adapting economic policies, to provide better user services. To achieve this there is a need to adjust with the new environment i.e. IT platform, Digital Library development, Open archives etc. But, it needs revamping the processes. Hence, there is a need to change the practices followed in the library. The Reengineering is necessary to handle the new practices which may be cost effective, beneficial to users, providing value added services, etc.

What is Reengineering?

The term Reengineer and reengineering is defined by many, which are summarized below.

Reengineer means to redesign or extensively modify the design.Reengineering means the applications of technology and management science to the modification of existing system, organization, processes and products etc.It is a process of rethinking, redesigning to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality service and speed. It is a process of restructuring of existing systems. Reengineering changes the work, processes and carries out for the better service to customers, clients and users etc.

From these statements it is very clear that Reengineering is nothing but redesigning, restructuring the systems. Hence, there is a need for the reengineering Library activities also so as to provide better services to the users within limited resources.

Terms used for Reengineering

There are different terms used for the reengineering like

- Restructuring
- Reengineering
- Reengineer
- Reorganizing
- Regenerating
- Redesigning
- Reshaping

But the meaning is same as redoing the process in different fashion to get maximum benefits.

Why to reengineer the libraries?

There is a need to reengineer libraries due to following drivers

1) Information explosion in all sector of knowledge
2) Rising cost of the publications
3) Users demands
4) Pinpointed information on areas of research or study
5) Limited budget and resources
6) Growth in research
7) Rapid changes in the profession
8) Global competition for the commercialization

Apart from these issues technology is also easy and cheap to implement in the library as compared to the traditional days, which helps the reengineering process.

Objectives behind Reengineering:

The main purpose and the objectives behind the reengineering are:

1) To develop the libraries in tune with current trends and needs
2) Reshaping the library functions using technology and align the staff to provide better services
3) To adapt the tools for introduction of effective change management and output

Steps in changing the process:

For changing the practices or restructuring the processes there is a need to :

- Plan for the area where change is required
- Priority and vision
- Apply techniques of new performance management and technology
- Create a team of staff
- Train staff
- Observe the results
- Acceptance of management

How to bring the successful restructuring?

For restructuring the library activities the following points may be considered

- Authority and responsibility to lower staff
- Coordination and teamwork in the organization
- Quality services as well as information product generation
- Different skills acquirements along with leadership
- Motivation to staff for the good performance
- Capacity building
- Use of IT applications and management techniques, evaluation and proper collection development. These will play the key role in restructuring systems and procedures
- Establish the advisory committee for getting the expert advice

Building positive approach in the library professionals

Outcome of the Restructuring:

After Reengineering the changed management will have benefits like

- Enhanced users services, flexible and responsive services, which meets the user expectations
- Increase the level of library use
- improved level of customer satisfaction
- Greater innovative practices and procedures
- Development of income generating capabilities
- Participation in networking
- Change in traditional practices which are replaced by using technology

Is Reengineering Necessary in Libraries?

No doubt, it is necessary to reengineer libraries to get the benefits like

- Sharing the resources
- Providing better services
- Proper collection development
- Saving the cost on various parameters

Conclusion

Whatever may be the type of library, there is a need to reengineer it. The purpose behind the reengineering is to make the activities economical, profitable and easy to mange. However, these also need extra budget at the initial level. Since the library profession is now technology literate and managing the digital resources, they can easily manage the Reengineering process. In reengineering library, Library functions, services, collection development, creation of Institutional repositories, digital library development, Internet usage, consortium participation and applying management techniques for the better services are the main issues, and the outcome of these is quality services to the users.

Bibliography :

1) Brodie, M and McLean, N (1995) Process Reengineering in Academic Libraries : Shifting to client-Centered resource provision. Cause / Effect Summer 1995 pp 40-46
2) Graves, Karen J. and Martin, Elaine R.(1998) : Reengineering the Library for improved access to Electronic Health Information : One Research Library Experience. INSPEL , 32(3) pp 182-188.
3) en.wikitionary.org/wiki/reengineer
4) en.wikitionary.org/wiki/reengineering
5) www.crfonline.org/orc/glossary
6) www.wiley.co.uk
7) www.sl.nsw (Report of state library of New South Wells August 1999)
8) www.sl.nsw.gov.au

Reengineering in Libraries

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Abstract : *The role of executive in the actual business situation include, scan the available alternative courses of actions, work out the impact of each of them and select the best suited alternative under the given environmental setting. Experience is, perhaps, the best teacher. The reengineering of the library is very important, it enhances service quality, improves process and efficiently utilizes resources and lower emission. provides a description of the decisions taken in a particular situation, at a particular period of time and its impact on the organization which acts as an eye-opener for the Library's thorough analysis of the causes of what and where things went wrong, why and what could have been a better alternative, would enable one to avoid such decision in one's real Business life. Library is a learning temple Library is the fulcrum of support for the entire of academic activities on an educational campus.*

Keywords : *TQM, Rethinking*

Introduction

According to Michael Hammer of the US who coined the term "reengineering",the definition of reengineering is as follows. Reengineering has been defined as " the fundamental rethinking and radical design of business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality, service and speed."

The new information revolution is well under way. It will surly change face of all the institution of society. Library is also a part of society. It will radically change the means of information for the user and provider due to revolution in technology, techniques software or speed entire face of information technology has been charged and will be change drastically.

Earlier libraries have centered on data and information entered in their collection storage, transmission, retrieval of data interface. New information revolution from or center on the technology of techniques which are rapidly changing or reinventing itself.

Present Status of the Libraries:-

Libraries are changing their faces, from only collection of books to information center and librarians are changing from librarians to information managers. Working as information manger is not merely a post of manger but they should work like mangers. What qualities mangers have in them must be with information mangers. Librarians are not only caretakers of books and information sources but they should mange sources in such a way that the sources should be utilizes up to maximum limit. Librarians should adopt quality of mangers, use of new techniques, technology. He/She should think in managerial way and use library sources converting them or reinvent them for new services.

Ways of reengineering in libraries :-

➢ ***Recruitment -Staffing pattern :-***

when there will be need for new appointment, a candidate with computer knowledge would be given preference with convention knowledge (required qualification). Every person has some unique quality. Using skills of existing staff members by giving them their choice of work, In this system they can perform well as this task are their own choice. Selection of library staff, giving motivation to staff, providing training to newcomers or refresher courses for the present staff is also bring some positive changes in library.

➢ ***Building :-***

Mostly library building are too old. The atosmospher, air ventilation, lighting system are in such a condition that users of library are not happy with the current situation. They should reinvent or make some internal changes that can make total atmosphere healthy for worker and users point of view. We can make some changes to overcome such type of problems, changes in stack room, office. Space problem is big problem specially in big cities like Mumbai, Pune. Normally library space is allocated once which cannot be extended.

As per fifth law of library science, library is growing organism, this means it will grow by each way

- ✓ Collection
- ✓ Users
- ✓ Staff

➢ ***Promotion strategies by using new technology :-***

Using internet as media, informing user what is new in library and making library users blog, we can provide them information about library activities books on specific topics and list of books referred by professors.

Strategy to use for reengineering.-

- Find out what are the problems in the process and how to handle them what are the ways to overcome such problems-always search for new way techniques

- Decide what type of reinvention we want to make. Once it is decided clearly, then don't change mind before they come to fruitions.

- Make people/staff/collogues ready to implement our idea .reinvent or reengineer Make communication by spreading positive attitude or create vision of the future of the institute .

- Build a team of enthused people, collogues. Reengineering is not a solo effort, it is team work

- Librarian should have a vision, should be like that stretch the organization or institute beyond the present situations.

Conclusion:-

The initiations of modern technologies have considerably changed the approaches of individuals and institutions towards libraries and information centers. In tune with this change, the libraries and information centers are now required to improve and adapt themselves to the changing conditions. With the modern societies becoming more and more information conscious, well-equipped and users-friendly libraries have become the essential ingredients of the civilized world. Library is the heart and mind of educational institutions

References;

1. Bhat, Shridhar K ,2007. "Business process reengineering" ,Himalaya publishing house,Mumbai.
2. Dey,B .R, 2005. "Business process reengineering & change management", Biztantra ,New Delhi,2005
3. George, S S (Ed) 2002 Managing innovation in the new millennium, ICFAI,Hyderabad.
4. Koontz, Harold, Weihrich, Heinz, 2008. "Essentials of Management : an international perspective, tata mcgraw-Hill, New Delhi.
5. http://search.ebscohost.com

Reengineering Library and Information Services in Digital Era

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Abstract : *Reengineering is very popular modern management technique. Application of Reengineering is present day need. Hence, present paper high lights how this technique is applicable to a college Library). Authors has emphasized on not only historical background of Reengineering but also background of studied library in brief and implementation of Reengineering in five phase manner i.e. activities to be re- engineered , selection of the Reengineering team , vision for the new improved processes and actions needed to implement the new process.*

Introduction

With the growing emphasis on quality improvements, libraries adopting management techniques to give their best in the form of information products and services. The Management theories and principals which are applicable to an organization can be successfully implemented to library. The 1990's have seen tremendous evolution of recent management techniques such as T Q M, Reengineering, Six Sigma etc. Reengineering which has been very popular in the business world in 1990's, is equally beneficial for libraries to redesign their services in order to provide pin pointed exhaustive information up to end users. Reengineering involves redesigning key processes, while keeping customer at the center of process redesign.

Meaning and history of the term Reengineering:

There is pressures to lower costs, reduce cycle time, raise quality and in general, make workplace processes more productive and intensive. As a result, Reengineering which "burst upon the management scene in 1990" has been much in vogue (Davenport). However the term Reengineering was first introduced by Michael Hammer in 1990 in a Harward Business review article, " Reengineering Work: Don't Automate obliterate.' (Gaur, Ramesh,C.) .However Hammer and Champy (1933) says "Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality, service and speed."

While as per opinion of Davenport (1933) - "Reengineering is only the part of what is necessary in the radical change of processes, it refers explicitly to the design of new process. The term process innovation encompasses the envisioning of new work strategies, the actual process design activity and the implementation of the change in all its complex technological, human and organizational dimensions.

The above definitions mostly stresses on rethinking and radical redesign of processes and also on destroying the old ways of thinking and operating.

Objectives of the study:

The objectives laid down for the present study are as follows:

a) To identify the pre-requisites for the application of Reengineering process .

b) To propose a step by step method for reengineering library and information services of a College Library.

c) To provide a modern reengineering plan for a College Library.

Need of Reengineering for college library:

The following reasons points at the need for Reengineering in College Library.

a) To cope the challenges posed by information explosion.

b) To fulfill multidimensional information needs of library users.

c) To redesign information services of a College Library.

d) To provide pin-pointed and exhaustive information to the end-users of the library.

Reengineering plan for college library:

The Reengineering plan for College Library has been framed in the following five steps.

Step - I

Selection of Reengineering team :

For the successful Reengineering of College Library a competent team of experts should be selected in order to redesign the library and information services of college Library.

Step – II

Processes/activities to be Reengineered:

In the first step the Reengineering team has identified the processes/activities of the College and its Library that have to be re-engineered. These are as follows.

a) Physical layout/ Facilities of the library.

b) Library Collection.

c) Manual Processes of library housekeeping operations.

d) Information services provided by the library.

e) Human Resources.

Step - III

Status of current processes in College Library:

In most of the college libraries maximum processes and in-house library operations such as, acquisition, cataloguing, circulation, serials control and various reports are being done manually. Use of Information Technology for library operations is very less. However each college has to find its current status.

Step - IV

Vision for the new improved process:

Following vision may be used as a model for the new improved process -

Vision : "We are committed to provide an easy and ready access to the library resources for updating the knowledge base of students and staff. Our endeavor is to keep the users of the library abreast of the state-of-the art inputs in respect of Arts, Commerce and Science, so that, they can face confidently challenges thrown open by 21st century. We are streamlining our concerted efforts to build our library as an excellent center for disseminating information."

Step - V

Actions needed to implement or redesign the new process

Physical Layout / Facilities of the library:

In order to provide better services to users, the physical layout of the library may be made as follows -

a) Separate Stack Room, if necessary.

b) Computer Laboratory with sufficient no of computers having Broad Band Connectivity.

c) Separate Reading Room for students and teachers with functional library furniture.

d) Separate Reference Section.

e) Reprographic section

f) Processing section

g) Independent cabin for Librarian and Asstt. Librarians.

Library collection:

In order to cope the challenges of multidimensional information needs of the library users, the library collection should be built in digital format. It may include -

* CDs, DVDs, Microfilms etc.
* Online-Books, On-Line Journals.
* Online Databases.
* E-Reference sources.
* Membership with e-consortia

Manual processes of library house keeping operations:

In order to improve efficiency of library housekeeping operations library should be automated with standard library software. With the help of Information Technology, the library housekeeping operations will be redesigned in the following manner.

* Automated Acquisition system.
* Automated Cataloguing system.
* Automated Circulation system.
* Automated Serials control system.
* Automated Reporting system.
* Automated Stock Verification system.

Information Services:

In order to redesign these information services, of Information Technology may be used in the following way -

* CAS and SDI services by e-mail.
* Online Information Retrieval system.
* Online Resource sharing.
* Institutional Repository.

Human Resources:

The vision for re-engineered HR in a College Library is that, all human resources services should be available instantaneously, on demand with radical redesign of workflow

processes. The following steps may be conducted for Reengineering of human resources -

a] Inform the library staff about the Reengineering process, its need and impact.

b] Inform the library staff about their roles and responsibilities in Rengineering process.

c] Organization of motivation/study tours for the library staff.

d] Organization of in-service training programmes for library staff in the computer laboratory of college.

Conclusion

Considering the importance of Reengineering in library and information services it is necessary to rethink on this serious issue and how it will apply to the library for providing better services to fulfill multidimensional needs of the present patrons.

Bibliography :

1] Dubas, K.C.(n.d.) Reengineering University Libraries as the Gateway of Local and Global Information. Retrieved 15 December 2008. From www.dspace. inflibnet.ac.in/bitstream/194/56/ pdf sy.pdf.

2] Gaur, Ramesh, C. 2003. Reengineering Library Information Services.
Mumbai: Allied Publishers Pvt. Ltd.

3] Graves, K.J. and Martin, E.R. 1998 .' Reengineering the library for improved access to electronic health information : One Research Library's Experience.' *INSPEL,* Vol. 3 (3) PP.122-88.

4] Mornati, Susanna . 2000. ' Reengineering Users Services in Physical Libraries : A Transition Phase between old Experience and new New Opportunities.' *High Energy Physics Libraries Webzine*. Issue I Retrieved on 15 December 2008. From : www.eprints.rclis.org/ Re engineering user services in physical libraries. pdf.

