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Best Practice in E-Era for Librarians and Users

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ABSTRACT

This paper defines the concept and describes the best practices in e-era and how it beneficial to librarian's and its users in digital era. It discusses importance of introducing best practices in a modern library and information centre to enable it to improve its processes and activities, optimize resource utilization, and deliver high quality, value added services to its users. This paper concludes that the best practices is not a onetime solution, but a continuous process. The sense of curiosity, willingness to change and learn from experience of others, and pursuit for superior performance can lead the librarians and libraries to Best Practices.

Keywords: Library recent trends, Library 2.0, E-Learning Technology, Digital Library, Virtual Library, Deep web

1. INTRODUCTION

Today, we are living in the age of Information Technology (IT). The storage and retrieval of information has taken various forms and formats like on-line databases, Cd/DVDs, telecommunication facilities, internets and web etc. now a modern library has to provide a package of many related service with the help of computer networking which enable the interlinking of libraries information centre to pool resources and services irrespective of their physical location.

The information explosion can be faced by the application of ICT (Information Communication and Technology) and networks in libraries. We see traffic jam sometimes on the networks because of user explosion. 'Data Traffic' will be more than 'Voice Traffic' on the telecommunication infrastructure. Now 'Chat service' (both voice and video) or 'video conferencing' is possible sitting in different counties. IT has an important role in library management.

Traditional reference sources are going to be greatly affected by internet and development of Information Technology. Reader's today quarries can be better answered through the use of Internet and Information Communication and Technology (ICT). Now the Libraries should make directory or Web dictionary of all the important websites relating to education and other subjects courses. It will make the students more confident and self-reliant to explore new websites for more knowledge.

2. INNOVATIVE TECHNOLOGIES

2.1 Library 2.0 /Web 2.0

Library 2.0 is an independent technology given the fact that every library activity designed or built with active participation and feedback of its user's community qualities to the concept of library 2.0. However, Web 2.0 technologies can help libraries to create collaborative and participative environment that is necessary to deliver user-centric library service and to create new resources and build upon existing once using collective intelligence of user. This technology gives libraries to ability to offer improved customer driven service to their users.

2.2 Categories of Library 2.0

- Synchronous Communications – Instant Messaging (IM)
- Content Delivery – RSS / HTML Feeds
- Streaming Media
- Pod Casting (Broadcasting and iPod)
- Vodcasting
- SMS Enquiry Service (SMS)

2.3 Services

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Vol-22-Issue-14-December-2019

- Social Network Service – My Space, Facebook, Twitter, Flickr etc.

3. WEB-BASED \ ONLINE LEARNING

3.1 E-Learning Technologies

For e-learning to take place, all that is required essentially a computer with an internet connection and browser for accessing web courseware. However, e-learning may involve the use of some or all of the following technologies.

- Computers – desktop, laptop etc.
- Networks – internet, intranet, extranet
- Interactive whiteboards
- Digital cameras and videos
- Audio – Video tapes
- Interactive TV and satellite broadcasts
- Cd's and DVDs etc.
- Electronic Communication tools, including e-mail, discussion forums, and chat facilities virtual classrooms, video conferencing etc.
- Virtual Learning Environment (VLEs)
- Managed Learning Environment (MLEs)
- Wireless and mobile technology including mobile phones.

3.2 Recent trends and technologies in e-learning

- If we carefully study the pattern of the changing trends in e-learning, we will certainly be able to understand why and how e-learning will continue to be a driving force in education as well as business.
- E-learning as a business strategy
- Application-specific e-learning solutions
- Blended learning
- Online collaborative learning
- Use mobile or wireless technologies
- Use of variety and combination of e-resources ie, informal e-learning
- Digital Game-based learning
- Instant Messaging (IM) & Chat
- Live e-learning
- Peer-to-peer (p2p e-learning
- Development of Standards

4. Web-based \ Online Learning

4.1 Definition

Arms defined the digital library as "a managed collection of information with associated services, where the information is stored in digital formats and is accessible over a network"

