GNITED MINDS
Journals

ADOPTION OF INFORMATION AND COMMUNICATION TECHNOLOGY IN PANT AGAR UNIVERSITY LIBRARY'S

Adoption of Information and Communication Technology in Pant agar University Library's

Poonam Singh

Assistant Librarian University Library, G.B. pant University of Agriculture & Technology, Pant agar- 263145

Abstract – With the invention of Information and Communication Technology (ICT), libraries now use various types of technologies to aid the services they render. Everyday new technological advances affect the way information is handled in libraries and information centers. This paper describes the Information and Communication Technology (ICT) adopted by the University Library of G.B. Pant University of Agriculture and Technology, Pant agar and also discusses and explains the various services such as Online Public Access Catalogue (OPAC), Internet, library automation, library management software, webpage etc. which are using in the university library's.

--------------------------◆----------------------------

INTRODUCTION

The library is the heart of a university that actively performs the activities related to learning and teaching, research and generation of new knowledge, dissemination of research results and conservation of knowledge and ideas along with the extension of services. The university library was established in 1960. In 1982 was moved into its present premises. The library is centrally located in the campus and all the colleges are located in semicircle around it. The mission of the university library is to provide fast access to information resources and services that meet the information need of the students, teachers, researchers and other administrative staff of the university for teaching, learning, research, extension and other educational and recreational activities of the university. The library offers a collection by 20 of over 3.6 lacks. Documents, journals, electronic journals and is well supported internet nod facilities and photocopy services.

The campus networks cover all the departments including library, administration, research centers and hostels. Seeking access to library resources and information services in higher education libraries all over the world is undergoing tremendous transformation, especially with the advent of Information and Communication Technology (ICT) as tool and enabler. The role of ICT in the university library has promoted the information seeking and made it more meaningful, where users can stay in their homes and classrooms to access and interact with the library and receive information without physically visiting the library.

Application of ICT in University Library: - University library has entered the era of information technology, using computer and telecommunication technology for information storage and retrieval. Library networks are distribution system composed of two or more libraries and other organizations engaged in common pattern of information exchange, through communication for some functional purpose. It is usually consists of journal arrangement buy material, information and services provided by a variety of libraries made available to all potential users. Computers and telecommunications are used for facilitating communication among them. Creation of infrastructure is the basic requirement for providing efficient quality services. A modern air-conditioned computer room has been renovated. It is equipped with library server, web server, CDH server, works stations, heavy-duty network printers and scanners etc. The server room at documentation section is the nodal point for all IT based services of this library.

The role of ICT in university library can be looked into the context of its application in various tasks that are being performed by the university libraries. Such as:-

- Cooperation and the formation of library networks;

- Easy integration of various activities within a library and between libraries in a network;

- Elimination of some uninteresting and repetitive work in a library system;

- Increasing the range of services offered;

- Ultimately saving or even generating money;

- Quick and convenient information exchange;

- Access to regular updates on topics of interest;

- Facilities for sending and receiving e-mail;

- Facilities for electronic search.

Internet: -. Internet the largest worldwide network of networks has emerged as a powerful educational tool for an instant access to information. It has made a tremendous impact on the academic activities of the teachers and students. The internet provides various information resources and services, such as electronic mail, online chat, electronic transaction, bulletin board, file transfer and file sharing, online newspaper, online gaming and the interlinked hypertext documents and other resources of the World Wide Web. Internet facility is available in the university library and faculty members, research scholars as well as students have been using the facilities of internet and e-resource through consortium in the library.

LAN (Local Area Network): - LAN stands for Local Area Network. It concern two or more microcomputers connected by cable. LAN refers to those microcomputers, installed in distant local area such as within the different departments of library, with the different departments of same institutions library or within the entire building. LAN has an advantage in sharing, hardware peripheral such as high quality printers modems.

The library has developed its own LAN using TC/IP protocol, connecting 60 nodes distributed in different departments/ sections over five floors of the library with the help of five switches and three servers Proliant ML 530 Linux based library server. Proliant ML 350 web server and CDH server. The university library LAN is connected to the campus network through fiber-optic line. Thus the university is connected to the whole university campus for providing library services up to the terminals of colleges and departments.

