Creative Commons @ BHU Library System

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Abstract

With its physical and virtual levels, information commons is the combination of information communication technologies, information technologies, information resources, facilities, and services in such a manner to ensure the seamless flow of digital information to the users. It constitutes the physical space, physical media, digital resources, digital services and training etc. Banaras Hindu University (BHU) Library System has done significant work to develop a healthy information commons to provide digital environment to assist the university students, researchers and faculties into their studies and research works. This paper presents the development of the information commons in the Central Library at Banaras Hindu University. It discusses the need and goals of the facilities to support the seamless access, collaboration and production of the scholarly outputs. The purpose of the study is to find the feasibilities to acquire new techniques and services to cope with the continuous paradigm shift towards the digital environment.

Keywords: Information, E-Resources, E-content, Cyber Library, Academic Libraries

1. Introduction

Banaras Hindu University, internationally reputed temple of learning, is the one of the major research universities of India. It is founded in 1300 acres of area by great visionary and national leader, Pandit Madan Mohan Malaviya in 1916 with the help of great personalities like Annie Besant and donations from common man to kings. At present, the university family consists of more than 30000 students, 1700 teachers and about 5500 non-teaching staffs. The University Central Library, also known as Sayaji Rao Gaekwad Library, is the largest university library system in India which is established in 1917 from the donations from Prof. P. K. Telang. The actual Information commons in Banaras Hindu University Library has started since March 2013 with the establishment of "Cyber Library Study Centre" with more than two hundred workstations which increased in July 2014 to more than 400 personal computers having 1 Gbps connectivity from National Knowledge Network (NKN) to provide high speed internet facility to explore, browse, and search the desired information and to study the e-resources made available by central library. This study centre has come into existence due to special attention of the university Vice-Chancellor.

2. Information Commons

The term "Information Commons" is first used in 1999 by **Donald Beagle** of the University of North Carolina. He used this term in two parallel levels as virtual level and physical level. On one level, it has been used to denote an exclusively online environment in which the widest possible variety of digital services can be accessed via a single graphical user interface (GUI) and potentially searched in parallel via a single search engine from any networked workstation. On a second level, the phrase Information

Commons has also been used to denote a new type of physical facility specifically designed to organize workspace and service delivery around the integrated digital environment. **(Beagle, D., 1999)** Cowgill et al. (2001) emphasized on the technical proficiency of the staff into collection, retrieval and dissemination of the electronic resources to ensure the best resources to the right user , defined an Information Commons as "a specific location designated to deliver electronic resources for research and production that is maintained by technically proficient staff" **(Cowgill et al., 2001)**. MacWhinnie conceptualized the modal of IC as the combination of technology, information resources, library resources and services and defined it as "Information Commons is a model of integrated technology and information resources, a transition of library resources, facilities and services with the purpose of providing the best resources and the best services for users with the shifting emphasis from ownership of information to access to and management of information" **(MacWhinnie, (2003) and Yao, L. and et al. (2009))**. Gertrude Himmelfarb described IC as an online environment from the scholar's perspective, i.e. it is not only the library catalogue that is computerized; the computer can call up a variety of other catalogues, indices, data bases, CD-ROMs, the Internet, as well as books, journals, newspapers, archives, even collections **(Himmelfarb, G., 1997)**. The Association of Research Libraries had identified three elements shared by most information commons: the availability of both research and computing assistance, a "one-stop shopping" location for a variety of library services, and a staffing model that includes "librarians, computing professionals, and other public services staff" **(Haas, 2004 and Spencer, 2006)**. Obviously, Information commons is a centralized location to search, retrieve,

use and create information with the help of appropriate technologies. It constitutes the following:

1. **Physical Space** for digital assistance i.e. Reading area with broadband connectivity

2. **Physical Media** for digital assistance i.e. PCs, CD-ROMS, Laptops, PDAs, Smartphones,

3. **Digital Resources** i.e. Databases, e-journals, e-books, e-newspapers, archives, web portals

4. **Digital Services** i.e. OPAC, Web-OPAC, M-OPAC, Reference, Circulation service

5. **Training and Support** to handle digital data i.e. Training and assistance to staff, students, faculties and consultants