5] Nickols, Fred.(n.d.). Reengineering the problem-solving process. Retrieved 16December 2008 From. : www.home.att.net/Reengineering.pdf.

6] Weicher, Maureen others.(n.d.). Business process Reengineering analysis Recommendations. Retrieved 5 December. From; www.netlib.com/files. pdf..

ICT Technologies

ICT Use and its Impact on Libraries: A Study of Academic College Libraries

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Abstract : *Information and Communication Technology has swiped whole world and created a saga in the world of communication system. Fastness, accuracy, cheap and need based ICT tools have attracted humankind. One will surely feel handicapped without these ICT tools. In this study a survey was conducted using structured questionnaire. The extent of use of ICT and its impact in selected academic colleges of Mumbai is briefly explained. The paper also identifies the emerging ICT which are useful for library and Information Science field.*

Keywords *: Academic Libraries, ICT*

Introduction

Latest development in Indian Information Technology scenario is Unique Identity Card for every Indian. This technology is hardly used by some developed countries of the world. The electronic voting machine is a big success in India which shows the growth and successful use of information technology in India.

As all walks of life are affected by the technology, the libraries are no exception to this change. The libraries with vision are trying the technologies as and when they are appearing to improve the service trends. Much of these technologies are used by financially sound institutes, because of volatile nature of IT tools.

The job pattern of paper age librarian and new era librarian are unlike to each other. Functions of librarians in the paper age were collection development and acquisitions; Cataloguing and classification; Circulation; Reference work; Preservation and archiving. Where as, the functions of librarians in the new era have changed to, selection and acquisition of relevant information from vast variety available in various forms like accessing free journals to subscription of paid ones, from Books, CDs, DVDs to e-books. As there is shift in pattern of work, the problems of new age librarians are also different from the problems of paper age librarian. Like preservation problems, obsolescence of hardware and software, *Cost of future conversions,* how to identify items uniquely, *Document Object Identifier (DOI),* change of content with the same URL, lack of legal deposit, lack of permanent retention by subscriber and unwillingness of publishers to allow it, etc.

The explosive growth of mobile computing and wireless networks have made educational institutions stay at the forefront of this changing world. Due to this, many students prefer schools that provide them with powerful network infrastructure and rapid information access. Universities and colleges have started to install wireless networks into dorm rooms, classrooms, student lounges, libraries and even in dining rooms. Libraries have become portals of information anywhere and higher education has always been adapters of the new technology. Khalil, Mounir. A.(2004) [1]

The revolutions in computer and telecommunication technologies are the root cause of change. The developments in applications of computer technologies in libraries provided the base for consequent developments. The rapid technological advances during past ten years are faster and more powerful computers, sophisticated and integrated software packages for library applications, telecommunications and networking, information storage and retrieval techniques, including CD-ROMs, Interactive hyper and multi media, electronic publishing and the Internet and World Wide Web. Lee, Hwa-wei.(2005)[2].

A study has been conducted on use of information technology in academic libraries of Mumbai to know the existing situation of academic libraries in Mumbai. The study covers Arts, Commerce and Science colleges of Mumbai city and its suburban area which are affiliated to the University of Mumbai. Out of 95 colleges, only 83 colleges have responded.

1. Use of Computer by Libraries.

In all total 83 respondents, 74 (89.16%) of libraries have computer facility and 09(10.84%) libraries do not have computers or are in the process of acquiring the same. This is a good sign that nearly 90% of academic college libraries are provided with computer facility.

2. Use of Library Management Software

Majority of libraries are creating the database of their library collection. For that, some specially designed software has been generated. There are number of software available in market with quite affordable price. The result of survey shown in Table 1 reveals that 59(71.08%) libraries that have computer facilities have procured the library management software. Where as 08(9.64%) of libraries are using in house software. Some 16(19.28%) libraries have not procured the library management software at all.

Using MS-EXCEL and MS-ACCESS of MS Office applications, some libraries have developed their own library software to handle the library functions, which is termed as 'in-house library software' in this study.

Table 1: Library Management Software

Categories of Responses	Not Procured	In house	Commercial	Total
No. of Respondents	16	8	59	**83**
Percentage	19.28	9.64	71.08	**100**

The librarians were asked to name the library management software which they have purchased. The results are much scattered. Yet SOUL 16(27.13%), SLIM 10(16.95%) and LIBSUITE 10(16.95%) are predominant in the present scenario. Apart from these, nearly eight to ten other library softwares are used by different academic college libraries of Mumbai. The diversity in use of software is due to mushrooming of library software in the market at an affordable price.

Table 2: List of Commercial Library Software used in various Libraries

Sr.No	software	Total Responses	Percentage
1	LIBSYS	2	3.4
2	LIBRARIAN	1	1.69
3	SOUL	16	27.13
4	LIBSUITE	10	16.95
5	SLIM	10	16.95
6	Bookworm	3	5.08
7	Flexlib	1	1.69
8	LIBTECH	4	6.78
9	MICM Net Solutions Lib Software	4	6.78
10	XERON	1	1.69
11	Easy Library	1	1.69
12	LMS(Library Management Software)	2	3.4
13	SKF-e-Library Suite	1	1.69
14	NET Campus I Library Administrator	3	5.08
	Total	**59**	100

The creation of library database is a systematic and continuous process. Librarians were asked about the status of library database in their library management software. Same is recorded in Table 3. Majority 40 (67.80%) of librarians said that they have up-to-date records in the library database. Some 16(27.12%) libraries are in process of creation of database and 03(05.08%) librarians said they have procured the library management software but not yet started using it.

Table 3: Status of Library Automation

Categories of Response	Up-to-date	In-Process	Not Yet Started
No. of Response	40	16	3
Percentage	67.8	27.12	5.08

3. Use of Internet

Academic libraries have started using Internet services to disseminate the information and to meet the diverse needs of users. The use of Internet is gaining momentum in libraries a decade after its inception. Table 4 presents the data about the availability of Internet connectivity in the libraries. Total of 47(56.63%) respondents are using the Internet facility in their libraries. A total of 36 (43.37%) respondents are not using this facility in their libraries or in the process of acquiring the same.

Table 4: Availability of Internet in Libraries

Categories of Responses	Yes	No	Total
No. of Respondents	47	36	**83**
Percentage	56.63	43.37	**100**

4. Usage of Electronic Journals

The advancements in Internet services have made available the journals at the fingertips of the users on their place. E-Journals are fast. There is no distance barrier. The librarians of various academic libraries were asked the questions related to subscription and use of electronic resources. Table 5 records the total number of libraries subscribing e-journals in their libraries. The result of data shows that hardly a few libraries 07(08.43%) are subscribing e-journals. And maximum 76(91.57%) of academic libraries don't subscribe.

Table 5: Subscription of Electronic Journals

Categories of Responses	Yes	No	Total
No. of Respondents	7	76	83
Percentage	8.43	91.57	100

Some of the e-journals can be accessed through Internet without paying anything. These are e-journals open archives. Some of the e-journals give access to their back volumes free of cost. Table 6 presents data about librarians' awareness about such free resources on Internet. The librarians were asked whether they provide access to such freely available e-journals to their users; some 35(42.17%) librarians who have Internet connectivity admitted that they are providing this service to their users and 48(57.83%) said they have not tried the same.

Table 6: Access to Freely available (open source) E-Journals

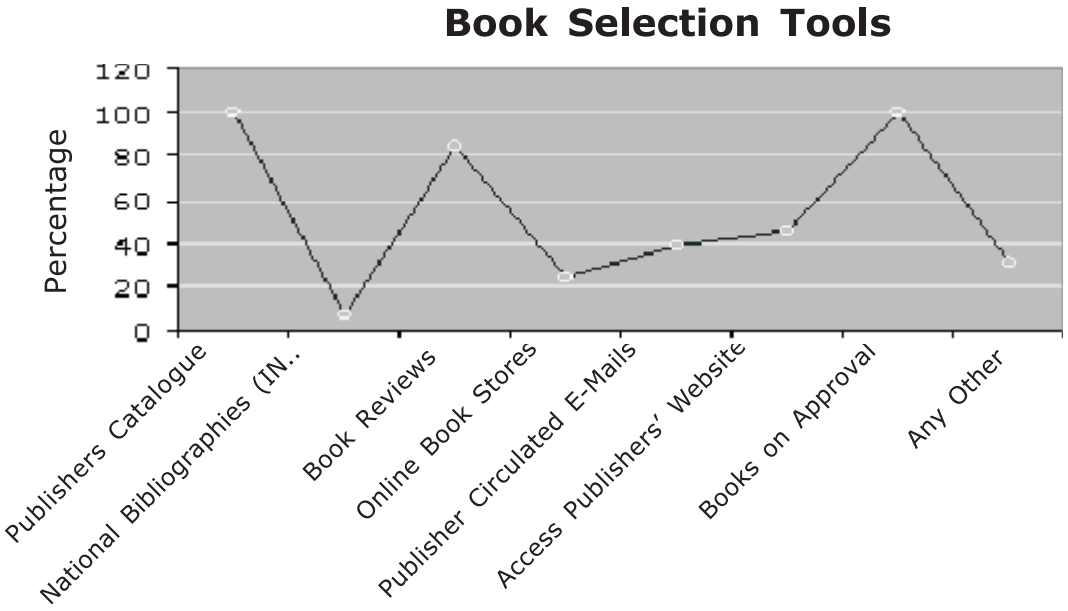
Categories of Response	Yes	No
No. of Respondents	35	48
Percentage	42.17	57.83

5. Impact of Emerging Technologies on LIS Field

A useful collection is the strength of the library. Imparting right information to right user is possible only if a library has right collection in any form from books to DVDs. Proper and well-balanced collection development depends on the skills of librarian and more over on the collection development policies and principles the libraries follow.

There are number of selection tools which librarian can make use for selecting the library resources. The Table 7 reflects the tools that are used in the academic libraries in Mumbai. Almost all respondents, 83 (100%) use 'publishers' catalogue' and 'books on approval' as tools for selecting books for their library. 'Book reviews' is major tool for selection of the books in 70(84.34%) libraries. It is interesting to note that the trend of using the technology for their collection development is seen in considerable number of libraries. In all 38(45.78%) respondents have indicated as access of publishers' website, 32(38.55%) as 'publishers circulated e-mails', 20(24.10%) use 'online bookstore'. Only 6(7.23%) respondents are using 'National Bibliographies' like BNB, INB to select the books.

Table 7: Book Selection Tools used in Library



Any Other: Selection list of staff, list from students, Book Exhibition, other libraries on-line catalogue

6. Formation of Mumbai Academic Colleges Network

Table 8: Formation of Mumbai Academic Colleges Network

Categories of Responses	Yes	No	Total
No. of Respondents	78	5	83
Percentage	93.98	6.02	100

Till now maximum number of academic libraries were isolated, using book suppliers and subscription agents as middlemen for their collection development. But, with the convergence of expensive databases delivered via new technology, coupled with growing pressures to do even more with less in financial budgeting terms, the need to adopt new ways of acquiring important and essential information products has taken root.

Some suggestions in this regard are: To have an effective and economical resource sharing computerized network is essential and inevitable. All the activities of the library should be computerized. This needs adequate funding

and training. Librarians of various colleges are willing to share their resources for the benefit of users, and it is the higher authority who has to take initiative in forming the network of all academic college libraries.

The initiation needed by Government are, i) make it mandatory to use single standard library software by all libraries or at least by libraries affiliated to one particular university. ii) Financial support from the Government and establishment of maintenance service centres at convenient places.

7. New Technologies expected to make their ways in academic library system are;

- Touch screen identification of library visitors
- Electronic security systems like Smart Cards, RFID etc.
- Storage Technologies like ORC, high end optical storage technology.
- Communication technologies like Wi-Fi, Bluetooth
- Multimedia technologies with latest developments like computer animation, video conferencing, desktop publishing, 3D exchange of information etc.
- MAID-(Massive Array of Idle Discs)- which supports new concept 'Green IT' Maitland Jo. (2008) [1]

Conclusion

Development of ICT has reshaped the libraries. It is an appropriate time to adapt various technologies available to cater to the needs of the students. The librarians of 21st century are coming up with new ideas, new tools and new services. The new interdisciplinary courses have forced the librarians to redesign in other words reengineer their libraries. The librarians working in different environments feel they have good infrastructure, their resources are sufficient to cater to the needs of users. The technology use in different colleges is found satisfactory. The healthy competition among the institutions has boosted the development of libraries and their infrastructure. The manpower development is one of the major works pending with academic libraries of Mumbai. This study presents a picture that the technological developments have become necessary rather than a luxury.

It is really interesting to note that 'the most dominating ICT sector will be telecom followed by hardware, IT services and software. Partha Iyengar's report. (2005, August 30) [2]. What we are seeing is true now. The Internet, Wi-Fi etc telecommunication based sectors are booming. This kind of prediction about emerging technologies will help the librarians to prepare their mindset accordingly.

References :

i Khalil, Mounir. A. (2004) Vision to Reality: Application of Wireless Laptops in Accessing Information from Digital Libraries: End-Users' Viewpoints. ***Library Hi Tech News***, 7, 25-29.

ii Lee, Hwa-wei.(2005) Maximising Information Access and resource Sharing: The OhioLINK Experience. Retrieved May 13,2005 from http://web.simmons.edu/~chen/nit/NIT'98/98-149-Lee.html

iii Maitland Jo. (2008) The Future of MAID Storage. ***Digit,*** 8(12), 148-149.

iv Partha Iyengar's report. (2005, August 30). ***The Times of India***

Bibliography :

1. University of Mumbai.(2006) Annual Report 2005-06 (1st April 2005 to 31st March 2006). Mumbai. University Publication Division.

Application of web2.0 Technological Tools in Libraries

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Introduction

The information environment within which libraries find themselves is changing, probably faster than ever before. These changes offer great opportunities for progressive libraries to reach out far beyond the boundaries of their buildings and web sites, and to engage with an increasingly literate body of information consumers.

Web 2.0 is becoming a central topic in our information world. Web 2.0 tools allow libraries to provide a better service to users by offering simple access to what they want and how they want it. It is an effort to provide and market the optimal 24/7 content and service delivery. Now libraries are not far behind to use this new technological assets. They are creating virtual communities through social software such as Blogs, RSS feeds, Instant Messaging, Wikis, Podacast, Vodacast, Tagging and social Bookmarking and Networking. Stepens (2006) claimed that Web 2.0 is a place where everyone can add or edit information and where digital tools allow to create, change and publish dynamic content. For Miller (2006) web 2.0 is participating and presenting the value of user generated content. It is about sharing and communication; it opens the long tail that allows small groups of individuals to benefit from key pieces of platform while fulfilling their own needs.

