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Importance of Digital Libraries in Distance Education in India

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Abstract: Open and distance learning is one of the most rapidly growing fields of education, and its potential impact on all education systems has been greatly appreciated through the development of Internet-based information technologies, particular the World Wide Web and Digital Libraries in India. Digital libraries play a crucial role in the development of distance education system and distance learning in India. Nowadays, they are one of the fundamental information sources for the students who enrolled in this learning system. Digital libraries contain huge amount of instructional data (text, audio and video) offered by the distance learning program. Organization of the digital libraries is therefore very important for easy and fast access to the desired information. Improper categorization of data may mislead the students searching the library. The digital libraries have got a significant role to play to assist effective e-learning process. Effective learning is having advantages in delivering the right content to the right person at the right time. Development of distance education system is only possible by the digital libraries in India. This paper discusses the development of distance education, need and importance of e-learning and the role of digital libraries in distance education and E-learning process also.

Keywords: Digital libraries, Distance Education, E-learning process.

INTRODUCTION:

The emergence of the Internet and related networks such as the World Wide Web has had and will increasingly have radical effect on the transformation of education and training in all sectors. The impact is already significant in all developed countries, and the great majority of developing countries are despite difficulties and fears seeking to take part in the emerging global educational community. The Web offers a worldwide forum in which to teach courses that can be dynamically updated in ways never before possible. Each student has an enormous range of resources available, free from limitations of time and space. There remains considerable work to be done concerning searching and sifting techniques within these resources for learners and teachers alike. These resources are reconfiguring the ways in which students learn, and new approaches to networked learning are evolving. The trans-cultural nature of the Web also creates problems of legislative and public control, with fears that local culture can be threatened by the international culture of developed countries. While the use of the Internet and the World Wide Web in open and distance learning is predominantly represented within higher education, it is also beginning to be used in schools. In developing countries in particular distance education for school

equivalency is an important way of expanding educational opportunities to the adult population. Open schools that use a variety of media are of particular interest to high-population countries. Teacher training is an important area where open and distance learning has made a major contribution. This includes initial training for formal qualifications, in-service supplementary training for formal upgrading, and continuing in-service training in particular subjects and topics. Many examples, particularly from developing countries, show that teacher training at a distance may reach large groups of teachers and have profound impact on the development of national education systems. The use of open and distance learning for teacher education is therefore a crucial strategy when expansion or quality improvement is needed in the public education system.

Objective of Study:

The objective of this paper is to review open and distance education learning in the context of present challenges and opportunities, role of digital libraries and contributions, outline current global and regional trends, suggest policy and strategy considerations, and identify India's initiatives in open and distance learning, including its role in capacity-building and international co-operation. It is addressed to a wide range of potential partners, governments, intergovernmental and non-governmental organizations, specialized institutions, associations, industrial corporations, telecommunication companies, and others interested in this field, to seek their co-operation in meeting today's urgent education and training needs, through open and distance learning.

Development of Distance Education:

In India, the University of Delhi was the first to introduce distance learning programmes in 1962 through its correspondence courses. Soon it was followed by several other universities. The first Open University was established in 1982 in the country. The Open University and distance education institutions are now in a position to meet the demand for education. India has a vast network of distance education institutions, with around 106 dual mode institutions and 14 single mode Open Universities, (Refer Annexure – II for list of Open Universities in India). The Distance Education Council (DEC) is responsible for promotion of the Open and Distance Learning (ODL) system and for coordination and maintenance of standards in distance education in the country. In pursuance of these objectives, DEC has taken a number of initiatives for providing support to State Open Universities (SOUs) and other Correspondence Course Institutes (CCIs) of conventional universities. The Council extends technical and financial support for development of infrastructure, institutional reforms, professional development and training, student support services, computerization and networking for improvement of quality of education. With the recent initiatives of the DEC, about 40 conventional universities have established new Distance Education Institutions (DEIs). The number of dual mode universities in the country now is 106. Some of major university are given below:

S.No.	Name of University	City	Type of University
1	Indira Gandhi National Open University	New Delhi	National Open University
2	Yashwantrao C. Maharashtra Open University	Nashik	State Open University
3	IMT Distance and Open Learning Institute	Ghaziabad	Autonomous Institute
4	Sikkim Manipal University (SMU DDE)	Gangtok	Dual Mode University
5	Symbiosis Centre for Distance Learning	Pune	Autonomous Institute
6	MP Bhoj (Open) University	Bhopal	State Open University
7	Dr. BR Ambedkar Open University (BRAOU)	Hyderabad	State Open University
8	Netaji Subhas Open University	Kolkata	State Open University
9	University of Mumbai (IDOL)	Mumbai	Dual Mode University
10	Maharshi Dayanand University (DDE)	Rohtak	Dual Mode University
11	Maulana Azad National Urdu University (DDE)	Hyderabad	Dual Mode University
12	University of Delhi (SOL)	New Delhi	Dual Mode University
12	Annamalai University (DDE)	Annamalainagar	Dual Mode University
14	Dr. Babasaheb Ambedkar Open University	Ahmedabad	State Open University
15	Karnataka State Open University	Mysore	State Open University
16	Acharya Nagarjuna University (CDE)	Guntur	Dual Mode University
17	The ICFAI University Sikkim	Gangtok	Dual Mode University
18	Osmania University (PGRRCDE - Prof. G. Ram Reddy Centre for Distance Education)	Hyderabad	Dual Mode University
19	Alagappa University (DDE)	Karaikudi	Dual Mode University
20	Shivaji University (CDE)	Kolhapur	Dual Mode University
21	The ICFAI University Tripura	West Tripura	Dual Mode University
22	SNDDT - Women's University (CDE)	Mumbai	Dual Mode University
23	Himachal Pradesh University (ICDEOL)	Shimla	Dual Mode University
24	Tamil Nadu Open University	Chennai	State Open University
25	University of Madras (IDE)	Chennai	Dual Mode University

26	Andhra University (SDE)	Vishakhapatnam	Dual Mode University
27	Madurai Kamaraj University (DDE)	Madurai	Dual Mode University
28	Vardhman Mahaveer Open University, Kota	Kota	State Open University
29	UP Rajarshi Tandon Open University	Allahabad	State Open University
30	Uttarakhand Open University	Haldwani	State Open University
31	Nalanda Open University	Patna	State Open University
32	Kurukshetra University (DDE)	Kurukshetra	Dual Mode University
33	University of Calicut (SDE)	Kozhikode	Dual Mode University
34	Patna University (DDE)	Patna	Dual Mode University
35	Kakatiya University (SDLCE)	Warangal	Dual Mode University

Digital Library:

A digital library to be an electronic collection of real or virtual resources, which may also be available elsewhere. These resources must be whole works, with which humans can have a complete cognitive or affective engagement. A digital library may allow either online or offline access to the elements it organizes and houses, and may include multimedia as well as multilingual data. Although accessible online, a digital library is not identical to a website or a portal. However, while portals, specialized websites and search engines cover a wide range of subject areas, digital libraries are more narrowly focused around one or a specific group of disciplines. Digital libraries, moreover, attach content specific and highly descriptive metadata such as, descriptors or keywords to describe each item in the collection. Therefore, searches in a digital library can produce more useful results, save time and effort in searching, and in the best of cases browsers may directly access the text or multimedia content for which they executed their search.