3. Literature Review

Beagle discussed about paradigm shift towards the digital environment that the emergence of the Information Commons concept on both the virtual and physical levels poses a fundamental question of organizational planning and design: how do we adapt an institution that has grown up around the print tradition to manage service delivery in the complex and fluid digital environment? **(Beagle, D., 1999)** Major information technology trends affecting libraries and all other segments of higher education include dramatically increasing rates of:

❖ Personal computer use for research and writing, in homes and offices, by students, staff, and faculty;

❖ Internet use for research by students, staff, and faculty;

❖ Emphases on student, staff, and faculty computer literacy and skills;

❖ Integration of information technologies into classroom instruction;

❖ Distance education programs because of significant changes in student characteristics, needs, and expectations;

❖ Administrative concerns about coordinating computer resources and services throughout campuses;

❖ Collaboration between campus-wide computer services units and smaller diverse groups of department-based networking/computer operations and laboratories on campuses; and

❖ Student reliance on information technology for study, research and dissemination with concurrent expectations about its widespread availability both on and off campus (**Cowgill et al., 2001**)

As a new innovative library service model, information commons is systematically explored to be a positive direction in which university libraries evolve beyond their traditional operation, reshaped by users' rapidly growing informational needs and reconfigured by increasingly challenging technological advances. It is, so far, generally accepted as a successful combination of actual and virtual space, print and digital information resources, technological possibilities and intellectual creation, scholarly research and social entertainment, individual learning and cooperative study, with an open, free, inviting, dynamic, comfortable, supportive, collaborative and multi-functional environment (**Yao, L. and et al., 2009**).

4. Background of BHU Library

Banaras Hindu University Library System, with its one central library, 4 institute libraries, 8 faculty libraries, 1 college library, 1 south campus library and more than 30 full fledged departmental libraries, is the largest university library system of India. BHU Library system has a collection of more than 15 lakh volumes of printed and digital documents together (more than 10 lakh books, 1.5 lakh bound volume journals, more than 500 print journals, about 12 thousand online journals, 1.2 lakh e-books, 16500 theses, and more than 7000 manuscripts), a significant information service, more than 150 staffs to serve more than 30000 students, 1700 teachers and about 5500 non-teaching staffs. Now, library has emphasis on growing its digital document collection and decreasing the printed document collection steadily to meet the requirements of users for more and more digital documents. At initial stage, Central Library started internet access service with 10 computers and a printer with Scifinder, Pubmed and Science Direct databases to university students, especially for research scholar, and faculties with the help of UGC funding. Later on, more emphasis is given to develop electronic resource collection which results with the rich electronic collection of databases with the help of UGC-Infonet consortium, JCC-Gate consortium, purchase from aggregators, vendors etc.
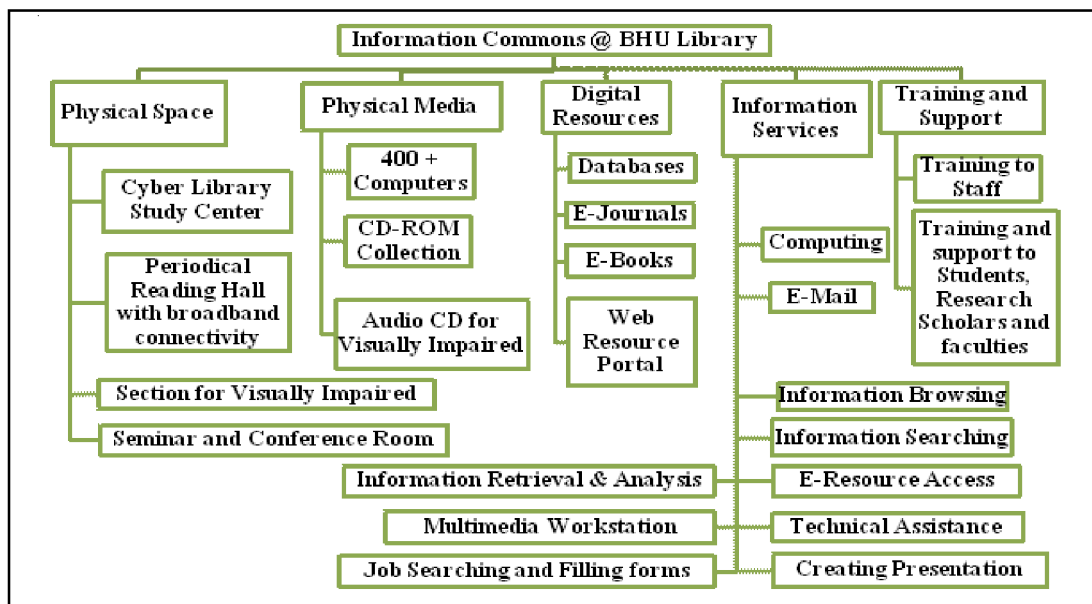
Figure 1: Information Commons @ BHU Library