The term is widely defined and interpreted. "Web 2.0" was reportedly first conceptualized and made popular by Tim O'Reilly and Dale Dougherty of O'Reilly Media in 2004 to describe the trends and business models that survived the technology sector market crash of the 1990s (O'Reilly 2005). The companies, services and technologies that survived, they argued, all had certain characteristics in common; they were collaborative in nature, interactive, dynamic and the line between the creation and consumption of content in these environments was blurred (users created the content in these sites as much as they consumed it). The term is now widely used and interpreted, but Web 2.0, essentially, is not a web of textual publication, but a web of multi-sensory communication. It is a matrix of dialogues, not a collection of monologues. It is a user-centered Web in ways it has not been thus far. Web2.0 is both a platform on which innovative technologies have been built and a space where users are treated as first class objects.

Web 2.0

The essential difference between Web 1.0 and Web 2.0 is that content creators were few in Web 1.0 with the vast majority of users simply acting as consumers of content, while any participant can be a content creator in Web 2.0 and numerous technological aids have been created to maximize the potential for content creation. The democratic nature of Web 2.0 is exemplified by creations of large number of niche groups (collections of friends) who can exchange content of any kind (text, audio, video) and tag, comment and link to both intra-group and extra-group"pages". A popular innovation in Web 2.0 is "mashups", which combine or render content in novel. Now with technological advances web3.0 is now on the way of developing.

Tools of Web2.0:

Blogs Wikis RSS Fields

Multimedia Shairing

a)Photo Shairing b) Podacasting c) Vodacasting

d) Tagging and Social Bookmarking e) Social networking
f) Instant Messaging (IM)

Blogs: The term web-log, or *blog*, was coined by Jorn Barger in1997 and refers to a simple webpage consisting of brief paragraphs of opinion, information, personal diary entries, or links, called *posts*, arranged chronologically with the most recent first, in the style of an online journal (Doctorow*et al.* 2002). Most blogs also allow visitors to add a *comment* below a blog entry. A library blog can be used to disseminate information about new arrivals of materials, databases, journals, books, services and allowing librarians to focus more on content and coding. Following are the services which librarian can give through a blog. A blog in a librarian's hands is a powerful online information manager. As new and interesting material comes over their desk, they can document and annotate it on a daily basis. As Paula J. Hane says, "Blogs are Natural for Librarians."

- As an information service: use as a library tool to inform clients of changes, addition to library services, collections and of news / current events.

- Blog as a library services: List of new books, videos, CDs or DVDs as they are added to the collection. Review new titles and link them to relevant internet site. Librarians can start an online book discussion.

- Blogs as a Professional tool : It is used as current awareness tool, professional aids and notices to users.

- Blogs as a feedback tool : It encourage valuable feedback from readers via comments link. Libray patrons can provide information about their library experience and valuable guidelines to improve the services and remove the unwanted things.

Wikis : The term 'wiki' is derived from the Hawaiian term for 'quick'. It is an open shared space for collaborative content contribution and editing. The first wiki was created by Ward Canningham in 1995. A wiki is a collection of web pages designed to enable anyone who accesses it to contribute or modify content, using a simplified markup language**.** A wiki is a software often referred to as a wiki engine that allow users to freely create and edit web page content using any web browser. There are many free open source wiki engines available to create Wikis. The most famous example is of course, Wikipedia (www.wikipedia.org), which is edited by people from all over the world.

Use of Wikis in Libraries:

Librarians can build the reference wikis, subject guides by group thoughts and by topic. Wikis are built for reference services and collaborative workplace help to manage knowledge.

1. Wikis for Librarian: Library & Information Science Wiki (LISwiki) (http://liswiki.com/wiki/main.page/). LISwiki was launched to provide the library community an opportunity to investigate the usefulness of Wikis. Its aim is to exist as a niche encyclopedia comprising of library related issue. The site claims that this is wiki is intended to be developed, edited, organized, and maintained by anyone and everyone interested.

2. Library Instruction Wiki (http://instructionwiki.org/main-page). Library instruction wiki is a collaboratively developed resource, initiated by the Oregan Library for librarians involved with or interested in instruction.

RSS Feeds:- RSS stands for 'Rich Site Summary' or 'Really Simple Syndication'. RSS is a standardized XML markup that can be used to publish and syndicate content. It provides users a way to syndicate content on the web. It is conceivable that this syndication will replace browsing and searching through library websites for content. RSS aggregator application installed in a library's system coupled with the social network of the library will enable users to have a single, customized, personal library page that syndicates all the library content of their interest eliminating irrelevant information. Users will have the control over these pages and contents.

Multimedia Sharing:

Multimedia sharing comprises photo sharing, podcasting and vodcasting. One can interact with more and more number of people all around the globe and share images, videos, audios on the web.

1. Photo Sharing: Some great sites like flicker, Picasa, Photobucket, Webshot community, Kodak Gallery, Image sack, snapfish where one can share, upload and download digital pictures. These sites make it easy and fun to view, organize, edit and share the digital photos on our PC. Flickr is the most popular social picture sharing site but photobucket is used widely.

2. Podcasting: The word Podcast originates from combining the words 'ipod' and 'broadcast'. It was used for the first time in the year 2004 (7) The term originated with Apples portable music player, the ipod is distinguished from the other digital media formats by its ability to be downloaded automatically. It is a digital audio file made available on the internet for downloading to a personal audio player such as an ipod or MP3 player.

3. Vodcasting: A vodacast is a term used to describe the online delivery of video on demand via Atom or RSS attachments. Wikipedia (2006) define the term as "an evolution for video, coming from the generally audio-based podacast and referring to Video on Demand (VOD)".

4. Tagging and social Bookmarking: Tagging essentially enables users to create subject heading for the object at hand. Shanni (2006) describe, tagging is essentially a web 2.0 tool because it allows users to add and change not only content (data) but content describing content (metadata). In flicker, user can tag a picture. Users and writers can tag every page read or written. These tags, whether public or private, are the base for new connections, links between various pieces of content, sharing something in common, via the tags. Unlike the well known world of taxonomy, where tagging is well defined by the organization, tagging in web 2.0 is rather personal.

5. Social Networking: Social networks are perhaps the most promising and embracing technology discussed here. They enable messaging, blogging, streaming media and tagging discuss. MySpace, FaceBook, Del.icio.us, Frappr, and Flickr are networks that have enjoyed massive popularity in Web 2.0. While MySpace and FaceBook enable users to share themselves with one another (detailed profiles of users' lives and personalities), Del.icio.us enables users to share Web resources and Flickr enables the sharing of pictures. Frappr is a bit of a blended network, using maps, chat rooms and pictures to connect individuals.

Use of Multimedia Sharing

- Training tools for database and online library resources.

- Provide short, informational episode about one issue viceover by harottor/ host and interview clients.
- Give weekly what is going in library and community
- Attract community to attend future programme by video
- Social bookmarking is used in library to store and share links through internet. It helps to create social community on web and solve problems.

Synchronous Messaging

This technology has already been embraced quite rapidly by the library community. More widely known as instant messaging (IM), it allows real-time text communication between individuals. Libraries have begun employing it to provide "chat reference" services, where patrons can synchronously communicate with librarians much as they would in a face-to-face reference context. For example : chat rooms, G-talk.

Use of Instant Messaging in Libraries:

- Providing virtual reference service
- Communicate to vendors.
- Library events, news send to user.
- New arrivals on specific subject interest

Conclusion:

Web2.0 technology has become as an essential tool for library application to provide interactive services in library. Keeping abreast to information in this internet era to user community, satisfy their information need efficiently and effectively with in time.

Referances:

1 Bhatt, Jay. (2006) Using RSS to increase user awareness of e-resources in academic libraries. Retrived January 8, 2008, From http://www.higheredblog.com/index.php/using-rs-to-increase -user-awareness-of-e-resources-in-academic libraries.

2 David Jakes. "Wild About Wikis". Tech Learning. August 15, 2006. http://www.techlearning.com/story/showArticle.jhtml?articleID=191801354

3 Dora Mallikarjun & Mahorana Bula " A Lib 2.0: New Avtar Academic Libraries with web 2.0 Application", 'International Library P.473)

4 Folly, M (2002), " Instant messaging reference in academic library : a case study." "College & Research" Libraries, Vol.63, P.P 36/45.

5 Gross Julia & Lyn Lesile (2008) twenty-three steps to learning web 2.0 technologies in an academic library. Edith Town University, Perth, Australia (www.emerld nsight.com/0264-0473.html)

6 Jenn Riley(2006). Tagging (description and links to resources). TechEssence, http://techessence.info/tagging

7 Noa Ahornony " web 2.0 use by libraries (2009)" ' Library & Information Research" Vol-31, P.29-33)

8 O' Reilly T. (2005) " What is web 2.6 ? pattern & business models for thnext generation software" (www. o'reilly.com/pub/a/o'reilly/tim/news/2005/09/30 what is web -20.html.

9 Tom Stafford and Matt Webb (2006) "What is a Wiki (and How to Use One for Your Projects)" .http://www.oreillynet.com/lpt/a/6646

ICT Technologies for Future Education

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Abstract : *Some important technologies in Internet era are VLE, PLE, email, video conferencing, blog, podcast, wi-fi, m-learning and content management. If teachers utilized ICT technologies, they can spend a high proportion of time on focused interactive teaching, and start lessons in ways that engage pupils. They can employ a wide range of teaching techniques to engage pupils, probe for misconceptions and deal effectively. For any ICT based learning environments like VLE or PLE need the internet and its applications like email video conferencing etc. With these basic help, the teacher and the student can browse and the world in PLE or VLE environments of learning. So the modern teacher should be equipped him/herself with the latest and future update of computers in education.*

Key words: *CMS, E-mail, HTML, ICT, mLearning, PLE, VLE, Wi-Fi.*

Introduction

Today's modern world is an era of digital instruments in all the fields of human system. Its due to the vast growth of science and technologies, especially Information Communication Technology (ICT) and it comprises all the electronic devices which we used in our day to day life. The electronic devices may be from radio to palm devices like mobile phones. ICT stands for Information Communication Technology; ICT refers to all electronic Medias; it can be Radio, TV and computer and other electronic accessories. Today's world is growing faster with technological revolution. The following paragraphs elaborate about the new advancement technologies of computer and mobile phones, which we use in the field of education.

Future Technologies

Day to day knowledge of the students is expanding drastically and faster, when compared with olden days. To match this, a teacher has to help to raise the level of expectation about what children can achieve. Helps to gain confidence in understanding and making judgments about the level of work pupils are undertaking and provide opportunities for them to develop their understanding of how ICT can be used to support their learning in a range of contexts takes place in 'an environment of high expectations'. So, the future technologies can be utilized in the field of education. Some important technologies of Internet are Virtual Learning Environment(VLE), Personal Learning Environment(PLE), email, video conferencing, blog, podcast, wi-fi, m-learning and content management.

Need of Future Technologies

Good teaching comprises good demonstrations, well-targeted questions, explanations of the technical language, well-produced task sheets and guides, close monitoring of work, effective teacher–pupil interaction, a whole-class plenary session, use of homework and effective teaching. If teachers utilized ICT technologies, they can spend a high proportion of time on focused interactive teaching, and start lessons in ways that engage pupils. They can employ a wide range of teaching techniques to engage pupils, probe for misconceptions and deal effectively. They can feel confident about planning, teaching and assessing all aspects of ICT, and use ICT to support teaching of other subjects. ICT helps to improve teachers own skills in ICT.

Basic of ICT Technology

"Click and explore" or "just log on to the miracle" is the keyexpression of exploring into the ICT technologies. Future world of education is in the backbone of computer and it's Internet. For any ICT based learning environment like ***Virtual Learning Environment*** (VLE) or ***Personal Learning Environment*** (PLE) needs the internet and its applications like email, video conferencing etc. With these basic help, the teacher and the student can browse and the world in PLE or VLE environments of learning. Where as the blog, podcast, wi-fi, m-learning and content management are new technologies, which comes under any one of PLE or VLE.

E-mail, short for electronic mail and often abbreviated to e-mail, email or simply mail, is a store and forward method of composing, sending, receiving and storing messages over electronic communication systems. ***Video conferencing*** uses telecommunications of audio and video to bring people at different sites together for a meeting. This can be as simple as a conversation between two people in private offices (point-to-point) or involve several sites (multi-point) with more than one person in large rooms at different sites. Besides the audio and visual transmission of people, video conferencing can be used to share documents, computer-displayed information, and whiteboards.

Weblog or a Blog (Blog = *web and log* = *a webpage with diary elements*.)

There are probably as many different definitions for the ever-evolving concept of the weblog as there are commentators. For educational purposes, a weblog is a web site that is easily and (potentially) collaboratively maintained using simple, non-technical tools. Weblog composition is personal— there are no editors involved and the nature of the content is personal, coming from an individual perspective. Weblog entries are (at a minimum) archived and displayed chronologically. At first, weblogs were either a place to list links that one found interesting with brief bits of commentary or personal journals (or both). Today, blogging has taken on a life of its own, reaching into many different domains of education. Weblogs can serve many purposes in an educational setting depending on how you choose to use them. Here are some examples:

- ***Log Reflective Writing*** - Individual students can use weblogs to create and collect reflective exercises such as journals, assignment responses, or directed writing exercises.

- ***Class Community*** **-** A single weblog can be maintained by a group of authors. This kind of community weblog can be particularly useful in the distance education setting, to combat "the loneliness of the long-distance learner."

- ***Collaborative Resource*** **-** A weblog can be used to create a collaborative resource. Having students collaboratively build a weblog around a specific topic is not only a good exercise in research and writing, but may well result in a genuinely useful resource to the world at large.

- ***Class Information Site*** **-**In distance education setting, timely and efficient information dissemination is critical. This is more visible than discussion board posts or posting such information as course documents, while allowing for room to expand on topics and posts that are not easily handled by the "Announcements" section of a Learning Management System.

- ***Portfolio or Process Documentation*** **-** A weblog makes it easy to capture notes, ideas, essays, stories, poems, and other written materials. With a little bit of setup they can also easily capture digital images (photos, scans) and other digital documents.