Internet connectivity: - The library has exclusive 256 kbps broadband VSAT internet connectivity. This has enabled us to provide web based library services and fast access to online electronic resources. Library is using email and internet facilities. SAT is a short for very small operator terminal. A VSAT consists of two parts, a transceiver that is placed outdoors in direct line of sight to the satellite and a device that is placed indoors to interface the transceiver with the end user's communications device, such as a PC. The transceiver receives signals from a ground station computer that acts as a hub for the system. Each end user is interconnected with the hub station via the satellite, forming a star topology. The hub controls the entire operation of the network. For one end user to communicate with another, each transmission has to first go to the hub station that then retransmits it via the satellite to the other end user's VSAT. VSAT can handle up to 256 kbps.

Integrated Library Management Software: - University library have a core set of functions that includes library management such as acquisition, cataloguing, circulation, rental and documentation as housekeeping operations. The in-house activities of the library are handled by Libsys software package. The package is application software is known as library automation software or library management software.

Libsys is very popular library software in India. It has a contract with the British council divisions of South Asia, to provide automation and related services for its libraries. Libsys is integrated library software developed in C and C++. This software is based on its own bibliographic users interface front and for windows client; it is runs on a wide spectrum of hardware and operating systems, using UNIX, Window NT and Novell network operating system on the server side, having any version of windows at the client side. Thus in choosing operation platform, users find greater flexibility in comparison to other software.

Modules of Libsys:-

- Acquisition

- Circulation

- Cataloguing

- Serials control

- Article indexing

- OPAC(Online Public Access Catalogue)

UNIVERSITY LIBRARY SERVICES:-

Library automation: - The techniques of moving in apparatus, a process or a system operate automatically is called automation. Automation is a technique to make a system or a process self active. The main base of automation is the computer. Automation has helped library operations and accelerates their working.

University library is using IT to automate technical services, to provide efficient reference and information services, to network operations, such as cataloguing, authority control, interlibrary loan, and bibliographic project. The primary objective of library automation is to provide deadly available latest information in an appropriate form. The main reason for automating library activities are:-

- To provide better services at an affordable cost free;

- To increase the retrieval ability of the resources;

- To improve the existing services and to introduce new services;

- To avoid duplication of the work;

- To facilitate the sharing of resources.

Barcode: - Barcode is a series of black and white bars arranged in a predefined form to represent known code information. This code can be read by a barcode reader and processed by a computer without the risk of human error. Barcodes are accepted tool which is being used in improving the efficiency of libraries all over the world. The major benefits acquired from this system are:-

- Improving errors in circulation

- Reducing errors in circulation

- Uniquely identifying the location and status of various tools like books, journals, standards, periodicals, audio and video cassettes, abstracts etc.

INFORMATION RETRIEVAL FROM CD-ROM BASED BIBLIOGRAPHICAL DATABASES:-

The following six international databases are available in the Library:

1. Centre of Agriculture and Biosciences International (CABI) database;

2. AGRIS database;

3. AGRICOLA;

4. Biological Abstracts;

5. Food Science and Technology Abstracts;
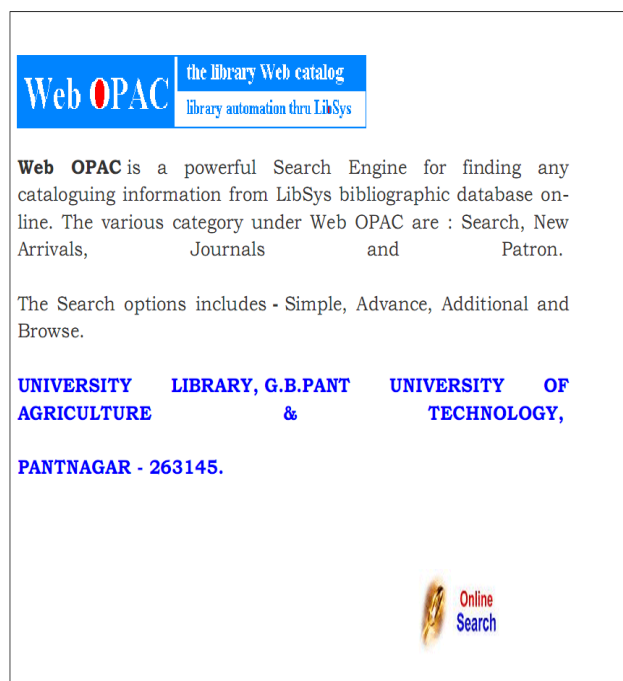
6. COMPENDEX – a engineering database

CDH Server: - With the acquisition of FISC-CDH server which has 3 * 80 GB storage capacity is capable of handling large number of CDs/DVDs, all the bibliographical CDROM database is mapped on this CDH server for providing CDROM data search facility.