Digital library in India:

The concept of digital libraries in India began in the mid 1990s with the spread of information technology, the internet and the support of the Central Government. In 1996, this concept was recognized during the Conference on Digital Libraries organized by the Society of Information Science at Bangalore. Though a few libraries have made attempts earlier in this direction, the digital library initiative in India is still at budding stage. Majority of the Digital library initiatives were largely confined to limited uses such as subscribing to e-journals, scanning documents and installing them on the intranet. But there is every need for rapid change in this scenario of libraries in India to use the Information Technology (IT) and ICTs which are confined so far to the prestigious National institutes such as the Indian Institutes of Technology (IIT), Indian Institutes of Management (IIM), Indian Institutes of Science (IIS) Research Institutes under the control of NISSAT and some special Libraries. Some government agencies and institutions, mostly in the public sector are also engaged in digitization of their libraries in a limited way. However, it is evident from the initiatives taken so far in this direction that the great potential of ICTs for developing digital libraries has not yet been fully utilized. Some of the important digital library initiatives and programmes initiated across the country are reviewed below:

Sr. No.	Name of Repository	URL
1	Digital Knowledge Repository	http://dkr.cdri.res.in:8080/dspace
2	Dspace at CUSAT	http://dspace.cusat.ac.in/dspace/
3	Delhi College of Engineering Repository	http://dspace.mdi.ac.in/dspace
4	Dspace at GGSIPU	http://dspace.ipu.ernet.in:8080/jspui
5	Dspace at IBS	http://202.131.96.59:8080/dspace
6	Dspace at NCRA	http://ncralib.ncra.tifr.res.in:8080/dspace/
7	Dspace @ IITB	http://dspace.library.iitb.ac.in/dspace/
8	Dspace @ IIA	http://prints.iia.res.in/
9	Dspace @ IIMK	http://dspace.iimk.ac.in
10	ePrints @ IISc	http://eprints.iisc.ernet.in/
11	edt @ IISc	http://etd.ncsi.iisc.ernet.in
12	OpenAgri	http://www.agropedia.net/openaccess
13	Eprints @ IITD	http://eprints.iitd.ac.in/dspace/
14	Digital Library at ISI	http://library.isibang.ac.in:8080/dspace
15	Librarian's Digital Library (LDL)	http://drtc.isibang.ac.in
16	Kautilya Digital Library	http://oii.igidr.ac.in:8080/dspace
17	eGyankosh	http://www.egyankosh.ac.in
18	Dspace @ INFLIBNET	http://dspace.inflibnet.ac.in
19	NAL Repository	http://nal-ir.nal.res.in
20	ICRISAT Open Access Repository	http://openaccess.icrisat.org/
21	Eprints @ SBT MKU	http://eprints.bicmku.in/
22	MGU Online Theses	http://www.mgutheses.org/
23	Dspace @ MDI	http://dspace.mdi.ac.in/dspace
24	ePrints @ NCCR	http://www.eprints.iitm.ac.in
25	Dspace @ NCL	http://dspace.ncl.res.in/dspace/
26	ePrints @ NII	http://openmed.nic.in
27	OpenMED @ NIC	http://eprints.nii.res.in
28	DRS @ nio	http://drs.nio.org
29	NISCAIR Online Periodical Repository	http://nopr.niscair.res.in
30	Dspace @ NITR	http://dspace.nitrkl.ac.in/dspace/
31	Petrospace- PDPU Open Repository	http://203.77.192.116:8080/dspace/
32	RRI Digital Repository	http://dspace.rri.res.in/
33	ePrints @ SVNIT	http://eprints.svnit.ac.in
34	Dspace @ TU	http://dspace.thapar.edu:8080/dspace/
35	IMScEprints Archive	http://www.imsc.res.in/eprints
36	DU Eprints Archive	http://eprints.du.ac.in
37	Dspace at Vidyanidhi	http://dspace.vidyanidhi.org.in:8080/

Role of Digital Library in Distance Education and E-learning

Libraries are not the mere store house of books, the modern library with the explosion of information technology has led to a paperless society, digital and virtual libraries the www (world wide web) has opened up electronic information and the users want that information in a refined manner. The traditional libraries occupy more space, but the documents are being digitized so, it occupies less space. The main features of digital library are as follows:

- information is stored in digital form;
- information sources are amenable for computer access;
- facility for multi-user search;

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- offers network accessibility
- provides user-friendly interface;
- facility to browse, select, retrieve, download in the user computer;
- facility to have any number of copies, if required;
- Sometimes, rare and expensive material is available.