Podcast

" Podcasting is a process in which digital audio recordings are broadcast over the internet to users who have signed up to receive them....like a traditional radio, it is only a cognitive medium and is available on demand for a specific topic." A podcast is a series of audio or video digital-media file which is distributed over the Internet by syndicated download, through Web feeds, to portable media players and personal computers. Though the same content may also be made available by direct download or streaming, a podcast is distinguished from other digital-media formats by its ability to be syndicated, subscribed to, and downloaded automatically when new content is added. Podcasting's initial appeal was to allow individuals to distribute their own radio-style shows, but the system quickly became used in a wide variety of other ways, including rebroadcast of traditional radio and television content, distribution of school lessons, official and unofficial audio tours of museums, conference meeting alerts and updates, and by police departments to distribute public safety messages.

Podcasting is becoming increasingly popular in education. Podcasts enable students and teachers to share information with anyone at any time. An absent student can download the podcast of the recorded lesson. It can be a tool for teachers or administrators to communicate curriculum, assignments and other information with parents and the community. Teachers can record book discussions, vocabulary or foreign language lessons, international pen pal letters, music performance, interviews and debates. Podcasting can be a publishing tool for student oral presentations, Course content dissemination, Classroom recording, Field recording, Study support, File storage and transfer. It reinforces content provided in traditional lecture, It makes learning more accessible and is a very useful adjunct for distance learning, It stimulates the auditory learner as well as the visual learner, It helps students use "dead" time - they can listen to course content while riding a bus or walking across campus Video podcasts can be used in all these ways as well.

Wi-Fi

Wi-Fi is the trade name for a popular wireless technology used in home networks, mobile phones, video games and more. Wi-Fi is supported by nearly every modern personal computer operating system and most advanced game consoles. The purpose of Wi-Fi is to hide complexity by enabling wireless access to applications and data, media and streams. A Wi-Fi enabled device such as a PC, game console, cell phone, MP3 player or PDA can connect to the Internet when within range of a wireless network connected to the Internet. The coverage of one or more interconnected access points called a hotspot can comprise an area as small as a single room with wireless-opaque walls or as large as many square miles covered by overlapping access points. Wi-Fi technology has served to set up mesh networks, for example, both architectures can operate in community networks.

In addition to restricted use in homes and offices, Wi-Fi can make access publicly available at Wi-Fi hotspots provided either free of charge or to subscribers to various providers. Organizations and businesses such as airports, hotels and restaurants often provide free hotspots to attract or assist clients. Enthusiasts or authorities who wish to provide services or even to promote business in a given area sometimes provide free Wi-Fi access. Wi-Fi also allows connectivity in peer-to-peer (wireless ad-hoc network) mode, which enables devices to connect directly with each other. This connectivity mode can prove useful in consumer electronics and gaming applications.

Many consumer devices use Wi-Fi. Amongst others, personal computers can network to each other and connect to the Internet, mobile computers can connect to the Internet from any Wi-Fi hotspot, and digital cameras can transfer images wirelessly. Routers which incorporate a DSL-modem or a cable-modem and a Wi-Fi access point, often set up in homes and other premises, provide Internet-access and internetworking to all devices connected (wirelessly or by cable) to them. One can also connect Wi-Fi devices in ad-hoc mode for client-to-client connections without a router.

M-learning, or "Mobile Learning"

M-learning, or "mobile learning", now commonly abbreviated to "mLearning", has different meanings for different communities. Although related to e-learning and distance education, it is distinct in its focus on learning across contexts and learning with mobile devices. One definition of mobile learning is: Learning that happens across locations, or that takes advantage of learning opportunities offered by portable technologies. The term covers; learning with portable technologies, where the focus is on the technology (which could be in a fixed location, such as a classroom); learning across contexts, where the focus is on the mobility of the learner, interacting with portable or fixed technology and learning in a mobile society, with a focus on how society and its institutions can accommodate and support the learning of an increasingly mobile population that is not satisfied with existing learning methodologies.

Content Management System

A content management system (CMS) is computer software used to create, edit, manage and publish content in a consistently organized fashion. CMSs are frequently used for storing, controlling, versioning, and publishing industry-specific documentation such as news articles, operators' manuals, technical manuals, sales guides and marketing brochures. The content managed may include computer files, image media, audio files, electronic documents, and Web content. Where as a web content management system is a CMS designed to simplify the publication of Web content to Web sites, in particular allowing content creators to submit content without requiring technical knowledge of HTML or the uploading of files.

Need of ICT Skills

The philosophy of education is that teaching and learning are personal, human things. The heart of teaching and learning is the face-to-face interaction among students and teachers. The second said that computers are an extension to the human brain, and that learning about the capabilities and limitations of one's brain is a fundamental, unifying theme in education. A human brain is naturally curious, driven to satisfy this curiosity, and driven to developing aids to overcome limitations of the mind and body. Reading, writing, arithmetic, telescopes, microscopes, and computers have all resulted from the curiosity and drives. For these philosophical problems, we can give a solution through video conferencing, language lab, creative software etc. If we want to give a useful solution, we need ICT skills and idea about future technologies.

Conclusion

Albert Einstein says "Before God we are all equally wise - and equally foolish." Like that if we update our ICT Skills we can survive better, else we will be wise or foolish according to ICT skills before our students not the artificial computer. So, teacher should change according to the technological revolution as a facilitator. So the modern teacher should be equip him/herself with ICT skills. Then only, they can survive future otherwise their students dominate the classroom.

References

- Friedman, Thomas (2005), the world is flat: A brief history of the twenty-first century. New York.
- http://www.clayfox.com/teaching/
- http://connect.educause.edu/Library/educase+review/theresomethingintheairpo/40587
- http://www.cpt.fsu.edu/pdf/teaching.pdf.
- http://en.wikipedia.org/wiki Content_management_system
- http://www.weblogg-ed.com/

Usages of Web 2.0 in Education Institional Libraries

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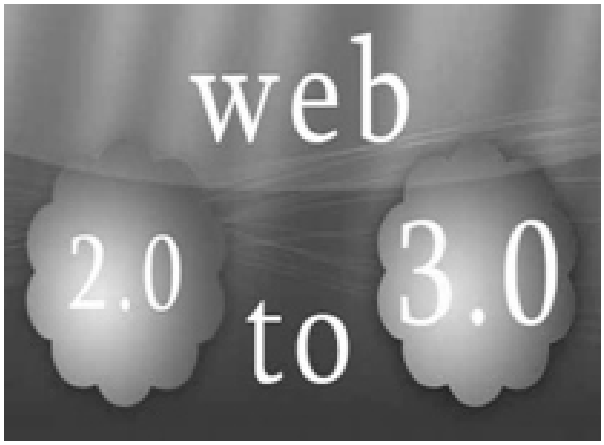
Introduction



Web technologies are used daily by librarians for professional communication, research and continuing education activities. It is used to stream live presentations, to support distance education programs and to facilitate collaborative projects. It is used to distribute scholarly publications and documents, to manage manuscripts and to process abstracts for conference presentations. The importance of the web as a communications tool for libraries has become even more essential than ever. It is therefore imperative that librarians understand the general principles of creating and maintaining web content.

Librarians involved with the development of even a basic library-oriented web site need to understand how web documents are created and structured. The implementation of online services requires further understanding of how interactive forms gain their functionality. Adding graphics and multimedia material requires additional knowledge of different media formats.

This interactive document provides a general introduction to the concepts involved with creating and providing access to web documents. Newer web related tools and technologies are briefly described and references to other resources are provided.

Copyright Issues

The open spirit of sharing and cooperation in the early days of the web lead to a common misconception that the decision to place something on the web, without a notice of copyright, automatically places that content in the public domain. The reality, of course, is that all intellectual property is protected regardless of the use and format.

There are many issues librarians creating web content need to be concerned about. The issue of copyright and the Internet are so complex that it can not be covered in legal documents, let alone this primer. A subsection entitled Copyright Concerns will appear at the bottom of any section in this document where there are copyright issues to consider.

Definition

"Web 2.0 refers to a perceived second generation of web development and design, that facilitates communication, secures information sharing, interoperability, and collaboration on the World Wide Web. Web 2.0 concepts have led to the development and evolution of web-based communities, hosted services, and applications such as social-networking sites, video-sharing sites, wikis, blogs, and folksonomies."

-Wikipedia

USAGE

The popularity of the term Web 2.0, along with the increasing use of blogs, wikis, and social networking technologies, has led many in academia and business to coin a flurry of 2.0s, including Library 2.0, Social Work 2.0, Enterprise 2.0, PR 2.0, Classroom 2.0, Publishing 2.0, Medicine 2.0, and Government 2.0 Many of these 2.0s refer to Web 2.0 technologies as the source of the new version in their respective disciplines and areas.

For example, in the Talis white paper "Library 2.0: The Challenge of Disruptive Innovation," Paul Miller argues that b logs, wikis and RSS are often held up as exemplary manifestations of Web 2.0. A reader of a blog or a wiki is provided with tools to add a comment or even, in the case of the wiki, to edit the content. This is what we call the Read/ Write web. Talis believes that Library 2.0 means harnessing this type of participation so that libraries can benefit from increasingly rich collaborative cataloguing efforts, such as including contributions from partner libraries as well as adding rich enhancements, such as book jackets or movie files, to records from publishers and others. Here, Miller links Web 2.0 technologies and the culture of participation that they engender to the field of library science, supporting his claim that there is now a "Library 2.0." Many of the other proponents of new 2.0s mentioned here use similar methods.

Web-based Applications and Desktops

Ajax has prompted the development of websites that mimic desktop applications, such as word processing, the spreadsheet, and slide-show presentation. WYSIWYG wiki sites replicate many features of PC authoring applications. Still other sites perform collaboration and project management functions.

In 2006 Google, Inc. acquired one of the best-known sites of this broad class, Writely. Several browser-based "operating systems" have emerged, including EyeOS and YouOS. Although coined as such, many of these services function less like a traditional operating system and more as an application platform.

They mimic the user experience of desktop operating-systems, offering features and applications similar to a PC environment, as well as the added ability of being able to run within any modern browser. However, these operating systems do not control the hardware on the client's computer. Numerous web-based application services appeared during the dot-com bubble of 1997–2001 and then vanished, having failed to gain a critical mass of customers. In 2005, WebEx acquired one of the better-known of these, Intranets.com, for USD 45 million.

XML and RSS

Advocates of "Web 2.0" may regard syndication of site content as a Web 2.0 feature, involving as it does standardized protocols, which permit end-users to make use of a site's data in another context (such as another website, a browser plug-in, or a separate desktop application). Protocols which permit syndication include RSS (Really Simple Syndication — also known as "web syndication"), RDF (as in RSS 1.1), and Atom, all of them XML-based formats. Observers have started to refer to these technologies as "Web feed" as the usability of Web 2.0 evolves and the more user-friendly Feeds icon supplants the RSS icon.

Specialized protocols such as FOAF and XFN (both for social networking) extend the functionality of sites or permit end-users to interact without centralized websites.

Web APIS

Machine-based interaction, a common feature of Web 2.0 sites, uses two main approaches to Web APIs, which allow web-based access to data and functions: REST and SOAP.

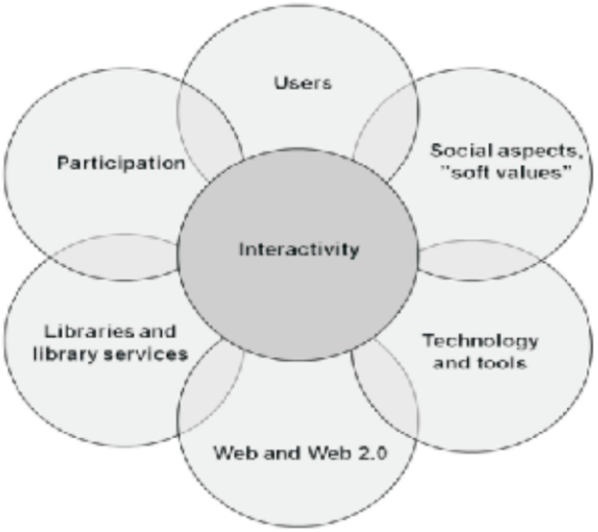
1. REST (Representational State Transfer) Web APIs use HTTP alone to interact, with XML (extensible Markup Language) or JSON payloads;

2. SOAP involves POSTing more elaborate XML messages and requests to a server that may contain quite complex, but pre-defined, instructions for the server to follow.

Often servers' use proprietary APIs, but standard APIs (for example, for posting to a blog or notifying a blog update) have also come into wide use. Most communications through APIs involve XML or JSON payloads.

Library 2.0

USAGE



Libraries were never the primary source of knowledge but they have always played a major role where people of all ages, gender and religion could go and engage with various forms of resources. The term "Library 2.0" was coined by Michael Casey on his blog Library Crunch as a direct spin-off of the terms Business 2.0 and Web 2.0. Casey suggested that libraries, especially public libraries, are at a crossroads where many of the elements of web2.0 and in non-technology based services. In particular, he described the need for libraries to adopt a strategy for constant change while promoting a participatory role for library users.

With Library 2.0, library services are frequently

evaluated and updated and to meet the changing needs of library users. Library2.0 also calls for libraries to encourage users active and empowered library users is a significant component of library2.0. 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. The user is participant, co-creator, builder and consultant- Whether the product is virtual or physical.

Key Principles

The key principles of Library2.0 are not just about access to books and information. It is about innovation, about people and about community building, enabled encouraging users to share ideas throng writing, rating and commenting against everything in the library's collection. It everything in the library's collection. It even makes the collection open to developers to use, re-use and improve again and again.

Library2.0 Concepts

* Delivery
* Constant and Purposeful change
* Adaptation
* User Designed
* User Designed
* User Created
* Participation
* User Feedback
* 2-Way Information
* Reaching new Users

Library2.0 by Bonaria Biancu

* Browser + Web2.0 applications + Connectivity = Full;-featured OPAC

* Harness the library user in both design and implementation of services

* Library users should be able to craft and modify library provided services

* Companies wanting to do business with public or academic libraries should not be creating proprietary software; Library2.0 is not a closed concept .

* Constant change is replacing the older model of upgrade cycles

* Beta is forever

* Harvest and integrate idea and products from peripheral fields into library Service models.

* Continue to examine and improve service services and be willing to replace them at any time with never and better services.