E-Resources: - The resources of libraries which are available in electronic form or digital form are called e-resources and e-resources are defined as those electronic information resources and services that users can access electronically via a computer network from inside library or outside library. The university library has many electronic resources. These are collection of information (stories, articles from magazines, encyclopedias, pamphlets and other published resources) that are accessed on an electronic device, such as a computer.

Webpage of the university library: - University library has its own webpage, which is accessible on the web at the address http://202.141.116.194. This is an interactive user interface for all e-resources of theses library, Web OPAC, in-house database, on-line full text e-journals, On-line e-services, digital repository, standards, Krishi Prabha (e-Thesis), Ce-RA and INDEST consortiums.

The university library subscribes on-line full text journals to support teaching, learning and learning and research activities of the university. These journals are available to students, staff and researchers of the University of Pantnagar through the campus-wide network.

Online Public Access Catalogue (OPAC): - Online Public Access Catalogue (OPAC) is an online catalogue facility, that enables speedy searching of library holdings including books or reading materials are arranged according to the subject content that is given a call number. While the internet OPAC uses DDC classification, the web OPAC uses mark-21 format, a standard format used internationally to search for database. OPAC terminals are available in the reference section of the library, where OPAC could be accessed by a single key word at the click of the mouse. The search results are helpful in getting complete detail of the document related to search query, saving the time and energy of the searching person.

Web OPAC is a powerful Search Engine for finding any cataloguing information from LibSys bibliographic database on-line. The various category under Web OPAC are : Search, New Arrivals, Journals and Patron.

The Search options includes - Simple, Advance, Additional and Browse.

UNIVERSITY LIBRARY, G.B.PANT UNIVERSITY OF AGRICULTURE & TECHNOLOGY,

PANTNAGAR - 263145.

What OPAC does?

- Search for library materials using many options such as author, title, subject and call number search;

- Find detail status about an item such as its availability, number of copies, call number and location;

- Place a request on a book that is currently on loan to other borrow;

- Check our borrower account to get information about number of items on loan, amount of overdue fines (in any) other transactions you have with the library.

ONLINE FULL-TEXT JOURNALS: -

IEEE: - The institute of Electrical and Electronic Engineers (IEEE) is an international organization which helps promote global prosperity by encouraging the sharing of scientific and technological knowledge. The IEEE consists of engineers, scientists, and students in 174 countries.

The IEEE/IEE electronic library (IEL) covers almost one third of the world's current electrical engineering and computer science literature from publications of the institute of electrical and electronics engineers (EEE) and the institution electrical engineers (IEEE). The resource covers more than 78,000 documents from over 12,000 publications.

ASCE On-line Journals: - ASCE is the professional society for civil engineers. It consists of many different divisions, such as structural, environmental, and geo-technology. WPI's ASCE attempts to give guidance to and improve the professional development of individuals through group activities such as conventions, seminars, publications and continuing education.

ASME On-line Journals: - ASME is the American Society of Mechanical Engineers. It is a professional organization that promotes the scientific practice of mechanical and other disciplinary engineering and sciences for the greater benefit of humanity. ASME was established in 1880 by prominent mechanical engineers. It grew to include many institutions and schools. ASME has helped established many mechanical engineering standards. The American society of Mechanical Engineers (SME) is a nonprofit educational and technical organization serving a worldwide community of mechanical engineers. The ASME publication include than 20 journals and transactions.

J-Gate*: -J-Gate is an electronic gateway to global e-journal literature. It provides access to 9200+ Scholarly, Research and Professional journals, table of contents of latest issue, database of millions of articles and free access to 13+ journals is available. J-Gate also plans to support online subscription to journals, electronic document delivery, archiving and other related services.