4.1.   Physical Space for Digital Assistance

Physical spaces are necessary with computers to provide access to public catalogs, databases, electronic file management, file transfer, file compression, screen reading, public printing on cost basis, e-mail access, form filling, job searching, multimedia tutorials, online lectures, video instructions, electronic courseware access, access CD-ROM databases, internet access, library services access.

4.1.1 Broadband network and Wi-Fi connectivity:

Sayaji Rao Gaekwad Central Library is the one of the first library of India which started the internet access to student, research scholar and faculties in cost basis since 1999 with 10 computers. At present, the whole premises of the Central Library is enabled with Wi-Fi/ WLAN and broadband leased line connectivity from NKN with a speed of 1 Gbps to connect the handheld devices at any corner of the li-

brary building. Library staff supports the users to connect their laptops, PDAs, smartphones etc. by providing the Wi-Fi configuration and settings and other guidance to access the internet and online resources.

4.1.2   Cyber Library Study Centre:

Cyber Library Study Centre, the brainchild of the honorable Vice Chancellor, is a double storied reading area situated at the annexe of the Central Library. It covers more than 15000 sq. feet area, fully air-conditioned, and with 405 cabins with PCs (each with 2GB RAM, and 500GB HD drive, 2.6 GHz processor, Windows 7 OS) connected via broadband leased line connectivity to the internet to ensure the seamless access to information resources. Cyber Library Study Centre has started since 3rd March 2013 with 205 cabins with personal computers enabled with internet connectivity. As per the visitor records, the cyber library is used by more than 5

lakh times in the session of 2013-14. On the demands of the students, the extension of the cyber library on first floor is started since 3ʳᵈ July 2014 with a capacity of 200 cabins on commencement of new session. Now, the total capacity of the cyber library is of 405 cabins. It is expected that it is being used 10 lakhs times in the current session. Cyber library is running round the clock (24x7) to fulfill the information needs of the BHU students, research scholars and faculty members. It has improved the behavior of users towards access to information and the academic and research performance.
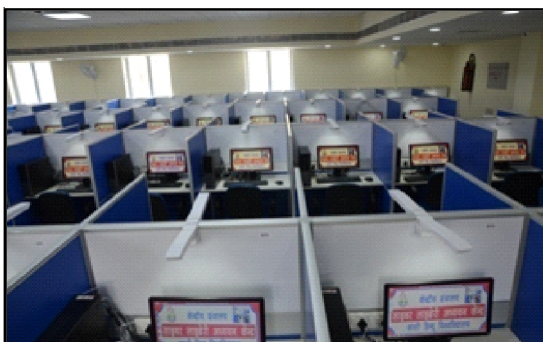

Figure 2: Inner view of Cyber Library Study Centre @ BHUL

4.1.3   Periodical Reading Hall

A well maintained, renovated, air-conditioned periodical hall with capacity of 50 + cabins without PCs but Wi-Fi enabled internet connectivity is available for research scholars and faculties to read not only the subscribed print journals but also the online journals.

4.1.4   Section for Visually Impaired

A separate section for visually impaired students has been established with the modern and advance technology for reproduction of the audio books on demand of the users. Volunteers are hired to record the text of the books into audio format with the help of Sound4 Cruzwel Software. This service is of immense value for the visually impaired users. Since 2007 to till date, about 400 students are served with help of 1681 audio CDs of 420 books.