* Rigidity breeds failure

Librarian 2.0

Web 2.0 + Library = Library 2.0

Librarian 2.0 is the guru of the information age. Librarian 2.0 strives to

* Understand the power of the Web 2.0 opportunities
* Learn the major tools of Web 2.0 and Library 2.0
* Combine e-resources and print formats and is container and format agnostic
* Is device independent and uses and delivers to everything from laptops to ipods
* Develop targeted federated search and adopts the OpenURL standard
* Connect people and technology and information in context
* Doesn't shy away from non-traditional cataloging and classification and chooses tagging, tag clouds, folksonomies, and user-driven content descriptions and classifications where appropriate.
* Embrace non-textual information and the power of pictures, moving images, sight and sound
* Understand the "long tail" and leverages the power of old and new content
* See the potential in using content sources like the open content Alliance, Google print, and Open World Cat
* Connect users to expert discussions, conversations, and communities of practiceand participates there as well
* Use and develops advanced social networks to enterprise advantage
* Connect with everyone using their communication mode of choice – telephone, Skype, IM, SMS, taxing, email, virtual reference, etc.
* Encourage user driven metadata and user driven metadata and user developed content and commentary
* Understand the wisdom of crowds and the emerging roles and impacts of the blogosphere, Web syndicasphere and wikisphere

First and foremost, Librarian 2.0 understood about the users at a deep level – not just as pointers and clickers. Librarian 2.0 understood the end users deeply in term of their goals and aspirations, workflows, social and content needs, and more. Librarian2.0 is where the user is, when the user is there. This is an immersion environment that the librarians are eminently qualified to contribute to.

It is essential that we start preparing to become librarian 2.0 now. The Web 2.0 movement is laying the groundwork for exponential business growth and another major shift in the wage our users live, work, and play. We have the ability, insight and knowledge to influence the creation of this new dynamic – and guarantee the future of our profession.

Other Important Issues

- Re-conceptualizing technology integration
- New forms of Assessment
- Internet-mediated social environments and what does it mean to collaborate
- Resources Sharing and Community Plumbing of Teachers and Student
- New generations of LMS, no LMS or
- Modules – blog, wiki, P2P, content management, personal space for RSS, data remixing, interactive visualization
- Method of distributing audio programs or video over the Internet for playback on mobile devices and personal computers
- Pod casts are distributed using either the RSS or Atom syndication formats.
- Blogging Should not be only about text
- Digital Story Telling and other Multimedia Expressions
- Digital Fluency
- Interactive Visualization

Oppurtunites to Explore

- There are blogs, moblogs, vlogs, audilog
- Blogsphere is a community of bloggers-Blog can be a first component of digital portfolio developed by students
- User control of information, subscribing and relationships, new forms of expression
- Web as a point of presence, internet-mediated social environments, collective activities and plumbing
- Science of user engagement and rich user experiences
- Some speak of media revolution — "we the media" (Dan Gillmor), "voice of crowds", increased democratization and new citizenship

STAY CONNECTED AND **ENJOY** THE WEB……..**CONTINUE** TO EXPLORE

Conclusion

Webs 2.0, Librarian 2.0 are the recent web tools that can be used to provide web based information services and a variety of customized services.

References

1. Deitel.H.M. & Deitel.P.J. "Internet & World Wide Web how to Programe".3rd Edition, Pearson Education - 2006. India.
2. Gerald Marwell and Ruth E. Ames: "Experiments on the Provision of Public Goods. I. Resources, Interest, Group Size, and the Free-Rider Problem". *The American Journal of Sociology*, Vol. 84, No. 6 (May, 1979), pp. 1335-1360
3. Handbook of Research on Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications", San Murugesan (Editor), Information Science Research, Hershey – New York, October 2009.
4. Paco Gomez and Peter Zadrozny "Professional Java2 Enterprise Edition with BEA Weblogic Server", Shroff Publishers - Calcutta , November 2000.
5. http://www.Imakenenews.com/sirsi/e_article000505688.cfm
6. http://en.wikipedia.org/wiki/Library_2.0
7. http://www.librarian.net/talks/nela/
8. http://www.webbology.ir/2006/v3n2/a25.html
9. http://ashkev.weblogs.us/
10. http://www.slideshare.net/tonywh/intro-to-library-20
11. http://litablog.org/2006/10/31/web-20-becoming-library-20/
12. http://www.slideshare.net/bcg8 /using-web-20-principles-to-become-librarian-20-introduction/
13. http://www.ukoln.ac.ukoln.ac.uk/qa-focus/documents/briefing-102/briefing-102-a5.doc.

Changing Role of Librarian

Changing role of Library Professionals in the Modern Era

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Abstract : *Librarians functions have changed due to the recent developments like Internet and the emergence of digital libraries. A Librarian has to 'access' rather than simply 'possess' documents. His function is not only to identify a document but to deliver the actual information to cater to the needs of the users. The advancements in LIS field followed by the changes in Library services are discussed in this paper. Further, changing role of librarian in the technology society is covered. Importance of libraries and the responsibility of librarians in the IT era have been shown.*

Introduction

Information Technology and Globalization have become the bywords of our era. These days, libraries seem to have lost their clarity of definition. Where a library exists is no longer important, but what a librarian performs counts. Librarians have long experience in organizing knowledge and serving the user. Their roles have been changing with social advances. From the document keeper and custodian in ancient times to the reference librarian and the Chief information Officer in late 20th century, the scope and meaning of the term librarian is broadened. The major reason for this is the evolution of information and communications technologies.

As a result, many new titles have been evolved for librarians, such as information navigator, information broker, information engineer, knowledge manager etc.

Advancements in LIS Scenario

Libraries started off as store houses, where books were more preserved than utilized and librarians acted like some form of custodians and their interaction with users were minimal, say only in locating books and serving users. Libraries play different roles for different people. To some, a library is a place to read books; be furnished with the current news from up-to-date newspapers; to do research; a place to access or share information in response to a particular need etc.

Now, there is a shift in the nature of library services as a result of introduction of information and communication technology. In the information age, libraries and librarians are more essential than ever. They are essential to our economic well being, to global understanding, to the advancement of learning, for meeting the challenge of information overload, to closing the digital divide and to ensure public participation in the democratic process. Technological advances will continue to provide new opportunities for libraries to generate, manage and disseminate information, serve new and often distant users and enhance teaching and learning. Technology also will challenge the library as it seeks to equitably and affordably provide and preserve access to information. The library of today and tomorrow is a dynamic, service-oriented organization, supporting a diverse clientele with a wide range of sophisticated information, learning and teaching inputs.

In the modern knowledge society libraries have a new role and there are various types of library models. These are as follows:

- traditional library as a memory institution
- library as a learning and research centre
- library as a cultural and communication centre
- electronic library
- digital library
- virtual library as library without walls

Change in Library Services

The traditional roles of libraries can be summarized as below.

Selection	:	Choosing and acquiring information resources available in the market place, based on user needs and quality standards.
Storage	:	Maintaining the availability of publications though short-term as well as long-term storage and presentation.
Services	:	Making information resources available through facilities and procedures for onsite use, circulation, and loan from other libraries.
Support	:	Providing guidance and assistance to users, including the development of support systems such as catalogues user education and information services.

Today, there has been a shift in the role of libraries, from the clearing house of products and a service center for printed publications towards becoming an intermediary for traditional materials and for networked service based on digital information resources. Information resources come in

various format- printed, audio, video, multimedia and electronic. These resources may or may not be owned by the library. Some of these resources may be free and available to users directly, others are available only through libraries that have acquired them. Libraries themselves add value to the collection (both traditional and networked) by helping users navigate the universe of information through content development, instructions, search services, and reference assistance.

Generally speaking library user services can be divided into two categories: library public services and library technical services. Library public services refer to circulation, bibliographic instructions, distance learning, government documentation, reference and special collection. Library technical services focus on procedures and operations of maintaining, developing and supporting library collection and services behind the scene such as acquisition, cataloguing, classification, inter library loan, document delivery and serial control systems.

In 1990s, the Internet became the primary platform for libraries to build and deliver information resources, services and instructions. Lately library information services, also called library public service became evolving into two sections: traditional library information services and electronic information services.

Traditional library information services have the following major features:

1. Face to face, this face-to-face personal communication includes eye contact, facial expression, oral and written communication.

2. Onsite, this includes campus, outreach coordination and collaboration, library tour, ready reference, technical support and virtual reference services.

3. Electronic library services include the Internet and the world wide web, computerized library catalogues, digital libraries, distance learning services, e-databases, government, instant message services, interlibrary loan and virtual references.

In the digital age, the most common library information services starts from the personal oral or written communications between librarians and library users.

Changing Role of Librarians

Chaurasia, K. K. enunciated in his paper that the role of librarian needs to be redefined by the nature of services and duties performed. He defines the major roles of librarians and listed them in the following way:

- Information Technology Expert
- Information Analyst
- Information Broker
- Content Provider
- Consultant
- Communicator
- Teacher

According to Tang, Jinhong, The three major roles are waiting for librarians to assume with the coming of the new millennium:

- Global information provider,
- Educator and trainer,
- Knowledge manager.

Soundararajan E. and others have defined the following roles of LIS Professional as,

- Information Manager
- Facilitator/ Trainer
- Network manager
- Knowledge Manager

Therefore, some of the major roles of librarian are as follows

1. The library and information professionals will perform the role of IT expert, as they will guide the users for using the computers for retrieval of information.

2. They need to critically examine the originality and authenticity of the information sources.

3. They need to be equipped with the techniques used in content generation, analysis, packaging and dissemination.

4. They can play important role in suggesting resources, locating and acquiring needed materials, recommending strategies, facilitating use of technologies and instructing students and teachers in optimal information-seeking methods.

5. A librarian manages the budget and evaluates and selects new materials for purchase or access. As tasks grow in the library, the need for support staff increases. As an information center manager, the librarian will supervise and evaluate the performance of technical and clerical assistants.

Training of these assistants will take a significant amount of time and expertise. Under the supervision of a librarian, paraprofessionals may become highly proficient in database searching, computer catalog maintenance and other tasks.

6. The librarians, being expert information managers, will always be effective as a teacher, a mentor, and a guide for the different types of users.

7. Librarians also play the role of information facilitator / trainer. Their main business is to enhance the information literacy among the users of an organization.

8. Librarians work with the computer experts to create and manage web sites and intranets for the library. Librarians have to analyze, describe and organize the digital resources such as e-books, scanned images etc for efficient retrieval by the patrons. The librarian is responsible for managing the information resources, the infrastructure and staff to meet the information needs of the users

Conclusion

Libraries are an integral part of the society that surrounds it. A librarian must be able to diagnose needs, provide the required information, design appropriate information systems, and evaluate the information. Librarians need to recognize the changes that have already taken place in libraries, and to be aware of the ways in which broader societal change are affecting Libraries. In the ICT era, Librarians have to play an important role as Information manager, knowledge manager and serve the users with eminent proficiency and lightening speed.

References :

1. Chaurasia, K K. Changing dimensions and perspectives of librarianship in India. http://eprints.rclis.org/ Accessed date : 1st March, 2009.
2. Craig, E.M. "Changing Paradigms: Managed Learning Environments and Web 2.0". Campus-Wide Information Systems, 24 (3), 2007, 152-161.
3. E.Soundararajan*, C.Jayakumar* and M.Somasekharan* Role of library and information professionals in the knowledge environment. http://library.igcar.gov.in/readit2007/conpro/s1/S1_2.pdf. *Accessed Date 1 March, 2009.*
4. Meshal Al-Fadhli. Web 2.0 + Library = Library 2.0 / What is Library 2.0?' URL: www.cse.iitb.ac.in/~siva/wl2p.pdf. *Accessed date : 1 March, 2009.*
5. Mohanraj, V M. The multifaceted librarian. New Delhi : Ess Ess Publication, 2006.
6. Prinsen, Jola G.B. "A Challenging Future Awaits Libraries Able to Change". D-Lib Magazine, 7 (11), November 2001
7. PSG Kumar,2003. Foundation of Library & Information Science (Paper VI of UGC curriculum), Delhi: B R Publishing House.
8. Tang, Jinhong. The expanding roles of librarians for the new millennium. IASSIST Quarterly, spring 1998, 19-23.

Changing Role of Librarians

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Abstract : *The libraries are changing along with the changes in the information and communication technology. The traditional concept of "warehouse" is shifted towards the "information center". With these changes, the role of the librarians should also change. Librarians should be technologically fit, he should take the efforts to develop the staff professional, he should promote himself and very important the role of the librarian must be as a teacher instead of being a manager of the library.*

Introduction

Traditional libraries were the depositories of the reading material. The reading material was limited up to books and non book material. But both were in printed form. Librarians were performing the tasks like acquiring, organizing and preserving the printed documents. More, cataloguing, classification, indexing were also the key functions of the libraries.

In the last decade of 20th century, this picture has rapidly changed under the influence of advances in computer and communication fields. The paper collections have given place to networked, computer resident user searchable collections like bibliographic databases, OPAC, information systems, information centers obliterating the need for users to visit the library building with the digitization of ever increasing number of collections and advances made in computer hardware and software seamless access to digitized information located in geographically diverse locations has become a reality. Thus, the library comes out of building and the "virtual library" in a cyber space came into existence. The advent of information and communication technology changed the present society into information society,. "The information society is the society in which, the quality of life, prospects for social change and economic development are increasingly depend upon information and its exploitation,. In such society living standards, education systems, market places are influenced by information and its exploitation, this is evidenced by an increasing array of information intensive products communicated through a wide range of media. Many of them are electronic in nature." Thus libraries are changing into information centers. A number of question arise, where do the librarian stand in this scenario? Can they survive in this information society? Are they getting adjusted with this changing scenario of libraries? What changes, updates should be in their traditional role? What types of professional knowledge should they have? This paper intends to answers all these questions and focus on the changing role of libraries.

Changing Facets of the library

Internet, WWW, information centers, information systems, databases, networking are the most familiar words to the libraries now a days. Many libraries are in transit from the traditional towards the digital libraries. The information is not on the shelves in the library, but it is on the finger tips of the users. The information is communicated through a wide range of electronic media. Now ours is not the library science dealing with the traditional concepts i.e. acquisition, cataloguing, classification, indexing etc, but now it is the Library and Information Science dealing with the information contained in any form documents, electronic or digital. Not only the text is considered but the images, videos, audios, have more dimensions of the information. The new concepts from different streams are applied in the libraries. The concepts like, Total Quality Management, Financial Management, Human Resource Management, SWOT, MIS, DSS from the management are applied in the field of the libraries. The technology like, RFID, Bar Codes, Digital Signature are the new technologies introduced in the libraries.

Development of information technology is playing a crucial role in restructuring of the libraries. Shift from human dependent operations to machine dependency, mechanization(data processing) to knowledge processing, stand alone system to network computing, local LAN to wireless access protocol systems. Document centered information to user centered information, print media to electronic media, data capture methods, human to machine oriented. Library automating to web enabled services, Online information retrieval to CD ROM Databases to Internet. This shift in application of innovative IT to library and information profession can be attributed to the changes emanated in the last two decades.

Thus, the focus of the libraries is changing from "books" to the "information". The information is diversified, it is vast, it is heterogeneous. The libraries have to collect this information, organize it and disseminate it in the proper manner.

