

## Planning Aspects of Digital Libraries and Professional Competencies in Digital Librarianship: An Overview



### Library Science

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### ABSTRACT

*This paper highlights the Digital Preservation is the series of actions and interventions required to ensure continued and reliable access to authentic digital objects for as long as they are deemed to be of value the Strategies for manpower development in the changed technological, economic, social and educational environment, which cases the change in the working style of the professionals for better functioning is providing information service to the user community. In this paper I give information of all digital libraries and automation process in India. I also give brief account why new technologies an necessary and how we can adopt these technologies easily.*

### INTRODUCTION:

These information objects may be digital objects or they may be in other media (Ex Paper) but representation in the library via digital means (Ex. Metadata) They may be available directly over the network Digital Libraries need to be defined and measured in relation to the communities they serve. Thus, the DL programmed aims to situate the development of digital libraries in a larger context of service.

To meet the expectations of users along with time successfully a strategic development of Library and learning resources is necessary. The aim of information strategy is and always has been to develop most effective arrangements for access to scholarly information for the users.

### NEED FOR TECHNOLOGY CHANGES IN LIS:

- Traditional Library to Digital Library
- Library cooperation to resource sharing Library Networks.
- From conventional learning to web learning
- From Information society to knowledge society
- Library Professionals to Information and knowledge professionals
- Reeder's advisory and e-references services

### THE OPPORTUNITIES:

Today the major opportunities presented by Digital libraries are mainly in the following areas. ;

- Organization of information for use
- Provision of value added ICT-based information services
- Library cooperation's and resource sharing
- Institutional repositories (digital content)
- Capacity building

### ORGANIZATION OF INFORMATION USE:

Traditionally computers in libraries have been used and are still being used by a large number to automatic (replace manual operations by computerized methods) all or some of the following core library activities;

- Acquisitions and budgets i.e., creating and processing book acquisitions and printing of book orders.
- Cataloguing i.e., creating online bibliographic records.
- Circulation control, i.e., registration of library users, issuing of library materials, making reservations of materials, generation of circulation statistics serial control (Periodicals) i.e., generation of subscription notice for serials, processing of serials.
- Short loans and reserves (Especially in academic Libraries) i.e., issuing of materials on reserve.

There are severed off the shelf library software systems and open source systems such as UNESCO 'S, CDS-ISIS, Koha and Email, available for automating the above library functions. In addition to library automation, libraries are also using Digital libraries to execute a variety of office operations such as word processing accounting database management and communica-

tion (ie. using electronic mail) using off the shelf software applications such as Microsoft office suite, Lotus SmartSuite and Corel word perfect office.

### DIGITAL LIBRARY –BASIC CONCEPTS:

- Digital Library (DL) is not a single entity
- DL is an organized collection of digital 'object' in various formats that are accessible online
- Digital resources include all kind of documents
  - Those created form paper –based documents
  - Those' digitally –born' electronic resources
- Digital requires technology to link the resources of many libraries/locations
- These linkages are transparent to the end users
- The goal of a DL is Universal access.

### A Digital Library is a -----

- Collection of Information 'object'
- Electronic / Digital availability
- Supporting users with information objects
- Organization and presentation of those objects
- Available directly or indirectly, and
- Collection of services

### DIGITAL LIBRARIES:

Digital revolution has transformed the intellectual function of traditional libraries . Digital Libraries are providing the base for a set of distrubuted activities . It is also providing ' a one step solution'for speedy delivery in a reliable fashion. Libraries are being digitised and patran demand is growing as the concept of content management has been adapted to the library world. More Libraries are providing virtual references via the web. The gretest challenge for the information manager today is to create an organization that can share knowledge. Quality library services are imperative in knowledge society as it inspires the knowledge workers to the innovative viz.,think globaly and design locally.

### VISION:

To bring world class electronic information services to the academic community and all.

### Some Digital Libraries in India

- Indian Parliament library
- Indira Gandhi Memorial library. University of Hyderabad
- Indian Institute of Technology, New Delhi
- Indian Institute of Technology, Kharagpur,
- Indian Institute of Technology, Mumbai,
- Indian Institute of Science, Bengaluru,
- National Institute of Technology, Callcut,
- Indian Institute of Management , Kozikode,
- Punjab Universtiy, Chandigarh.

### OBJECTIVES:

1. To collect ,store and organize information in digital form

2. To provide centralized access to decentralized resources
3. To deliver information to users economically and efficiently
4. To strengthen communication & collaboration between and among the researchers
5. To encourage cooperative generation and dissemination of knowledge.