4.2 Skills of Digital Librarians

According to tenant several service skills of digital librarians like

- Optional Character Recognition (OCR Technology)
- Imaging Technologies (e.g. journal article)
- Mark-up Languages (E.G. HTML, XML, SGML, Java Script, VB Script)
- Cataloguing and Meta data (MARC)
- Indexing and Database Technology
- User Interface Design
- Programming (e.g. C, C++, Java)
- Web Technology (e.g. Internet, Project Management)

4.3 Interoperability

Digital libraries are the heart of interrelationship between several information service related discipline like library management, archive management, museum management, document management, knowledge and e-commerce systems. This brings about the need for the different kind of system to talk to each other. This situation is depicted in Figure 1:

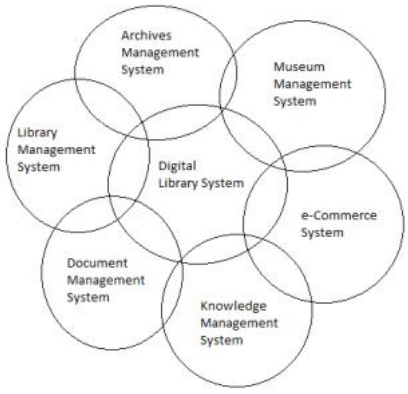

Figure-1: functional overlap of various management systems in relation to digital libraries, Adapted from Degam and Tanner (2002, p.133)

5. VIRTUAL LIBRARY

The characteristic that make interactive multimedia attractive for teaching and reference tools are also that what helps to make them accessible and easy to use by a variety of users. Virtual libraries rely on interactivity to allow patrons to explore sites and to use resources. While the terms **'Virtual Library'** and **'Digital Library'** are used interchangeably, they are in fact not the same. A Digital library consists of a networked collection of multimedia information typically available in one location, while a virtual library comprise a set of link to various resources on the internet, such as documents, software or databases. The link in a virtual library are transparent to users and it provides them with one interface to information.

5.1 Features of a VL

- Provides speedy and wide access to updated information in a global manner
- It has changed the traditional library system of cataloguing only book materials. Cataloguing of NBM (Non Book Materials) includes not only database but also websites.
- Greater emphasis is on access and not on collection.
- Time saving and
- It results in creation of digital divide because only developed countries with strong funds for automation and infrastructural requirements for VL can afford to support VL services.

6. BEST PRACTICE FOR NAAC

A brief listing of some of the **Virtual Libraries** is given for reference. This list is only indicative

Agriculture	http://vlib.org/Agriculture

ISSN:0971-1260
Vol-22-Issue-14-December-2019

The Arts	http://vlib.org/Art
Business and Economics	http://vlib.org/BusinessEconomics
Communication & Media	http://vlib.org/Communication
Computing & Com.Science	http://vlib.org/Computing
Education	http://vlib.org/Education
Engineering	http://vlib.org/Enginnering
Humanities & Hum. Studies	http://vlib.org/Humanities
International Affaires	http://vlib.org/InternationalAffairs
Law	http://vlib.org/Law
Natural Science & Maths	http://vlib.org/Science
Recreation	http://vlib.org/Recreation
Regional Studies	http://vlib.org/Regional
Social & Behavioural Sci.	http://vlib.org/SocialScience

Information & Librarieshttp://vlib.org/InformationManagement

National Institute of Science & Technology (NIST) Virtual Library (http://nvl.nist.gov/index.efm**)**: The Database offers General Research and search by subject features NIST's engineering area of research includes chemical, manufacturing, electrical and civil engineering.

Thailand WWW Virtual Library of Resource about Engineering

http://ace-member-de.org/VirtualLibrary/ : Virtual Library of Resources about Engineering contains a wealth of Internet link to resources of interest to engineering students. The resources are divided into the following categories:

- Organizational Resources
- Diversity/Minorities/Women Resources:
- Federal Government Resources and Educational Organizations and University Resources and Courses.

Digital Book Index
(http://www.digitalbook.org/about.html): Digital Book Index provides links to more than 130,000 title records form more than 1800 commercial and non-commercial publishers, universities and various private sites. About 90,000 of these book, texts and documents are available free, while many others are at modest cost.

Historical Text Archive
(http://historicaltextarchive.com): provides access to quality articles, books, essays, documents, historical photos and link on a broad range of historical subjects.