Ohh.. Librarian!…Wake up!..The World is changing…

The librarian, the traditional world, is now changed to information provider, information manager, information professional. The librarian has to deal with the information, and at the same time he has to survive and help others to

survive in the information society, in which the information is everything. The environment in which librarians work is changing in terms of greater access to a range of information, increased speed in acquiring information, greater complexity in locating, analyzing and linking information, constantly changing technology and adaptation, lack of standardization of both hardware and software, continuous learning for users and staff, management of financial investment for technology. Many authors have addressed the question of role of librarian in the new environment of exponentially growing Internet and World Wide Web. It has been postulated that librarians would play a more dynamic role than at present as guides to the information seekers in an exploding universe of information. The rise of digitized information is an opportunity to elevate the role of librarian and leads to the emergence of a new breed of librarian : "The Cyber Librarian" or "Cybrarian"- a specialist in locating information on the Internet(Hathorn,1997).

Be a Technologically Fit

In many institutions, the integrated automated library system is the only example of a fully functioning database that has intranet and internet facilities and that is available for students to learn how to access information electronically in a relatively safe environment. Even a stand-alone automated catalogue requires students to use the same skills to be able to find information electronically as those used to search the Web-a salient fact rarely advertised by the librarian and acknowledged by administration, teachers or students. Many librarians are reluctant to move over from their comfort zones and accept the new challenges that continuing advancements in technology pose for educational environments and the academic libraries.

The second step is to develop the strategies to manage the new information context. In their role as information specialists, librarians do want to have a say in policy development, the implementation of learning technologies and how they are integrated in curriculum programs in the school and how the network is used for access to information, resource based learning and curriculum development. To do this successfully, a librarian has to have some knowledge of what is happening in the world of information outside the college. For this, the librarians must be aware of the changing technologies and should try to make the applications of these technologies in the library. A librarian must possess the basic knowledge of computer and networking technology so that he can solve the minor problem on his own without consuming the time.

Professional Development of Staff

Professional development for all library staff is essential if the librarian is going to create a dynamic, multi-dimensional library and information center that is the focus of teaching and learning in your institution. All the members of the library staff need to have ongoing professional development in updating technology skills and sharing best practice with others. Librarians need to include these opportunities in the operational plan and the budget.

Self Promotion

Librarian should always promote himself. This may take the form of publicizing his success in the parent body's newsletter, giving Principal a copy of latest conference/journal paper, providing their Principal with a report of staff professional development that includes an evaluation of how this will benefit student learning outcomes or offering to share knowledge in the form of professional development session of college/institution. Librarian should take every opportunity to remind college community that the library is the centre of curriculum in the college and you are the information specialist and support teacher.

Be a Teacher than Manager

So our first challenge as librarians is to come to terms with this changing information landscape. Our second challenge is to assist others to make sense of this sea of information, which is growing exponentially. For many of us, these are fundamental challenges to overcome. We are members of graying profession. Many librarians consider that they have already had their major flirtation with technology in the form of automated catalogues, the introduction of web OPAC and the convergence of information telecommunications technologies-changes that were features of libraries in the 1990s.

In many cases librarians have become library managers, rather than teachers. While day –to-day management of the library's systems is essential for the smooth running of the facility, it is one that can be left in the capable hands of retrained library technicians. A librarian should be more in the role of a teacher and less of a manager. The first step towards taking up the challenges posed by technology is to accept that your role is not the day-to day management of the library-it is so much more.

The role of librarian is that of an "Information Technologist" (Craver,1994). Moving beyond the "warehouse concept" of traditional libraries, librarians strike out into classroom/departments to consult with classroom teachers. Suggesting resources, locating and acquiring needed materials, recommending strategies, facilitating use of technologies and instructing the students and teachers in optimal information-seeking methods replace the traditional librarians' tasks of material circulation.

More and more librarians should become teachers, it was less about the book, less about the media and more about helping library users to find information. It may be

different in every library, but the role of the librarians as teachers should grow.

Overcome the Weaknesses

In this changing environment the librarians have some weaknesses. They need to overcome these weaknesses. The weaknesses are as follows:

1. The librarians are threatened by technological change.

2. Librarians lack same level of technical knowledge in dealing with computer hardware software etc, as the concerned professionals.

3. Librarians are struggling with the user's false perception that the internet can meet all information needs.

4. Librarians need to interact with knowledgeable users and IT professionals to understand their specific needs and to add value to their products.(Smee, et.al, 1999)

Conclusion

The nature of the library is changing. Libraries are the information centers and the librarians are the information specialists. Librarians are needed to inculcate the new technological changes. Librarians should be more teacher than the manager of the library.

Bibliography

1. Heatherm, Changing Role of Librarians, The Imaginary Journal of Poetic Economics, Accessed October 28, 2009 at poeticeconomics.blogspot.com/2005/03/changing-roles-of-librarians.html.

2. Kanjilal, Uma(2004). Education and training for digital libraries: Model for web enhanced continuing education programme IN International Conference on Digital Libraries, New Delhi 24027 February, 2004. P.629-635

3. Sharma, P.L, Changing Role of Librarians in Digital Library Era and need of Professional Skills, Efficiency & Competency, accessed October 28, 2009 at htt://www.drtc.isibang.ac.in:8080/xmlui/handle/1849/407

4. Simpson, Carol(2007), The School Librarian's Role in the Electronic Age, accessed October 28, 2009 at http://www.librarybeat.org/read/show/233

Future Librarians: An overview of Emerging Issue and Challenges

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Abstract : *In modern world the role of librarian is adapting to changing technologies information and customer expectations. As the role of librarian is changing to face the new challenges posed by ICT, they must be keen to stay at the forefront of innovation in the library world. This paper covers the changing role of librarian that have a great change in near past and discuss how these are acquired and developed to remain in this field in a over changing technological environment and to face the future challenges.*

Keywords : *ICT, Professional development, web environment*

Introduction

The advent of ICT has changed the outlook of librarians. In fact the advent of computers into the library has taken an enormous burden, the librarian carried on their shoulders. As the role of librarian is changing to ace new challenges posed by ICT, they must be keen to stay at the forefront of innovation in the library world.

Technology enables all kinds of things librarians need to make effective use of evolving technologies. When there are new technologies, people rush in and try many new things. The role of a good librarian is to look at the new technologies apply new technologies to make knowledge more widely available. Today librarians have to play multiple, evolving and expanding roles to face challenges in the technological environment. A librarian should be a professional expert, web usability knowledge manager, techno literate, trainer, services provider and educator.

The way we provide information has changed and the medium with which the information provided has also changed. Amidst these sea changes, one concept of the library can remains same, that is the basic concept of librarian. The basic concept of librarian is to organize and disseminate quality information.

ICT in Developing Countries

Information Communication Technology (ICT) can help developing countries tackle a wide range of socio-economic problems, by improving access to information and by enabling communication; ICT can play a vital role in reaching to the unreached. The technological developments that have given rise to new devices and change in usage, can increase access to ICT. Recent developments in wireless and local area network technologies are raising hopes for internet diffusion in many parts of the developing countries.

The information can reach all nooks and corners with effective use of affordable technology, breaking down geographic barriers, but this requires proper planning, mindset and attitude.

Information Communication Technology is increasingly seen as a means of enabling other developmental needs rather than as an end itself.

Impact of web 2.0 on library services

That user no longer wants to be passive consumers of information but would also like to contribute their recommendations, knowledge and ideas with other likeminded people.

Users are beginning to expect speed, immediacy of information discovery and rich experience in their search for information. The web is seen as much as a social phenomenon, as it is a means for knowledge, information and communication exchange. Current delivery mechanisms do not always satisfy needs. Users expect one-stop access to content.

These trends are obviously more pronounced in the West where a whole generation of users has been exposed to web-based system and have become accustomed to network with peers using new tools.

Instant Messaging

Instant Messaging is nothing but real time text communication between individuals. There are number of new and upcoming library system which incorporate this useful utility. The advent of web based catalogues have used this utility to communicate with its users in a much more innovative and useful way.

Streaming Media

Social computing enriches the uses, experience and encourages user involvement. Streaming of video and audio media is another application that many might consuler web 1.0, as it also predates The American College and Research Libraries Project. Peer Reviewed Instructional Materials online (PRIMO) database created by a number of librarians

is a good example of how streaming media is dominating the thinking of librarians to provide multimedia experience to their patrons.

Blogs and Wikis

Blogs and Wikis are fundamentally 2.0, and their global proliferation has enormous implications for libraries. The most obvious implications of Blogs for libraries is that they are another form of publications and need to be treated as such.

Wikis are essentially open webpage, where anyone registered with the Wikis publish to it, amend it, and change it, much as Blogs. A Wikis as a library service can enable social interaction among librarians and patrons.

News Feeds

The advantage of web has made news feed reach directly into our desktops. In olden days the users searched for information, and they have to pay a hefty price for information. The advent of news feeds which are called as Relatively Simple Syndication (RSS) have seen that the news service come to the user.

Tagging

A tag is a term or subject heading assigned to a piece of information. Thus describing the item and enabling keyword based classification and search of information is made possible. Tags are usually chosen informally and personally by author/creator or by its consumer/viewers/ community. Tags are typically used for resources such as computer files, web pages digital images and internet.

Librarians: The Future

The future librarians are envisaged to connect people, technology and information in the same context; to connect using their choice in the mode of communication. Librarians who anticipate and embrace change constructively, creatively and intelligently will be the ones who are most likely to survive, proper, develop and succeed rather then decline or suffer in future. Primarily the future librarians who are termed as librarians 2.0 has to understand their users at a deeper level where more and more interactions are needed with the promise of new and upcoming technologies and services. There is no doubt that the librarians are poised for an exciting future.

Conclusion

Librarians need to implement new practices and new technologies improve performances and competencies to adopt changing technologies in order to deliver timely, value added quality content and world class services to the users from their desktop. The challenges represented by these competencies must be sized and acted upon today in order to ensure that librarians have better future in the 21st century.

Bibliography :

1. Brophy, Peter. 2001. The library in the twenty first century: New services for the information age. London, Library Association Publishing,p11.
2. Cronin Biaise, New technologies and Marketing- the challenges for librarians Aslib Procedding. 1982 34(a), p. 377-393
3. Deegan, Mand Tanner, S 2006.Digital Futures: strategies for information Age. London, Library Associated Publishing.p.6.
4. Mullins, V., Ferguson, S. and Houghton, J.(2000) INF100. The information society and Future of Library and Information services: study guide, Charles Sturt University, Wagga Wagga.p.5.
5. National Workshop on LIC Teacher and the digital future, Chennai, 2007 p.55-69
6. Witten, Ian H.et.al. 2001.Greenstone: open-source digital library software. D.lib magazine, p.7(10)
7. http://www.radar.oreilly.com/
8. http://www.del.icio.us/
9. http://www.cite u like.org/
10. http://www.oclc.org/
11. http://www.dspace.org/
12. http://www.greenstone.org/

Changing Role of Librarian in A Challenging Modern Era

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Abstract : *LIS has the fundamental goals of creating, disseminating, utilizing and preserving knowledge. The World Wide Web affords unprecedented access to globally distributed information. IT innovation is delimited by the degree of difficulty involved acquiring access to web related library information. Current role of Library and Informational Professionals explores their knowledge for the effective application of library resources. The gateway access of information resources and services is based on development of ICT and Web technologies. It is necessary for them to survive in ever changing modern digital environment to meet the future requirements. It is very clear that nowadays libraries are moving from a warehouse perception to information gateway. This paper analyses the role of Library Professionals in Modern digital environment, highlights the emerging additional responsibilities with technologies and applicability in facing new challenges due to ICT development.*

Keywords : *Challenging services, Changing Library technologies, Web based Knowledge Management, Future LIS Professionals.*

Introduction

As development of ICT changes all subjects and fields, there is no exception in library science. There is a vast change in the fields of Information technology, multimedia and information superhighway in modern era. Based on these developments, current Library Professionals have to be more dynamic, collaborative and informative. Developments in information communication technology (ICT) have enabled libraries to provide access to all and also bridge the gap between the local, national and the global knowledge. They have to deal with growing number of information from ICT, E-Commerce, Electronic and Multimedia Publishing, Internet based Information Services, Global Networking and Web based Digital Resources, Competition Intelligence for Research Scholars, Scientists and Working Professionals. This may extend to information needs of ordinary rural citizens where their service may be expected to deal with the needs of the digital divide, information poor and illiterate. Library Professionals have to deal with selecting, organizing and instructing patterns in using and preserving resources. To provide online informations, librarians have to give access to their users. This is the development of creating traditional librarians into E-Information Professionals. This paper presents the change in role of library and information science professionals and their new responsibilities.

New Challenging Professional Services by current Modern Library Professionals

The development of ICT creates a lot of changes in knowledge society. Dr.APJ Abdul Kalam, former president of India in his talks to students mentioned that, "Efficient utilization of existing knowledge can create comprehensive wealth for the nation and also improve the quality of life including better education, health care, infrastructure and other societal needs. The ability to create and maintain a knowledge society infrastructure, develop the knowledge workers and enhance their productivity through the creation, growth and exploitation of new knowledge, will be the key factors in deciding the prosperity of this knowledge society. Whether or not a nation has developed into a knowledge society is judged by the way it creates and deploys knowledge in all the three sectors of the economy, namely, Agriculture, Manufacturing and Services." In digital era, knowledge forms a major component of library activity. Earlier Librarians used to maintain their list of books records through card catalogue system. Next generation started using OPAC. This method converted into Web OPAC, Multi Web OPAC, WorldCat etc. Similarly, online informations extend up to online study, online Issues/Return, online E-Books, E-Journals and use of RFID (Radio Frequency Identification) technology. In this modern digital era, information professionals have to explore their knowledge with relevant ICT and searching capacity. Current library services extend to library database maintenance, E-Resources like E-Journals, E-books etc. Librarian's service and responsibilities extends to E-learning environment like updating Library portals, Open Source software, library automation, digital preservations, metadata standards etc. Librarians working in reputed universities and colleges where they have more branches of the educational institutions, their service extends till Institutional repositories, Intranet informations in Wi-Fi campus. Also, Information professionals should be aware of Digital rights, Cyber law, Copy rights, etc. The updated additional responsibilities of LIS professionals are listed below:

Sl.No.	Types of LIS Professional services	Additional responsibilities of LIS Professionals
1	Cataloguing system	a. OPAC, b. Web OPAC
2	Interaction with LIS Professionals	c. Multi web OPAC a. Ask a Librarian b. Chat with Librarian
3	Online reference service	c. Mail to Librarian a. Online Search b. Online CAS
4	Database Management	a. Maintaining databases through software b. Data mining c. Neural network
5	Adoption of RFID Technology	a. Online Self Issue/Return b. Online availability checking c. Online reservation system d. Wi-Fi connectivity e. Advanced stock verification
6	Digital Trends	a. E-books b. E-journals and other e-resources
7	Digital Standards	a. Metadata standards i. MARC ii. Dublin Core b. Web 1.0 to latest version c. RSS feeds
8	E-Learning	a. Digital Library b. ETD c. Institutional repositories d. Library Consortia and Networks
9	Open source software	a. Knowledge Management b. Open access
10	Web technologies	a. Library Portals b. Library websites c. Gateways d. E-resources e. Open access to Library URL

LIS professionals should be familiar with search engines like Google, Altavista, Lycos, yahoo, open text and other search engines, new relevant library search engines and networks to assist for the user needs.