Ce-RA: - Ce-RA (Consortium of e-Resources in Agriculture) is a consortium of e-journals (full text), a project under NAIP, ICAR provided access to 123 libraries of National Agriculture Research System (NARS). Presently total of 1342 on-line full-text journals are available on Ce-RA of the following publishers.

1. **Springer**: It is a platform of Springer and provides on-line access to 70 journals on different subjects published by Springer.

2. **Annual Reviews**: Annual Reviews are authoritative, analytic reviews on 22 focused disciplines within the Biomedical, Life Sciences, Physical Sciences, and Social Sciences. Users can access the full text of articles from 1990 onwards.

3. **CSIRO (Australia):** 8 Australia's Commonwealth Scientific and Industrial Organization (CSIRO) provides access to full text of articles.

4. **Elsevier:** 358

5. **Indian Journals:** 131

6. **Taylor and Francis** :1079

7. **American Society of Agronomy**: 6

8. **Oxford University Press** :30

9. **Wiley Blackwell** :80

10. **Library Subscribed Journals** : 810

11. **Open Access Journals** :433

12. **List of Requested Journals (Not Subscribed by CeRA and Libraries)** : 407

DELNET (Developing Library Network): - DELNET has emerged as the first major operational library network in South Asia. It has more than 970 libraries as its members which include 163 libraries in Delhi, 812 libraries outside Delhi in states and Union Territories and 14 in overseas countries. DELNET maintain an online Union Catalogue of books and more than twenty other databases including the National Bibliographic database. DELNET has been actively engaged with the compilation of Union Catalogue of the resources available in member-libraries. These data-bases are accessible to its members on web.

Videoconferencing: - Videoconferencing is the conduct of a videoconference (also known as a video conference or video teleconference) by a set of

telecommunication technologies which allow two or more locations to communicate by simultaneous two ways video and audio transmissions. It has also been called 'visual collaboration' and is a type of groupware.

In-house databases: - A number of in-house databases are available in the university library for advanced search interface is available for various search option like author, title, subject and keyword etc. with Boolean logic for searching following in-house databases.

Thesis database: - The library receives one copy of each doctoral and master's thesis accepted by the university students. Thesis database consists of bibliographical information of M.Sc and Ph.D. thesis submitted in this university. This database is also available on CDROM and web.

Reprints database: - Those journals and articles are not available in the university library; this database consists of bibliographical records of these journals and articles acquired from other libraries.

Serials holding database: - In the university library, this database consists of complete information about holdings of the journals subscribed by this library. This database is also available on web.

Digital books: - These books are a collection of full text rare books and documents digitized at university library for archiving and distributed access. This collection is compliant with International standards of digital library i.e. OAI-PMH (Open archives initiative protocol for metadata harvesting) and support Dublin core.

Computer based indexing of IAI: - In the university library Indian Agriculture index a bimonthly indexing service which was computerized for indexing articles since 2000 on words using WINISIS software package.

CONCLUSION

The ICT is playing a momentous role in the development of libraries. It is changing the work of libraries and information centers. The accelerated adoption and use of Information and Communication Technology (ICT) has resulted in the globalization of information and knowledge resources. The role of librarian totally changed and to keep pace with the latest technologies available. Librarian is bound to adopt all the technology in own field. Today librarian has become information broker. They have to collect all the information relevant to their institution and then make contents of the same information and provide this information to the concerned users. Librarians, library patrons and supporters, and above all, the

government, must help develop ICT-based libraries to meet the changing demand of the users.

REFERENCES:

- Ansari, Mehtab Alam. Impact of IT on Libraries: Role of library software. Lecture Notes, AMU, Aligarh.

- Bhatt, R.K. 2011. University libraries in India in the digital age. *DESIDOC Journal of Library & Information Technology,* 31(3):p.159-169.

- Kamba, Manvir Abduullahi. 2011. Implication of ICTs' in libraries of higher education institutes: a panaced catapulting library development in Africa. *DESIDOC Journal of library & Information Technology*, 31(1):p.65-71.

- Panda, K.C. 2008. Role of E-Resources in information retrieval In: Information Literacy in the Digital Age. Lal, C., ed. p.35-43.

- University Library. Information brochure. Pantnagar: G.B.P.U.A. & T.