The online Book Page
(http://onlinebooks.libray.upenn.edu): The Online Book Page is a website that facilities access to books that are freely readable over the internet. It also aims to encourage the development of such online books, for the benefit and edification of all.

Major part of the site include:

- An index of thousands of online books freely readable on the internet.
- Pointers to significant directories and archives of online texts.
- Special exhibits of particularly interesting classes of online books and
- Information on how readers can help support the growth of online books

ISSN:0971-1260
Vol-22-Issue-14-December-2019

Virtual Computer Library (http://webcms.utexas.edu/vcl/index.html): It gives links to resources on Computer and Information Technology

Internet Public Library (http://ipl.org/): It contains directories of online text, newspaper, magazines and other reference materials.

Know Genesis (http://www.knowgenesis.org.tc): It is an online library for technical Communications and research writings.

Project Gutenberg (http://www.projectgutenberg.org): Project Gutenberg is the first and largest single collection of free electronic books or e-books. Michael Hart, founder of project Gutenberg invented e-books in 1971 and continue to inspire the creation of e-books and related technologies today.

The Free Library (http://www.thefreelibrary.com): It has good collection of books by well-known authors. It also provides a short write up on importance of a particular day in history.

Free Management Library (http://www.managementhelp.org): It has grown to be one of the world's largest well organized collection of resources on leadership and other management issues.

Virtual Information Centre (http://www.vic-ikp.info/vic_new/index.asp)**:** ICICI knowledge park, Bangalore has set up a VIC provide access to digital resources of member partner, K-Library is a part of VIC. It covers four domains namely Biotechnology, Networking and Telecommunication, Pharmaceutical Science and Material Science. Resource coverage includes Electronic journals and Newsletters, Books, Discussion forum, Conference portal, Preprints and e-prints, Science and Research news etc.

Sun Site India (http://sunsite.serc.iisc.ernetin/virlib/): The Sun Site India is a joint initiative of the Indian Institute of Science and Sun Microsystems.

E-Gate: (http://www.drdo.org/egate/index.html)

It is a part of Defense Research and Development Organization, a Government of India undertaking. The e-Gate provides links on resources for Aerospace, Chemistry, Electronics, Academic, Defense, Research and General. It also has a listing of various search engines, newspapers and patents.

IUCCA
(http://www.iucca.ernet.in/library/) **:** IUCCA library is one of the most advanced modern libraries specializing in Astronomy and Astrophysics in India.

7. WHAT IS DEEP WEB?

The portion of the web which is hidden from the web users because traditional search engines cannot access them is called the web. The deep web is also called as the invisible web or 'the hidden web'. According to Wikipedia, The Deep Web (also called Deep net, the invisible Web or the hidden web) refers to World Wide Web content that is not part of the surface Web, which is indexed by search engines. Librarians have accepted and absorbed the Electronic resources in the libraries, especially from 1990s. The reference librarians in particular are extensively using the internet resources to discriminate information to their users.

7.1 Tool through which the Deep Web can be accessed by Librarians

The Deep Web is more useful for researches. Bright Planet Company is extending solution to his problems. Many researches are also presenting solutions; Ntoulas worked on building an effective hidden web crawler, Raghavan and Garcia Molina introduced a hidden web crawler. Many Meta search engines have been built for this purpose like,

BEAUCOUP: It is collection of over 2,500 searchable database and search engines. It contains free information sources in the areas of computer, software, employment, society, geography, health, business & money, people, reference & education, science, family, pets, hobbies etc.

BLOOMSBURY.COM: This Meta site covers dictionaries, quotations, and literary reference works. It also links to gateways, awards and festivals and book trade information. It is useful to all those who are interested in writing and literature. It is provided by Bloomsbury Publishers.

ISSN:0971-1260
Vol-22-Issue-14-December-2019

BUSINESS.COM: It contains Web page on 64,000 plus public, private and international companies. It is extremely useful for business information. It is useful especially for information related to marketing, human resource, business travel and consumer service.

COMPLETEPL: Highly topical information like energy or agriculture or food or medicine from rich content site can be found from Complete Planet which is developed by Planet. It is a public service to the Internet users. The database it search are extremely valuable.