Recent developments in libraries, associated with Digital Library E-Resources, Consortiums etc. Some of the important consortiums are

1. ACM DIGITAL LIBRARY (www.il.proquest.com)
2. IEL online (www.ieee.org)
3. DEL (www.digitalengineeringlibrary.com)
4. COMPENDEX PLUS and INSPEC (www.engineeringvillage2.org)

Changing Library Scenario

Reading methodology is converted from traditional to Hi-Tech Wi-Fi environment. The user community wants informations on their pockets immediately. To fulfill this requirement by devices the users, libraries are equipped to access the useful informations instantly. This is the reason modern web based libraries have started growing up. They are delivering high quality informations, on demand. The traditional library is converted into automated library, Digital library, Virtual library according to the user requirements. The four wall library is converted into internet library, any time – anywhere access libraries. There is an impact of ICT on library. IT , made librarians to work in digital environment with modern technical push. The digital library and virtual library provide informations in electronic format. To manage informations online, librarians has to change their role as information professionals with updated ICT knowledge. The utilization of e-resources leads to other challenges such as reduction in their budget, limited space, no addition fund to provide new building, demand to high quality service, which is converted into distributed learning with dissemination of information.

Web based Knowledge Management in digital era

Knowledge management of an organization is to create, represent, and distribute the experiences and knowledge of the individuals and groups. In recent years the sources like web and internet help users to send information instantly in inexpensive way. Thus, web has the way to effective of accessing global informations with wide range of products. The web based knowledge management is fundamentally very inexpensive and simple to handle. Through web, it is possible to share the resources like UN Catalogue, accessing databases over Networks, Retrieving full text journals, OCLC, Ohio net, ILLINET, WLN, BID (UK). This resource has web portals, WEB-OPAC and the web based user services are carried out by sharing resources and knowledge through Networking. OCLC, LOC online catalogue are the best examples for web based knowledge resources. Knowledge resources can be developed with knowledge extraction, knowledge mapping, groupware, data mining etc.

Future Information Professionals

The new ICT application in the libraries is improving the effective utilization of the library resources, so that the role of LIS professionals is also enhanced. The new technologies started from ICT trends, search technology, digital resources, metadata Standards, subject gateways, Information portals, online study, Wi-Fi connectivity, RFID Technology and E-Learning Environment. With adoption of these latest technological competencies there is bright professional future is waiting for Librarians. LIS professional's modern skills and technological working knowledge may change the role of librarians to Information Professionals, Cybrarians, E-Resource Managers, Knowledge Managers, Internet Cataloguers, Metadata Scientists, Internet Information Consultants, System Librarians, E-Publishing Managers, Information Advocates, Web Masters, E-Product Managers, Navigators, Digital Library Directors etc. The future roles of the LIS professionals are structured as follows:

Conclusion:

Librarians have to navigate into technical informations, to face the future challenges. Their responsibility may increases from traditional physical book keeping and verification to manage digital challenge, improve performance with ICT, managing library portals, extending services for faculties and students through online access. Their competencies have to face the future challenges of ICT and knowledge society. In the modern era, to turn library professionals into E-Information professionals, they have acquire new skills in the area of ICT, web world, handling databases, documentation management, data mining, content management, knowledge mapping and the new upcoming technologies with their own interest. It is very sure that future library professionals will be effective information extractors and integrators.

References:

1. www.talis.com

2. www.ukoln.ac.uk

3. www.ala.org

Presentations

Reengineering of Libraries: A Process Overview

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Introduction

The methods like time and motion study, division of work and other principles of management propounded in the late 19th century by F. W. Taylor were the first generation of efforts to improve the manufacturing efficiency. Most of those so called principles of *Scientific Management* were profitably adopted by the manufacturing sector over the decades. As the competition became intense with globalisation and advent of powerful tools of information and communication technology (ICT) a fundamental revision of the old practices for both manufacturing and services sectors became due. In his paper, "Reengineering Work: Don't Automate, Obliterate", *Harvard Business Review*, Jul/Aug 1990, pp 104-112, M. Hammer, former Professor of Computer Science, MIT, U.S.A. argued that ICT has been used primarily for automating existing work, rather than using its full potential for value addition to the customers. He urged to *reengineer* the business processes in order to maximise customer value, while minimising the consumption of resources required for delivering the product or service. Since then the concept of reengineering attained wide popularity and has been applied across several sectors. It is believed that by subjecting the services and processes to reengineering, utility of the library can be enhanced in the new era.

This note examines basic issues related to planning and implementation of reengineering of the library. Design and delivery of new services by the academic library are outlined in particular. Evaluation criteria for the reengineered library and emerging role for librarians in the future are also highlighted.

Library Reengineering

Basically profound rethinking and redesign of any system to achieve *radical* improvements in respect of the performance parameters like speed, service quality and cost characterise the reengineering process.

In case of the library abundance of information, short currency of information, and various modes for accessing information prompt its reengineering to meet expectations of the users of the present and forthcoming digital age. The following three approaches are suggested for this purpose. The selection of the approach would of course depend on the library environment.

Examine the working of library as a system and move backwards to understand its mechanism and create a better system.

Tinker the library system selectively to steer towards new goals.

Redesign the library system completely by starting afresh.

Library Development Drivers

Further development of the library is expected to be governed largely by the below given factors.

Needs: users in future will require information obtained from various sources in a compact manner say in a digital compendium form, and also the delivery of various library services provided through his mobile phone or similar gadget.

Resources: the return on investment or cost effectiveness of the library services would be the factors guiding resources allocation by the management.

Technology: constantly evolving technology, particularly the digital ICT would offer numerous opportunities to extend the scope of library services as never before.

Since the ICT will have a major impact on the library it would be useful to list its products and systems relevant for the library as given below.

Basic:

Computer [Desktop Computer, Server, Web]

Communications [Networking, Personal Digital Assistant (PDA)]

Sensor [Bar Coding, Radio Frequency Identifier (RFID)]

Reproduction [Digital Scanning]

Audio & Video [Podcasting, Digital Camera]

Advanced:

Data Mining (Bibliomining), Web Mining

Web 2.0 and Library 2.0

Geomatics or Geoinformatics

Expert Systems

Encryption Technology

Grid Computing & Cyberinfrastructure

Library services, entirely new in character, can be produced and delivered thanks to convergence of several of the above technologies. And such possibilities will increase in future with technological advances.

Methods for Reengineering

Generation of new ideas or ways to look at the situation from different perspective lies at the centre of the reengineering process. Incubating, that is constantly thinking over the issue is one method at the individual level to come out with novel strategy or innovation. However, collective efforts can facilitate the process through cross-fertilisation of ideas and pushing the right ones to the implementation stage. Some of the standard methods for this purpose are,

Brainstorming

Brain Writing

Delphi Method

Cognitive Mapping

SWOT Analysis

Service blueprinting is another method found useful for redesigning the services. Here visual picture of the processes in use to deliver a service is prepared. It helps in identifying potential service system shortfalls called *fail points*. A fail point exists whenever there is a gap between what the system delivers and what the end customer has been led to expect. Fail points can occur routinely or sporadically. If shortcomings occur sporadically, then the designer must compare their frequency with the level of service specified by the strategic planning process. In the library this method can be employed in variety of ways. For example drawing of *servicescapes* for improving library surroundings such as ambient conditions, spatial layout, signs and symbols to improve functionality is suggested. For a digital library in parallel, improvements in the library web site to facilitate understanding the content and navigation are suggested.

It is often observed that environment for the library operations is either not properly defined, or it has too few dimensions, or too many dimensions. This leads to poor design or redesign. To address these issues and come out with new strategies the methods under *Generic Design Science* can be employed (Warfield, J. N., *A Science of Generic Design: Managing Complexity through Systems Design*, Salinas, California: Intersystems, 1990). To list all possible factors affecting the situation to capture the variety is the first step of this methodology. Next step is to identify a few critical factors from among those listed so that addressing them would serve the whole system. Final step is to come out with alternative design solutions having the salient features from which the suitable one can be selected. This methodology gives ample scope for active participation by all the stakeholders.

New Academic Library

The academic library can be reengineered to take on the following new tasks employing the advanced tools of information and communication technology:

Supplying previous examination question papers with model answers [in print & digital form]

Providing immersive experience of the information for the users who spend lot of time playing video games.

Designing admittance facilitating system where a single log-in should be sufficient to access all the library resources

Ensuring continuous access to the resources like e-journals & databases

Supporting e-learning and information literacy

Avoiding information excess and supplying the precise information alone

Making alumni life-long associates to reskill and enhance their knowledge

Reducing e-fences or barriers

Handling of IPR, digital rights management issues and e-security

In fact a new role for the academic librarian called *Blended Librarian* is envisaged where besides the traditional librarianship the command over the IT and instructional design is expected of him. He also takes position as campus innovator to spread information literacy (for further details see www.blendedlibrarian.org). By providing faculty members and students relevant learning material to support their activities and by applying design thinking for this purpose blended librarianship would help academic libraries to gain critical importance.

Another model is of *Embedded Librarianship* where the librarian moves outside the library and works with customer groups intensively. His domain knowledge, LIS training and ICT skills help him in close collaboration with the group. He is expected to provide focused reference service and share responsibility for achieving goals of the group (see http://www.sla.org/pdfs/Embedded Librarianship FinalRptRev.pdf).

Judgment Criteria

To evaluate the functioning of the reengineered library the following questions could be asked:

Efficacy – does the means of transformation work?

Efficiency – is the use of resources optimised?

Effectiveness – is the transformation meeting long-term aims?

Ethicality – is the transformation morally acceptable?

Elegance – is the transformation pleasing from an aesthetic point of view?

Conclusion

It is clear that in the rapidly changing technological milieu and evolving socio-economic conditions the library will have to renew itself periodically to meet the new demands. To initiate the requisite reengineering process the library will have to examine each and every aspect of its working. The inquiry about the best way to do the given activity, its relevance and value addition to the patron will be at the core of this process. Systematic methods outlined above can help in reengineering the library to chart new ways to serve the society gainfully as in the past.

Reengineering (RE) : A problem solving technique for libraries

Dr. Rajendra Kumbhar
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Re-engineering (RE) : a problem solving technique for libraries

By
Dr. Rajendra Kumbhar
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The presentation -

- Narrates current ***changes*** in library materials, practices and services
- Discusses the ***problems*** faced by librareis due to these changes
- Explains ***how re-engineering helps*** libraries in solving these problems

Overview

- User satisfaction is the ***sole aim of*** libraries – TQM
- Competition amongst libraries – NAAC, NAB, foreign educational institutions
- Increasing user expectations

Changes in library scenario and problems posed by them -1

- Reading material (online, offline, IR, OAI, e-journal, printed –fast production, increased number, BC?)
- Increasing prices
- Drastic changes in the production process of e-journals
- Cooperation amongst publishers e.g. full-text and bibliographic databases
  - ***Is this lesson for libraries (***e.g. providing search result packages to other libraries / users)

Changes in library scenario and problems posed by them -2

- Machines (new hardware /software, OSS) : need continuing education
- Processes (digitization, use of software for housekeeping)
- Money (resource generation, non-grant institutions expenditure-based fee policy)
- Publishers are marketing
  - integrated digital libraries which are -
    - targeted and tailored towards end users
    - ***Will they be alternatives to libraries?***

What is ***Engineering*** and **Re-engineering?**

- ***Fundamental rethinking*** and ***radical redesign*** in working methods, practices and processes

  to *achieve* ***dramatic improvements*** in cost and quality of library services, practices, and process

Area of RE: Collection Development - 1

- Re-engineering can help to –
  - expand the breadth and depth of collections (e-publications, consortia)
  - eliminate duplication
  - saves costs and space

Area of RE: Collection Development -2

- Re-engineering helps to –
  - reframe policies about
    - Access V/s ownership
    - Consortia – need should be the main criteria ***not availability of funds***
    - Maximum use of online bookselling facilities for useful collection development – BC, reviews, competitive pricing

Area of RE: Services and information products

- Re-engineering helps to-
  - Change the service orientation – 24X7, virtual reference, EDD, Internet / database search
  - Develop portals
  - Develop IR
  - Organize Information Literacy programmes

Area of RE: Library Facilities

- Re-engineering helps to-
  - Develop reading-rooms equipped multi-media facility (in addition to reading-room for 'quite' reading)
  - Develop Information commons (reading faciltiy internet, human help, along with the facility for coffee, and lounge for leisure reading with attractive book displays)

Area of RE: Professional immage

- Re-engineering helps to-
  - Adopt the ***faculty-researcher model*** , carryout and publish research
  - Perform as knowledge navigator
  - Consortia builder
  - Lincense administrator

LIS professionals : RE experts

- Online acquisitions
- Retrospective conversion
- Barcoding, RFID, etc.
- Library Management softwares
- Library websites
- webOPAC
- Portals
- Blogs

Re-engineering – success *mantra*

- Start with great ideas – think big
- Increse visibility
- Get evey staff involved
- Take risks

To sum up ...

- LIS professionlas have re-engineenered, are re-engineering and will re-engineering, ***successfully*** the libraries so as to serve the human race in furure also

Thanks !