4.1.5   Seminar/ Conference/ Workshop Room

A conference room of capacity of 150 chairs is maintained by Central Library for the purpose of organizing workshops, conferences, seminars, lectures etc.

4.2. Physical Media for Digital Assistance

BHU Central Library has rich collection of physical devices to generate, reproduce, consolidate, browse, search and retrieve the digital information. These devices can be tabulated as:

Table 1: Physical Media

Devices	Quantity	Specifications
Computers	500+	2GB RAM, 140-500GB HD drive, 2.6 GHz processor, Windows XP ,Windows 7 OS
Printers	50+	
Scanner	10	
Server	4	8GB RAM, 2.13 GHz X2 Intel Xeon ® CPU, 64 bit system type, 140GB ROM, 16tb Storage
Connectivity		CISCO Core Switches, Cisco Firewall with fiber optic connectivity
CD-ROM	550+	CDs which are delivered with books are collected and documented. User can access these in Server Room.
Audio CD-ROM	1681 of 420 books	Conversion of text book to audio book is done by Sound4 Cruzwel software.

4.3.   Digital Resources

BHU Central Library provides different digital resource in form of bibliographic databases, full text

databases, indexes, abstracts, online journals, and e-books of various subjects**.**

4.3.1   E-Contents@ Cyber Library Portal

The cyber library portal (fig. 2.) is the main site to access the different electronic resources. This portal consists of the digital documents listed in the table 2.

Table 2. E-resources through Cyber Library portal

| Forms	E-Resources
Databases	Web of Science, Annual Reviews, MathSciNET, Scifinder Scholar, CAB Abstract, GALE, Indian Citation Index, Springer Protocols(1980-2013)**,** ErMed, Pubmed, NOPR
E-books	Sage E-Books, Springer E-Books, Taylor & Francis, Cambridge University Press, Encyclopedia Britannica, Pearson E-Books
Digital Libraries	Digital Library Of India, World Digital Library, Universal Digital Library, Project Gutenberg
Search Engines	SCIRUS, and JGATEPLUS
Open Access	OpenDoar, Doaj
Publishers	American Chemical Society, American Institute Of Physics , American Physical Society , American Society Of Civil Engineers , American Society Of Mechanical Engineers, Annual Reviews, Banaras Law Journal Cambridge University Press , Economic & Political Weekly , Emerald , Institute Of Physics ,Jstor , Manupatra ,Nature ,,Oxford University Press , Port land Press , Project Euclid , Project Muse , Royal Society Of Chemistry , Sage Hss Online Journals , Science Direct ,Science Online , Siam ,Springer Link , Taylor And Francis , Westlaw India , Wiley-Blackwell Publishing, Indian Journals
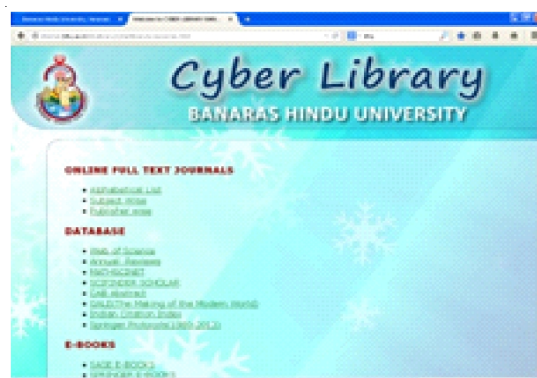
Figure 2. Cyber Library Webpage
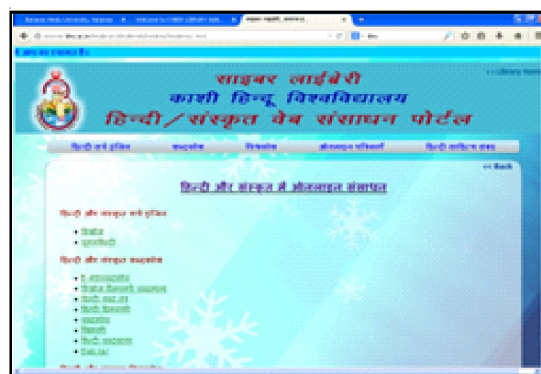