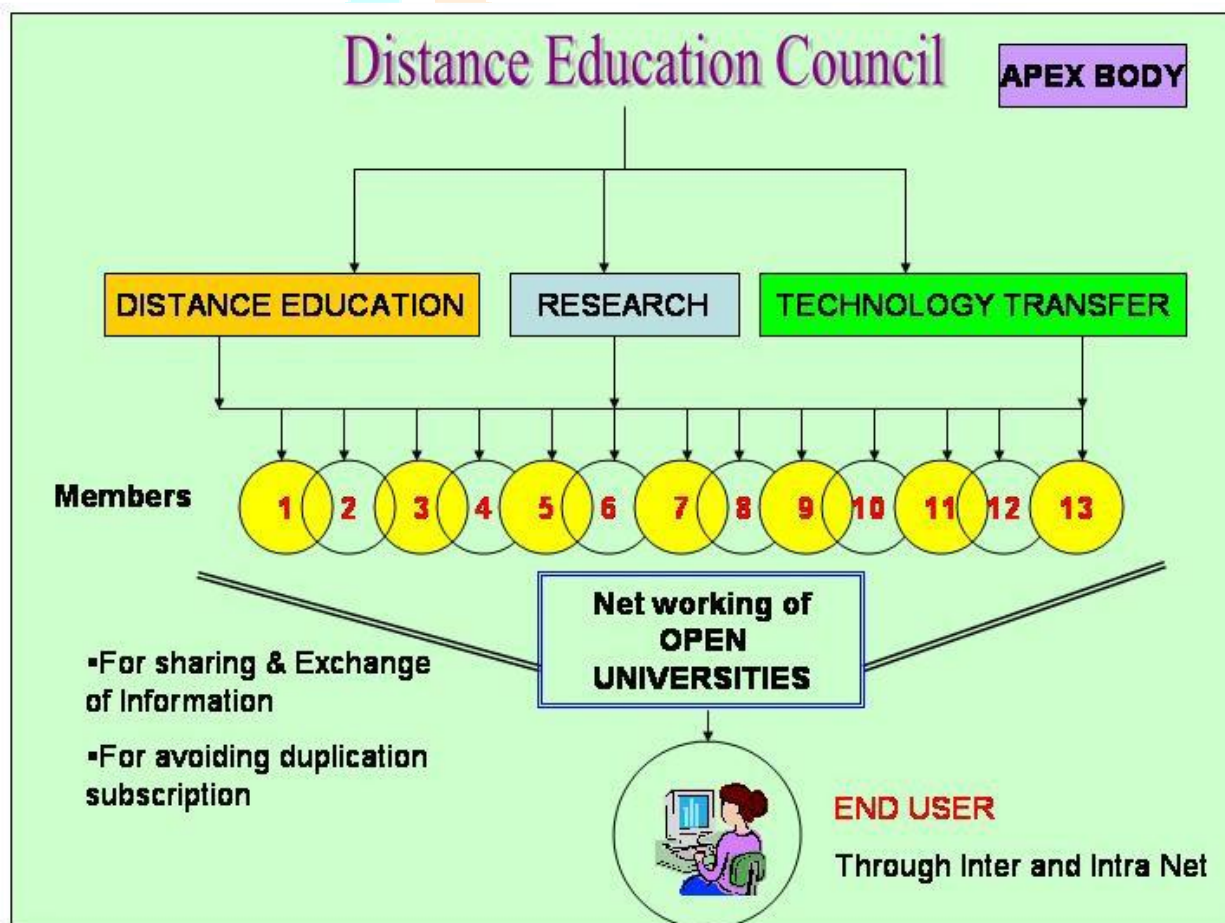


Figure Showing Role of Digital libraries in Distance Education.