DIRECTSEARCH: This is compiled by Gary Prince. It provides links to the search interface of resources that contain data not entirely searchable by traditional search engines. It is updated daily. It is also provides search access to streaming media; news & public affairs resources.

DIRECTORY OF OPEN ACCESS JOURNALS: This directory covers free and full text scientific and scholarly journals that are per reviewed or editorial quality controlled. As of now 3414 journals are there in the directory out of which 1161 journals are searchable at article level. It also accept free user registration online.

DISINFORMATION: The extremely interesting website launched in 1996 collect and index the most "hidden" and subversive material on the web. It is a popular alternative news culture on the web.

DMOZ.ORG: This Open Directory Project is a comprehensive human-edited directory of the Web created and maintained by librarians especially a community of volunteers. It is becoming a defensive catalogue of the Web. This free directory provides reviewed quality websites and databases by subject area.

ERIC: Eric is sponsored by the U.S Department of Education provides free access to more than 1.2 million bibliographic records of journals article to education literature. It also provide links to full text of the articles whenever available.

FLIPPER: Flipper is for news and e-commerce. The popular catalogues in it are finance, lifestyle, travel, home, business and entertainment.

GENIUSFIND: It is a directory of search engines, databases and archives. It is organized into categories and subcategories for ease in searching.

HEALTHFINDER.GOV: This website was developed in 1997 by the U.S Department of Health and Human Service together with other Federal Agencies. This site is developed for consumer to find the key Government and nonprofit health and human services information on the Internet. It covers over 1,500 health-related organizations. It does not accept paid advertisement or links.

It is supported by the U.S government funds.

INCYWINCY: This web search Engine over 10,000 databases. Hundreds of thousands of search engines are indexed and searchable through Incywincy. It presents search engines are as 'related searches' on search result and directory pages.

INFOMINE: INFOMINE is built by librarians and maintained by University of California. It is a virtual library of internet resources useful for research. It contains databases, electronic journals, electronic books, bulletin boards, mailing lists, online library card catalogues, articles, directories of researchers etc.

INTERNET.COM: It is an extremely useful gateway covering all operating systems, mark-up languages, wireless, downloads, developers, IT security, networking and much more. It is very comprehensive and up-to-date.

INTERNET PUBLIC LIBRARY: This is a public service Organisation founded at the University of Michigan, School of Information. It is now developed and maintained by a consortium of colleges and universities with programmes in information science. It is an excellent sources for public library needs. It is also good for exhibits, news and youth collections.

INTUTE: Intute is a free online service that provides resources for education and research which are evaluated by expert. The server is created by a network of UK Universities and other partners. Subject-specific and cross-subject resources can be accessed through it. It has four subject groups Arts & Humanities, Health and Life Science, Science Engineering & Technology and Social Sciences.

ISSN:0971-1260
Vol-22-Issue-14-December-2019

LIBRARIANS INTERNET INDEX: It is a publicity-funded website which started from California and now it serves the whole world. It has over 20,000 entries carefully selected and organized by librarians into 14 main topics and nearly 300 related topics. Users can also subscribe to its free newsletter. It is very reliable and gives access to high health-quality websites.

MARTINDALE's REFERENCE BOOK: It maintained by James Martindale. It is a gateway to excellent sources in a wide range of reference topics. It is strong in science and health science. It is also has a Health Science Guide 2008.

NEWPAGES: It is an important website for students, writers, readers and editors. It has information on independent bookstores, independent publishers, literary periodicals, and newsweeklies. It is rated high by its users.

RUTGERS UNIVERSITY RESEARCH GUIDES: SOCIAL SCIENCE AND LAW: This site is a very good source for Environmental Studies, Women's Studies, Latin American Studies, Library and Information Science and Alcohol Studies. Is also covers medicine, science & technology, humanities and social science disciplines.

SCIENCE.GOV: It is a gateway to over 50 million pages of authoritative selected science information. It contains the science information provided by U.S Government agencies including research and development results. Agriculture, applied science & technology, astronomy & space, nature, computers & communication, earth & ocean, energy and energy conservation, environment quality, health & medicine, math, physics & chemistry, natural science & conservation and science education are the subject area covered by science gov.