Figure 3: BHU Library Mobile

Figure 4: Hindi/ Sanskrit Web Resource Portal

4.3.2   Hindi/Sanskrit Web Resource Portal

A web resource portal for Hindi/ Sanskrit language and literature (fig. 4.) has been started on demand of the research scholars of the Hindi and Sanskrit departments. This portal lists the hyperlinks of the

reputed international and national journals, search engines, digital libraries, collections, dictionaries, and encyclopedias of the Hindi/Sanskrit language and literature. It also includes the e-resources of different subject in Hindi language.

4.3.3   BHU Library Mobile

BHU Library Mobile site (Fig.3.), first library mobile site in Indian universities, is developed and launched under BETA testing since 23ʳᵈ May 2014. This site has several features as OS independent, cross platform, easily accessible, fast to download on mobile, fully integrated, optimized to the screen of the smartphone etc. to provide information anywhere anytime.

4.3.4   Digitization of Printed Documents:

The digitization work of the manuscripts, theses, rare documents of the library holding has been done since 2007. The total digitized documents available in Central Library are shown in table 3.

Table 4. Digitization of documents

Documents	No.	Folios
Theses	3036	785231
Manuscripts	7000+	1910233
Rare Collection	2064	471819
On Demand	342	57136
Total	**12442+**	**3224419**

4.4.   Digital Services

BHU Central Library is fully computerized and automated library system. Almost all the holdings of the library are listed in OPAC with the help of SOUL software. Computerized circulation of documents has become functional since 2011. Computerized

reference desk with 4 PCs for OPAC and two skilled staff provides the reference help to users within library hours. WEBOPAC and M-OPAC is accessible in the campus wide network to search the catalogue and to know the member status anywhere anytime.

4.5.   Training to Handle Digital Data

Training to the staffs and users is the most important aspect to assure the optimum use of the electronic resources by users for quality research outputs and other academic activities. The skilled staff can help the new comers to the library with their experience and knowledge in searching, browsing and exploring the required information.

4.5.1   Guidance to Users

Users of the "Cyber Library Study Centre" are continuously guided by the library staffs about the use of computers, network configuration, e-mail, searching, browsing, retrieving the desired information, and other problems. "Authors Workshops", "USAID Information literacy program on Agricultural Information", "Springer protocol workshop", "Subject wise information literacy program", etc. are the different efforts which have been made to train the students, research scholars and faculties of different subject to access the right information at right time.

4.5.2   Training to Staff

Beagle discussed that the information commons creates "a synergy between the user support skills of computer staff, the information skills of reference staff, and the productivity skills of media staff **(Beagle, D., 1999).** Central Library has organized several workshops on handling of the digital data with help of different useful software time to time.

5. Future prospects:

Nothing can be said to be complete in the ever changing environment of the digital technologies. New technology comes and replaces the old one after a time span. To cope with this situation, university libraries are bound to acquire new techniques, services, and technologies to fulfill the user's requirements. In this regard, BHU library system is needed to acquire and implement the followings:

1. User Instruction Program

2. Collaborative Learning Space

3. Strong Multimedia Support

4. Web Portal for Open Access Journals

5. Institutional Repository

6. Information Literacy Workshops

7. Subject Gateway

6. Conclusion

The Banaras Hindu University Library breaks through its traditional academic library concept to the modern digitally equipped library by providing digital environment to the faculty and students to study and research by enriching its e-content. With the help of large physical and digital space with internet connectivity, Wi-Fi enabled reading areas, rich collection of digital documents, technologies and services, implementation of mobile technology, multimedia tools and staff assistance, BHU library system not only helps the users in their studies and research but also helps to achieve academic success. The information commons in the BHUL is the combination of the e-resources, digital spaces, services, activities, staffing, and many more to face the changes that comes with the advances in the digital environment. It has changed the information seeking behavior and reading habits of the students, research scholars and faculties.

The only constant is "change" is an apt statement for the information commons. Technology, students, curricula, and individual needs change so quickly it is hard to keep up with them. (Whitchurch, M, 2006).

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