Digital libraries are set of electronic resources and associated technical capabilities of creating, storing, searching and dissemination of information. Digital libraries are playing a vital role in online learning education system. Most of the digital libraries are dedicated to supporting higher education and research and they justify their investment in digital development as a powerful means of realizing the larger institutional goals of the academic community they serve. One reason for using digital libraries in E-learning is that it can store and manage large amounts of digital content such as full text, course materials, bibliographic databases, library catalogues, image and audio clips etc. Thus it provides

an environment to bring together collections, services and people in support of the full life cycle of creation, dissemination and preservation of data, information and knowledge.

Another reason to use digital libraries is that using various electronic tools, learners can search text materials and images easily and quickly, which can be applied broadly across all kinds of institutions. Advance intercommunication technology, sophisticated search engines, and affordable cost, large storage of digital content are the other reasons to implement a digital library in modern education. Other advantages of digital libraries in E-learning are:

- The library would allow learner to use electronic resources from anywhere, without even knowing where it is stored geographically.
- One copy of the documents could be viewed by any number of users simultaneously.
- It can be used for increasing course delivery for a large number of clients at a particular point of time.
- Study materials need never go out of print, and new editions can easily be created. One can carry several titles at once on a portable reader and, over time, build a personal library.
- It would be easy for non-specialist to use due to the simplicity of operation.
- Links to publisher's sites for full text journals.
- It provides and facilitate online and on demand enrolment, study and examinations,
- Search result will be delivered to an e-mail box to the user's choice.
- Protecting rare books that are rapidly deteriorating due to over use and poor storage conditions.
- It is cost – effective and cost-efficient for its ability of reuse.
- It provides faster learning, increased access, clear accountability and equal education for everybody; the web is available on the desktop.
- It provides current information and helps in research work.

Challenges faced by the E-Learners:

The development of E-learning has thrown up new problems focused on the copyright implications of electronic text. Students, researchers, staff, employees and other end users affiliated with virtual university or digital libraries should be allowed to print-on-paper excerpts of digitally available works on the same conditions according to which they may make photocopies of print material. The authorities of universities/libraries should take initiative to evolve some solution on this aspect and which may benefit learners, publishers as well as authors. According to the US copyright law, a library to qualify for the copyright exemption, must meet three requirements:

- the reproduction and distribution must not be for direct or indirect commercial advantage,
- the library must be open to the public or to researchers,
- the copies must contain a notice of copyright.
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Other major challenges are:

- There is no mechanism available to establish standards for internet materials, instruction, design and quality of interaction.
- Study materials are accessible only by specified students, licensing problems are unlikely to be serious barrier.
- Since course materials are instructionally designed, it hardly provides for individual variations and further revision.
- Dangers of increased learner isolation as students learn from the screen, and not through much interaction with their peers and teachers.

- Crossing national boundaries creates logistical and organizational problems of distance teaching institutions. The facilities available and aptitude level of European students and developing countries are different.
- Operating overseas can also expose one to the all problems of any international business, exchange rate fluctuations, restriction on foreign exchange, and the export of money from the country of operation to pay for services, sources from another jurisdiction, political turmoil, civil unrest and war etc.
- Information providers are more interested in profit than quality services.
- Lack of organization of information on Internet.
- Not all sites are updated regularly.
- Absence of monitoring mechanism to evaluate the course ware
- Lack of awareness about the use of electronic equipment.
- Access to Internet in developing countries including India, may not be easy or widespread, in comparison to the developed countries.

Conclusion

Electronic documents offer possibilities for expanding access as well as changing learning behaviour and academic research trends. Content can always be accessible, regardless of time or place to be read on PCs. The role of library professional is also changing in the digital library environment. There is a specific role for library professional to play in matching the user with correct information source. Library professional with their expertise, knowledge and techniques of where to look up and how to find out information for given query can help the users in their search for information by extending personal help and assistance. The success of the library and information science profession, in future, largely depends on how best they could make use of available information technology in performing their tasks and achieve productivity in obtaining set targets. The role of digital libraries in distance learning is still not clear in the country like India. The INFLIBNET has already started Networking of different university libraries, on its completion it will be possible to share all available resources for imparting E-learning to far distant places in the country.

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