SCIRUS: This gateway covers scientific, technical and medical sources. It is developed by Elsevier Science. It indexes over 450 million scientific terms. It contains both fee based as well as Elsevier Science collection. It is also allows searches into scientific homepages, pre-print server materials, patent and institutional repositories.

SHAKESEARCH: This site provides a full-text search of all works by Shakespeare. All his Comedies, Tragedies and Poetry are covered. Even the words coined by him and his most popular lines can be searched. It also links to relate to sources.

STATISTICAL RESOURCES ON THE WEB: This site is national and international in scope. It has link to University of Michigan's rich Foreign Government document collection. It covers areas like agriculture, business and industry, demographics, education, energy, engineering, health, housing, labour, politics, science, sociology etc.

THE SEARCHSYSTEMS.NET PUBLIC RECORDS DIRECTORY:
According to this site it is a reliable directory of public records and best resources for backgrounds checks and criminal records on the Internet. It was established in 1990 in Newbury Park, California. It provides access to over 36,000 useful databases containing billions of records.

VIRTUAL GUMSHOE: It is a free public record resources among investigators created in 1996 by a low enforcement officer collecting links that provided useful for investigative works. It contains over 4000 links to public information data.

VIRTUAL LIBRARAY: This site is the oldest catalogue of the web. It was started by Tim Berners- Lee, the creator of World Wide Web in 1991. It is maintained by volunteers, who compile pages of key links in area of their expertise. It is rated as one of the highest quality guide on the web.

VOICE OF THE SHUTTLE: This site is started in 1994, is extremely good for humanities resources. It includes anthropology, area studies and minority studies in addition to other humanities discipline. It is maintained by Alan Liu of University of California, Santa Barbara.

The above tools are just few out of a host of tools available on the internet to search Deep Web. Even Google's Google Scholar a late 2004 beta release searches the Deep Web. It is freely-accessible and indexes the full of scholarly literature from academic publishers, professional societies and institutional repositories. Google's digital library projects is yet another attempt to create a virtual library that is searchable. Now there

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Vol-22-Issue-14-December-2019

are many search engines that offers a desktop search tools. The desktop search tool installed on a Personal Computer searches the hard dishes out the results as it would do it on the Web. Thus, today with the desktop search tools even the information content on our hard disk is no more invisible.

7.3 Search Tools Cited

BEAUCOUP: http://www.beaucoup.com/

HEALTHFINDER.GOV: http://www.healthfinder.gov/

BLOOMSBURY RESEARCH CENTRE: http://www.bloomsburymagazine.com/

INCYWINCY: http://www.incywincy.com/

BUSINESS.COM: http://www.business.com/

INFOMINE: http://www.infomine.ucr.edu/

COMPLEATE PLANET: http://aip.completeplanet.com

INTERNET PUBLIC LIBRARY; http://www.ipl.org/

DISINFORMATION: http://www.disinfo.com/

INTUTE; http://www.intute.ac.uk/

DMOZ.ORG: http://www.dmoz.org/

LIBRARIANS INTERNET INDEX: http://www.lii.org/

ERIC: http://www.eric.ed.gov/

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NEWSPAGE: http://www.newspages.com/

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STATISTICAL RESOURCES ON THE WEB:

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THE SEARCH SYSTEM.NET: http://www.serachsystem.net

RUTGERS UNIVERSITY RESEARCH GUIDE: SOCIAL SCIENCE AND LAW:

http://www.libraries.retgers.edu/

VIRTUAL GUMHOUSE: http://www.virtualgumshoe.com

VIRTUAL LIBRARY: http://vlib.com

VOICE OF THE SHEUTTLE: http://vos.uesb.edu/

8. CONCLUSION

New Generation of libraries can bring revolutionary changes in temporary information infrastructure. This communication provides true intellect information access in the form of indexing, cataloguing and classification. Standard advanced technology and powerful system can support wide types of user providing a broad range of tailored service. The new generation of libraries can glorify the information access service and optimize the infrastructure with user requirements.

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ISSN:0971-1260
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