#### DIGITAL LIBRARY- DESIGN CONSIDERATIONS:

- o Content or 'Objects'
- o Formats & Standards- Metadata
- o Choice of technology
- o Storage media and hardware
- o Mode of creation
- o Intended audience (users)
- o Access/dissemination mechanism
- o Security issues
- o Maintenance mechanism – Digital copy rights
- o Digital Library planning
- Storage Space
- Network speed
- Selection of O S
- Tools for servers
- Tools for clients
- Standards needed
- Metadata elements
- Backward compatibility

#### CRITERIA FOR CONSIDERATION:

- Cost of Hardware/software
- Robustness
- Technically feasible – easy to install----
- Scalability
- Modular design
- User-friendliness
- Capable of handling multimedia objects
- Platform independent
- Inter – operability

#### THE DIGITIZATION PROCESS:

- Selection of documents/material
- Scanning & OCR
- Image cleaning & editing
- Creation of metadata elements
- Archiving and preservation
- Search & Access tools
- Distribution mechanism
- Rights management

#### DIGITAL LIBRARY SOFTWARE:

- ❖ **Open source software**
  - Greenstone-University of Waikato,NZ
  - D space-MIT+Hewlett+Packard
  - Eprints – University of Southampton
  - Fedora- Andrew W,Mellon Foundation
- ❖ **Commercial software**
  - Curator –Endeavor Inc
  - Metalib- Exlibris
  - Text works – Inmagic Inc
  - Vital – VTLS Inc

#### LIBRARY PRESERVATION:

Digital Preservation at its most basic definition is a series of activities aimed towards ensuring access to digital materials over time. Digitization is a means of creating digital surrogates of analog, materials of preserving such as books, newspapers, microfilm, and videotapes, Digitization can provide a means of preserving the content of the materials by creating an accessible facsimile of the object in order to put less strain an already fragile originals.

Google, Inc has taken steps towards attempting to digitize every

title with “Google Book Search”. While some academic libraries are in contract with the service, issues of copyright law violations threaten to derails the project. However, it does provide at the very least – an online consortium for libraries to exchange information and for researchers to search for titles as well as review the materials.

#### Merits:

The advantages of digital libraries as a means of easily and rapidly accessing books archives and images of various types are now widely recognized by commercial interests and public bodies alike. Traditional libraries have the potential to store much more information, simply because digital information requires very little physical space to contain it. As such, the cost of maintaining a digital library is much lower than that of a traditional library. A traditional library must spend large sums of money paying for staff, book maintenance, rent, and additional books . Digital libraries do away with these fees. Both type of library require cataloguing input to allow users to locate and retrieve material. Digital Libraries may be more willing to adopt innovations in technology providing users with improvements in electronic and audio book technology as well as wiki's and blogs; conventional libraries may consider that providing online access to their OPAC catalogue is sufficient . An important advantage to digital conversion is increased accessibility to users.

#### COMPETENCIES OF LIBRARIANS:

Competencies of Librarians include both professional and personal competencies. Professional competencies relate to the librarians knowledge in the areas of information resources, information access, technology management and research. As well as the ability to use these areas of knowledge as a basis for providing library and information services. On the other hand personal – represent a focus on continuing learning throughout their careers; demonstrate the value added nature of their contributions and survive in the new world of work.

Since Librarians work in a service-oriented organization, the new roles being played now should also be integrated with total quality services The philosophy of service quality centers on continuous quality enhancement. Continuous quality enhancement is continuous process improvement which involves improving effectiveness, efficiency and excellence leading to total quality service. Thus, Libraries and Librarians are truly and significant contributors to the success of their organizations or institutions, as well as active partners in information literacy education for lifelong learning.

#### Competencies and skills of the library Professional in the Digital environment:

The use of ICT extends the core role of the librarians, or helps the librarian to do these roles better.

The competencies, skills, roles vary, dependent on the specific type of the library or information centre, where the digital librarian works.

The digital librarian must have commitment to continuous learning and lifelong improving of skills in all areas of digital applications, services etc.

The digital librarian is a bridge between digital resources and users.

The digital librarian is an agent of innovation .of citizenship of information literacy etc.

The social role of the librarian is still strong even stronger in digital environment.

#### CONCLUSION:

- ❖ Role of the librarian-Network managers, Database integrators, Digital Librarian
- ❖ Know-how of ICTs-Hardware/software knowledge
- ❖ Training of library staff-Training in e-mail, html, xml, Blogs, Rss, etc.

- ❖ Legal issues- Digital copy rights?
- ❖ Understanding user needs- Information literacy Programmers
- ❖ Library services

Cataloguing and building the digital resources have become a necessity, as more and more resources are now being made available in digital formats. Therefore, Library and Information Science Professional should know how to set up and build digital library collection in their Organizations. GSDL normally used to build IR in academic institutions. Many reputed institutions in India set up institutional repositories. This is the right time to set up such IR in all the institutions to record and preserve the knowledge output. Users expect effective but simple software to access the digital resources. GSDL and D space can base to build DL collections and provide efficient services to the user communities.

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