Web 2.0

Applications for Library & Information Services

Mr. Kishor Ingle
TCS Internal

Web 2.0

Applications for Library & Information Services

20 November 2009 TCS Internal

Web 1.0 Vs Web 2.0

- Web 1.0 was about reading (Read Only)
- Web 1.0 was about companies
- Web 1.0 was about client-server
- Web 1.0 was about HTML
- Web 1.0 was about home pages
- Web 1.0 was about lectures

- Yahoo mail (old features)
- E-mail
- Newsletters
- Static
- Isolated

- Web 2.0 is about writing (Read/Write Web)
- Web 2.0 is about communities
- Web 2.0 is about Browser
- Web 2.0 is about XML
- Web 2.0 is about blogs
- Web 2.0 is about conversation

- Gmail
- IM
- Blogs
- Dynamic
- Interactive

List of Web 1.0 Vs Web 2.0 comparisons by Tim O'Reilly

Web 1.0	Web 2.0	Utility
DoubleClick	Google AdSense	Advertising
Photos on web pages	Flickr	Photo sharing
mp3.com	Napster	Music sharing
Britannica Online	Wikipedia	Encyclopedias
Personal websites	blogging	Personal pages
Publishing	participation	Content creation
Content management systems	wikis	Content management
directories (taxonomy)	tagging ("folksonomy")	Content classification

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Web 2.0 Tools

- Blogs
- RSS
- Wikis
- Social Bookmarking
- Instant Messaging
- Social Networking
- Podcast
- Twitter
- Mashups
- Folksonomies

Blogs And RSS Feeds

- What makes a blog different?
  - Dated entries ("posts") { These are in reverse chronological order}
  - Frequently updated / can have one or more contributors
  - Each "post" has a permanent webpage created automatically ("permalink")
  - Content is syndicated to users ("RSS feed")
  - Readers can leave comments
  - Posts are archived (Automatic archiving)
- More features…
  - Categorization & Searching of posts is possible
  - Tagging the content of posts
  - No need to know HTML

Blogs : Library Applications

Library Blog
- New Additions List
  - Users will subscribe to an RSS feed notifying them about new books added in library
- Recommendations for library
- Users Members post book reviews to a library hosted blog
- News / Library Circulars / Alert Services / CAS
- Current events
- Interaction with library users
- Market and promote different library services
- User Feedback

What Makes a Successful Library Blog?

- Currency
- Frequency
- Relevance to library or User needs
- Well written
- Interaction with users through comments
- Tips for successful blogging…
  - Collaborate
  - Edit
  - Interaction
  - Purpose

Free blog applications

- Blogger http://www2.blogger.com/
- WordPress http://wordpress.org/
- LiveJournal http://www.livejournal.com/
- Diaryland (hosted) http://www.diaryland.com/
- Pitas (hosted) http://www.pitas.com
- Slash (open source app) http://www.slashcode.com
- Greymatter (open source app) http://noahgrey.com/greysoft/
- LifeType (open source app) http://www.lifetype.net/

Wikis

"A type of website that allows anyone visiting the site to *add*, to remove, or otherwise to edit all content, very quickly and easily, sometimes without the need for registration. This ease of interaction and operation makes a wiki an effective tool for collaborative writing."

http://en.wikipedia.org/wiki/Wiki

In short its.. "… collaborative websites where users can add, edit, or delete content on a certain topic, using a web browser ..."

- What makes a wiki different?
  - Multiple users may edit content
  - Searchable
  - No formal HTML coding experience needed
  - Very similar to many content management systems

Wiki : Library Applications

- Why use a wiki in your library?
  - User Manuals
  - Document management (i.e. training documents, manuals, meeting minutes, etc.)
  - Collaboration by many (faculty, students, community users, etc.)
  - Knowledge base
- Useful features…
  - Track recent changes
  - (RSS feeds can be incorporated so users can be notified immediately)
  - History of page revisions
  - (With some wiki apps, you can revert back to a previous version of the wiki)
  - Accessibility of documents and information through a web-based browser login (can be password-protected)
- Some disadvantages…
  - Mostly text-based
  - Anyone (if you don't require login) can contribute and edit documents
  - Must use special "wiki" editing syntax to make changes or contribute content – this can be cumbersome for some users to learn

Wiki Tools

- PBwiki http://pbwiki.com/
- MediaWiki http://www.mediawiki.org/
- DokuWiki http://wiki.splitbrain.org/wiki:dokuwiki
- TWiki (open source app) http://twiki.org
- ClearWiki (free for 10 users) http://clearwiki.com/
- Wetpaint (free) http://www.wetpaint.com
- SeedWiki (free; multiple wikis) http://www.seedwiki.com

Social Bookmarking

"These tools "allow users to tag Web sites and links and to share their finds with other communities of users."

Laura Gordon-Murnane in *Searcher, June 2006: pp. 26-38*

- del.icio.us: http://del.icio.us

Social Networking

- Orkut
- Facebook
- LinkedIn
- Flicker

Instant Messaging

- **Online Reference System**

PODCAST

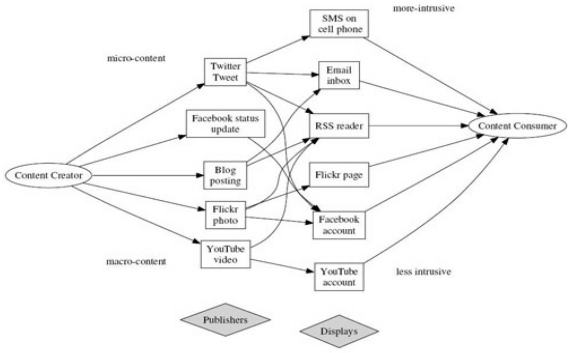
Its " … syndicated audio or video content in a multimedia file meant for play on a handheld device (such as an iPod) or a personal computer…"

- Why should libraries create podcasts?
  - Library tours
  - Special events
  - Story times
  - Book reviews
  - Readings
  - Guest lectures
  - Campus events
  - Student research presentations
- Podcasting Tools
  - Gabcast http://www.gabcast.com
  - podOmatic http://www.podomatic.com/home
  - Odeo http://www.odeo.com

Other Ways to Collect, Share, and Communicate in Real Time with Others

- Google Docs & Spreadsheets AND Gtalk
- LibraryThing: librarything.com (sharing books)
- SlideShare: slideshare.net (for sharing PPTs)
- Senduit: senduit.com (for sharing files)

Information Flow in Web 2.0



Thank You !!!

Role of Librarians in Reengineering Libraries

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Introduction:

The libraries are changing its practices in the changing environment due to use of emerging technologies and management techniques and these made to shift the processes in the library. Every library and librarian is facing the challenges to maintain the libraries properly and support to the users needs. Due to information explosion, crunching budgets, growth in R and D, users varied requirements, etc. made the library professionals to re-engineer the library activities by accepting the technology and management support. There is a scope in the modern era to share the resources and develop the proper collection development to support the needs of the users. The re-engineering libraries are one of the methods to run the libraries in the proper direction using the technology. Re-engineering term is used in 1990 in the business world initially, which indicates the reinventing the process. The re-engineering term is homonymously used as restructuring, reorganizing, retooling,redesigning, regenerating and reshaping libraries etc.

What is the concept of re-engineering Libraries?

From the various definitions cited by the many experts, it is concluded that the

- Re-Engineering brings the changes in work, practices, processes, and carry out the better services to the customers (in LIS Users), clients, etc.

- It is a process of reorganizing or restructuring the existing system using the modern developing trends

- Re-engineering is restructuring the old processes and convert to the new using the technology for the benefits to all

The terminology used and purpose may be different but its main function is to develop the library to sustain in the modern trends and development.

Examples of Re-engineered libraries:

In the developed countries the practice of re-engineering the libraries followed in public libraries, Academic libraries and special libraries to bring changes in the user services provided to the users.

In India also the use of technology is prominent and now applying the technology for the betterment of the library and its services by means of having

- Revision in Syllabi to fulfill the professional needs

- Use extensive technology for the search of information and LIS activities

- The specialized libraries, University libraries, organizational libraries have reached to the top but still many have to follow

How to re-engineer?

While re-engineering the libraries there is a need to understand the change, plan for the re-engineering activities on priority requirements, take shelter of the technology to get the proper results, train the staff to support the activities etc. Along with this there is a need to work in team. For bringing the change in the processes it is necessary to train the staff, motivate them as well as motivate for the capacity building. With the technological aid, tools and the new management concepts assist in building the new horizon in the profession and professional activities.

The results of the re-engineering is fruitful due to changing practices and enhanced services to users form various collections available on the net which , increasing the faith on library services and procedures.

Role of library professionals in achieving the Re-Engineering in Libraries:

The re-engineering is necessary due to environmental changes in the Libraries, and also for the better use of the collection. The term is used in various terms like Re-designing, restructuring, reorganizing, regenerating, reshaping etc and the meaning is the same that there is a need in changing the practices.. It is nothing but redoing the activities to get maximum benefits to all users, organization and library professionals etc.

The need to reengineer the libraries is to face the Information explosion, controlling the budgets and prices, satisfying the users demands etc. The librarians are the main players in re-engineering the libraries. Every Library professional is trained in accepting the challenges and modernizes the LIS functions.

While taking the decision to re-engineer the library the following factors need to be considered.

1) **Acceptance of Technology:** The technology applications in LIS are increasing and they are fruitful. The Digital media proved to be a boon. The automating libraries, development of Digital Libraries, use of Internet, Web tools and digital information resources These made the reengineering process simpler and also saved the space, maintenance, the budget (Finance) etc. The access to information is also fast and economical. The communication and computer technology assisted in achieving the Resource sharing. Thus technology adaptation assisted very well for this aspect

2) **Survey of the Library and users:** It is now necessary to consider the aspect of user satisfaction and understanding the user expectations, user-seeking behaviors etc. This is helpful in developing the proper need based collection in the library, which may have user base.

3) **Re-engineer the collection**: The collection Development policies must be fixed and the intake will based on the needs and objectives of the organization. The various policies regarding utilization of budget, weeding policies, electronic information resource policies etc are helpful in reengineering the activities.

4) **Information Audit**: There is a need to collect the qualitative material in the library and this need the evaluation and auditing the use of the information resources periodically.

5) **Information Literacy**: It is necessary to literate for the newer technology and management techniques. This helps in adapting the newer technologies, which are benefited for the re-engineering of the issues. Libraries must adapt the Information Literacy concept and also trend the users, this will assist in searching the proper information for the users.

6) **SWOT analysis**: to Reengineer the practices in libraries SWOT analysis is definitely useful. This will improve the process in reshaping the activities.

7) **Participation in Resources Sharing**: There is a need to adapt such policies, which are helpful in maximizing the user services from the multiple data resources. The trends like Consortium need to be followed more everywhere

8) **Web 2.0 tools**: Web 2.0 tools are very useful in reengineering the library and assist to the user participation in services. The contribution to knowledge using web 2.0 is also a need to develop Lib 2.0 and improves in LIS services.

9) **Adaptability skills:** It is also necessary to adapt the skills in the developing area in LIS. The skills like Creativity, knowledge building, Initiative to participate in technology, Risk taking, Collaborations, innovation, problem solving techniques learning, Communication skills and searching information skills are few of them

10) **User Training programs:** It is also necessary to trend the users in accepting and using the technology properly and efficiently for the information gathering. Such programs need to be conducted by the library professionals regularly along with self-training.

11) **Database Development:** The library professionals must be involved in the creation of the databases of their valuable data collection. This will assist in quick managing the resources and its proper information retrieval..

12) **New management techniques:** It is required to apply the new management techniques in the profession to re-engineer the library practices like cost effective and cost benefit practices, acquiring qualitative information resources, hence new techniques could be very useful to redesign the libraries.

13) **Outsourcing :** Outsourcing few activities which are less important like , programming, data entry, stack management, cleaning, etc

Conclusion:

Librarian is a partner in redesigning the library**.** Librarians must become fully involved in the digital revolution and accept new methods of developing their collections, services, improve functions etc. The technological skills will be helpful in reorganizing the libraries.

Bibliography:

1) Brodie, M and McLean, N (1995) Process Re-engineering in Academic Libraries : Shifting to client-Centered resource provision. Cause/Effect Summer 1995 pp 40-46

2) Graves, Karen J. and Martin, Elaine R. (1998) : Reengineering the Library for improved access to Electronic Health Information : One Research Library Experience. INSPEL , 32(3) PP 182 to 188

3) en.wikitionary.org/wiki/reengineer

4) en.wikitionary.org/wiki/reengineering

5) www.wiley.co.uk

B.N. Bandodkar College of Science, Thane

Conferences/Workshops/Seminars conducted till August 2009

National / State Seminar :

1. **Wonderful World of Insects**
   3rd December 2008, conducted by Zoology Department
2. **Contaminants in Food and Beverages**
   6th October 2007, conducted by Statistics Department
3. **Linux Thane 2006**
   24th – 25th November 2006,conducted by I.T. Department
4. **Einsteins Theories & Present Scenario**
   17th – 19th November 2005, conducted by Physics Department
5. **Human, Health & Nutrition – A Biotechnological Approach**
   12th – 13th December, 2004, conducted by Botany Department
6. **Creeks, Esturies and Mangrooves Pollution and Conservation**
   28th – 30th Nov. 2002, conducted by Zoology Department

Workshops :

1. **Refreshing Chemistry for Biologist 2006**
   26th September 2006, conducted by Chemistry Department
2. **Financial Mathematics**
   26th August 2006, conducted by Mathematics and Statistics Department
3. **Vedic Mathematics**
   5th December 2005, conducted by Physics Department
4. **Statistics for Nonstatistician**
   27th – 29th September 2005, conducted by Statistics Department
5. **Laboratory Safety**
   30th January 2004, conducted by Chemistry Department

B.N. Bandodkar College of Science, Thane

Library

Timing : 07.00 a.m. to 8.00 p.m.

Home Issue Timing : 10.00 a.m. to 12.30 p.m.
: 02.00 p.m. to 04.00 p.m.

Seating Capacity

Reading Hall : 125

Reference Section : 8

Collection

- Books : 20212
- Reference Books : 15547
- Special Reference Books : 640
- Textbooks : 4025
- CD's : 408
- Bound Periodicals : 370

E- Resources

Paid Databases:

- J-Stor
- Proquest
- CMIE
- Manupatra
- Artstor

Open Access Databases

Open J-Gate
DOAJ (Directory of Open Access Journals)
DOAR
SSRN (Social Science Research Network)
SSIG (Social Science Research Gateway)
ERIC (Education Resources Information Center)
Pubmed

Services

- Home Lending
- Reference Service
- Referral Service
- Book Bank
- Reading Hall
- OPAC
- Issue of CD-ROM
- Inter Library Loan
- Issue of Identity Card: Identity cards are issued to the students through the library

External Membership Facility

Journals and Magazines:

2 International Journals and 37 National Journals

25 Magazines and 10 Newspapers

Vidya Prasarak Mandal, Thane

Group of Educational Institutions

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2. Sou. A.K. Joshi English Medium School
3. B.N. Bandodkar College of Science
4. K.G. Joshi College of Arts
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14. VPM's Academy of International Education and Research